



# Proceedings of the **WorldCALL 2008 Conference**

**CALL Bridges the World**

## **WorldCALL 2008**

**Fukuoka, Japan**



## **Proceedings of the WorldCALL 2008 Conference**

### *CALL Bridges the World*

August 5 - 8, 2008

Fukuoka International Congress Center  
Fukuoka University, Seinan Gakuin University

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Publication Date: 2009.7.15

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Published by **The Japan Association for Language Education and Technology (LET)**  
<http://www.j-let.org/>

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**ISBN: 978-4-9904807-0-7**

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## *Preface*

# ***CALL Bridges the World – Conference Proceedings***

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One key objective of WorldCALL is to provide a worldwide focus for the promulgation of innovative research, development and practice in the areas of Computer Assisted Language Learning (CALL) in education and training. WorldCALL 2008 in Fukuoka certainly fulfilled this objective. Over 500 delegates from the five continents gathered in Fukuoka on 5-8 August 2008 to attend the conference, which had been superbly organised by the Japanese Association for Language Education and Technology (LET). Following in the footsteps of the organisers of WorldCALL 98 (Melbourne, Australia) and WorldCALL 2003 (Banff, Alberta, Canada), LET members, together with the members of the conference planning committee, provided all participants with ample opportunities to share and debate innovative applications of technology, old and new, to language teaching and learning. These debates were greatly enriched by the active participation of 13 scholarship holders from Argentina, Brazil, China, Egypt, India, Indonesia, Iran, Sudan, Turkey, Ukraine, and Venezuela. In Fukuoka in August 2008, CALL did indeed bridge the world.

Those of us who had the privilege to attend the conference brought home some unforgettable memories. Both socially and professionally, the conference was a tremendous success, which cannot be fully conveyed through its proceedings. Yet, the 73 papers constituting this collection gives a flavour of the diversity of experiences that approximately 200 papers, panel discussions, and posters brought to the conference. Expertedly put together by Toshiko KOYAMA (chief editor), Judy NOGUCHI, Akio IWASAKI, and Yuichiro YOSHINARI (deputy editors), to whom we are so grateful for their hard work, these proceedings open a window on the richness of CALL research, development and practice worldwide. We hope that you enjoy them.

**Françoise Blin and Claire Bradin Siskin**

Co-chairs of the WorldCALL 2008 Programme Committee

June 2009

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## **CALL: a Strange Attractor in Language Education in South America**

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Under the assumption that language education is a complex system by its very nature, this paper reflects upon the history of CALL in the light of chaos/complexity theory metaphors. The history of foreign language teaching has shown us that the normal route of the educational system has suffered unexpected changes along its path: from codex and gramophones to computers and the Internet. But the impact of the Internet seems to have caused the strongest turbulence. The system has been destabilized by the new technologies evolving into a strange attractor, creating new bridges spanning the globe. Learning a foreign language in South America is by no means an easy task as there are usually few opportunities for learners to interact with speakers of languages other than Spanish and Portuguese, but technology has always been the main element to bridge the distance between learners and speakers of other tongues.

### **1. Language education as a complex system**

A dynamic complex system (e.g. society, language, language education) is one whose components or agents interact among themselves, changing over time and exhibiting emergent properties.

Society changes and so does language education which suffers influence of the context. In the agrarian age, we had home education in the form of tutoring. In the industrial age, schools followed the factory model, and in language education, we had the boom of labs. In the information age, education is influenced by global models and the school walls can be metaphorically demolished. Communities of practice have been created and network projects offer the language learners the chance to use the language by interacting with other language users in different parts of the world.

Complex systems are open, that is, they are far from equilibrium. Educational systems exchange information with the context; they influence the context and are influenced by it. One example is innovation. Language education is open to innovations, such as new learning and acquisition theories, new pedagogical models, and new technologies. In a metaphorical way, innovations can be considered as a kind of energy which moves the system to different routes. Innovations cause disequilibrium in the system and disequilibrium is a necessary condition for the development of a system.

### **2. The history of technology**

The history of technology demonstrates how it has been impacting the dynamics of language

learning since the creation of written technology. Technology has been a necessary element in language education since the volumen, a scroll of papyrus, to codex, a collection of sheets attached at the back, whose format, is still found in the books we know today. The socialization of the written technology was not a simple process. The book faced the same problems computers face nowadays. The codex was expensive and just a few had the privilege to own one.

Gutenberg's design of metal movable type, the press, represented the first technological revolution in language education. According to Kelly (1969:258), "in the ancient world, books were scarce, cumbersome, and difficult to produce. Booksellers had them copied by slaves, one reader dictating to a roomful of scribes." Books were very expensive and both teacher and the book belonged to the student. Kelly adds that "the only text in the medieval classroom was in the hands of the teacher, the pupils taking down both the text and comments from dictation". He also said that Comenius defended the use of books in the classroom, but educators such as Lambert Sauver wanted them to be forbidden in the classrooms. According to Kelly (1969, p.261), Sauver's advice was: "Give your pupils the book to read at home, as a preparation for your teaching, but forbid them to open it in the class; their ears alone must be occupied there. Not very far from now, during the audio visual period, the students were also forbidden to open the books during the oral tasks.

In 1878, the gramophone was invented and the first audio material for language learning was produced in the very beginning of the last century, by Linguaphone. Visual and sound technologies

kept being aggregated to language learning. In the thirties, cartoons to teach basic English were produced by Walt Disney Studios and in the forties the same studios used actors for the March of Times series, but such sophisticated technology was not popular at all in South America.

Also in the forties, tape recorders were introduced in schools and mainly in foreign language classrooms. The war context had a huge impact on language teaching in the United States and by the 1950s language labs began to emerge. In South America, the scarce old audio labs with isolated cabins were replaced by computer labs before all the schools had got its traditional lab. Computers brought together all the previous gadgets: typewriter, pens, pencils, mail, tape recorder, notebook, book, slide projector, video, cinema, radio, TV, lab material, films, telephone, fax, printer, CD and DVD players, overhead projectors, etc.

Learning a foreign language in South America is not an easy task as there are usually few opportunities for learners to interact with speakers of languages other than Spanish and Portuguese. Technology has always been the main element to bridge the distance between learners and speakers of other tongues in our continent. Although personal computers were available in the eighties, the real spread of this new technology only happened with the emergence of the Internet in the 90s. No register of significant experiences with computers can be found before that. But we are experiencing a great shift nowadays.

As revealed in the studies of Rogers, Medina, Rivera, & Wiley (2005) and Chambers and Bax (2006), when an innovation appears, the first attitude is of distrust, fear and rejection, but little by little, new practices are incorporated into the system and a normalization state is achieved. It was not different in Brazil. Going back to the complex system theory, we can rephrase this normalization process in the following way. When a new element enters the system it causes some turbulence and disorganizes the system, but out of disorder or chaos, a new order is achieved and the system self-organizes.

Self-organization is an important characteristic of complex adaptive systems. Out of disorganization emerges a more ordered system. One example is the widespread adoption of new technologies nowadays. In spite of the natural resistances, the computer is now an inseparable part of language education, although in different

scales. I dare say that we are still living some period of distrust and turbulence.

Today, 20 million out of the 40 million Internet users in Brazil do not have computers at home, but they usually go to Lan Houses which are available everywhere, even in poor neighborhoods. Part of this population can also go to Computer Centers supported by the government, but in those centers they can neither play games nor access Orkut.

### **3. The history of CALL in Brazil.**

The CALL pioneer in Brazil is Dr Heloisa Collins (PUCSP). She developed a distance learning ESP reading course with one MA student, in 1995, using the *Bulletin Board System*, which depended on a telephone connection. Collins was also responsible for other courses involving not only reading, but also oral skills and most of them were part of a large teacher training program, *Teachers' Links*, supported by her state government. A second pioneer, Dr Denise Braga (UNICAMP) has been responsible for the project *Read in Web* since 2000 for graduate students. Another relevant project has been developed by a pool of teachers from UNESP. It is the *Teletandem Brasil: foreign languages for all* that aims at providing Brazilian university undergraduate students and university students from around the world with free and democratic access to online cooperative processes of learning and teaching foreign languages (<http://www.teletandembrasil.org>). In the south of Brazil, another pioneer is Dr. Vilson Leffa (UCPel). He developed *ELO* (Electronic Learning Organizer), an authoring system for producing learning activities, with emphasis on language teaching. With *ELO* one can create different kinds of teaching activities, including reading with a built-in dictionary, open-ended questions and so on.

I myself and my group started working with CALL in 1997 teaching undergraduate students at UFMG. We were the first ones to include CALL as part of our curriculum activities. In spite of the expected resistance, from more traditional teachers, we managed to offer several online courses including undergraduate and graduate courses on Applied Linguistics issues. The new technology, for the first time, allowed our students to be agents, and not mere repeaters and language could be used in real social practices.

But, the system is still undergoing turbulence. In 2008, we offered an asynchronous online course on English Reading Strategies for 2000

undergraduate students who needed to improve their reading skills in English. It is worth mentioning that the material was developed in a collaborative project involving researchers and collaborators in several Brazilian universities. This decision caused much distress among some peers and staff as some of them did not trust the quality of a course for such a huge number of students.

Rogers et al (2005) explain that “as individuals adopt an innovation, their microbehavior contributes to the macrosystem-level scale of behavior. As the rate of adoption of an innovation accelerates and innovation diffusion takes off, emergent adaptive behavior occurs at the system level.” I guess that was what happened with this Brazilian group of CALL pioneers. As any complex system, educational systems do not behave in a linear way, and small changes in the system can have a major impact in the whole system. As the pioneers for CALL in Brazil worked also with teacher education, their micro experiences contributed to spread CALL in our country. Their works inspired other teachers in different parts of the country, but were also inspired by the pioneers in other parts of the world.

Abandoning a highly structured and teacher centered methodology in favor of a flexible and student-centered approach disturbs the system although both methodologies can perfectly co-exist. We can understand it as bifurcation of the system which becomes unstable with the introduction of an innovation and all the by-products which come together. The system is then attracted to a new cycle and exhibits a new behavior, although the previous one can also be observed.

A complex nonlinear system converges towards a *strange attractor*. Sade (2008) explains that the word “attractor” may lead us to think that it is something that attracts, but, as a matter of fact, attractor can be understood as *repeated series of states – orderly and recurrent patterns of movement* (Taylor, 2001, p. 185) in which the system stabilizes.

As language education is a non-linear system, tendencies may emerge and remain stable over a relatively long time. That is the case of the use of books, but creativity, as pointed out by Miller (2004) “is an emergent phenomenon patterned by strange attractors, which govern the complexity of information in dynamic flow”. Reigeluth (2007) says that “a strange attractor is a kind of fractal that has a powerful influence over the

processes and structures that emerge in a system undergoing transformation” and Rogers et al (2005) add that it is “strange” because it is orderly when it is expected to be random; attractor because it “attracts” or draws order to itself out of seeming chaos”.

Language education has its strange attractors that never settle down into any normal rhythm. New technologies are among those strange attractors. Books, audio and video technology, and now computers are responsible for changes in the system.

Language education in general is undergoing a creative turbulence with computers and CALL is a strange attractor in South America. Small changes in complex systems can result in disproportionately large effects.

#### **4. The butterfly effect in South America**

Small changes in the initial condition of a dynamical system may produce large variations in the long term behavior of the system. The idea is that the flapping wings of a butterfly in Brazil may affect a chain of events leading to a tornado in Japan. The impact of computers in education is equivalent to the metaphor of the butterfly effect. Had computers not entered the system, the route of the educational system might have been totally different. The impact can be felt in diverse elements of the system: educational policies, school, teachers, students, research and technology itself.

One example of the impact in educational policies is the assistance of the World Bank to help developing countries in bridging the digital divide. Another is the researchers’ attempts to develop cheaper computers and free software.

Many dissertations and theses have been produced on CALL in South America universities. The main themes are: collaboration; feedback; interaction; online classrooms; students’ and teacher’s perceptions, digital literacy, etc.

In schools, language labs have been replaced by computer labs, curricula have been reformed and digital literacy became part of it. Digital libraries offer free access to books and lots of free online journals appeared on the web minimizing the cost with books and other publications. In Brazil, for example, 191 federal institutions have free access to 12,365 international journals and 126 databases on different scientific areas. In Colombia, EC-CALL Journal was created in 2007.

There is a boom in distance education programmes and in some traditional schools the

tendency is the co-existence of traditional courses and computer mediated activities. Online content has been produced in collaborative projects and some of them are sponsored by the governments. One example is *La Enciclopedia Virtual Paraguaya*, which gathers together content for all the educational levels, including languages. Free material is available on the net and teachers have been experimenting new ways of teaching. They have been engaged in collaborative activities both for material production, publishing and also for reflection about their practices. Interaction among peers increased and associations were created. One example is the AVEALMC in Venezuela. Different communities of practice were also created. In Argentina, for instance, we have the *Edublogger Argento* which hosts educators' blogs.

Despite the several positive aspects, there are also problems teachers must cope with. Online classes have more students, but the salary is the same. Even in traditional courses, the students go on interacting with teachers after the classes by email, but they are not paid for this extra task.

Autonomous learning is encouraged and the students become authors as they can now publish and have their texts read by different people. They can engage in different communities of practice and there are several web pages where one can find a partner to interact with.

## **5. Conclusion**

With online CALL there was a shift from local to global interactions. Learners and teachers in South America are not limited anymore to textbooks and to occasional interactions with other speakers. They have choices: teachers can choose free material to complement their own.

For language acquisition, a necessary condition is agency, using the language to do something. In spite of many traditional materials published on the web which do not offer students any chance to engage in authentic linguistic social practice, the learners are autonomous enough to be attracted into strange attractors which offer them the opportunity to be agents of their own learning. Our role as CALL teachers is to “disturb” a zone of stability and provoke the chaos that results in a zone of creativity (edge of chaos) where small changes can occur, creating significant effects on learning processes. In order to do that we must free our students from the school walls and empower them to act in the realm of language social practices.

The increased connectivity among CALL specialists has certainly contributed to what we

do today. We are nested in the world history of CALL and as so, our history is just a fractal of that world history. As fractals are recursive processes, I am sure that the fractal I presented here is the starting point of subsequent, unexpected and creative new phases in the future collective history of CALL.

## **Acknowledgments**

I would like to express my gratitude to WorldCALL 2008 organizers for the opportunity to talk about CALL in South America.

## **References**

- Chambers, A. & S. Bax (2006). Making CALL work: towards normalisation. *System*, 34: 465-479.
- Kelly, L. G. (1969). *25 Centuries of language teaching*. Rowley, MA: Newbury.
- Miller, I. (2004). *Edge artists as 'strange attractors'*. Retrieved June 18, 2008, from <http://www.subcutaneous.org/edge.html>
- Reigeluth, C. M. (2008). Chaos theory and the sciences of complexity: Foundations for transforming education. In B. Despres (Ed.) *Systems thinkers in action: A field guide for effective change leadership in education*. New York: Rowman & Littlefield. Retrieved July 15, 2008 from [www.indiana.edu/~syschang/decatour/documents/chaos\\_reigeluth\\_s2004.pdf](http://www.indiana.edu/~syschang/decatour/documents/chaos_reigeluth_s2004.pdf)
- Rogers, E. M., Medina, U. E., Rivera, M. A. & Wiley, C. J (2005). Complex adaptive systems and the diffusion of innovations. *The Public Sector Innovation Journal*, Volume 10(3), article 30. Retrieved May, 12 from [www.innovation.cc/volumes-issues/rogers-adaptivesystem7final.pdf](http://www.innovation.cc/volumes-issues/rogers-adaptivesystem7final.pdf)
- Sade, L. A. (2008). Complexity and identity reconstruction in second language acquisition. Unpublished manuscript.
- Taylor, M. C. (2001). *The moment of complexity – Emerging network culture*. Chicago: The University of Chicago Press.

## **Demystifying Teachers' Online Roles: A Pragmatic Look at Online Practice**

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CALL classrooms have become part of the Japanese university infrastructure and ESL teachers have had to learn how to teach with this technology. This paper examines the views of a small group of English teachers (n=5) at a Japanese university on fostering learner autonomy through a CALL project and their online roles. A multi-method approach was employed to gather the qualitative data and analysed using grounded theory. The teachers' views on their online roles are discussed and compared with their online interaction. The results highlight the complexity of the teachers' online roles. Practical recommendations for online pedagogy are given.

### **1. Introduction**

This paper examines the views of a group of teachers at a university in Japan on fostering learner autonomy through group projects and computer assisted language learning (CALL). The study examines the teachers' views on their online roles and attempts to demystify them.

### **2. Background**

Many Japanese universities now have some form of CALL infrastructure. Parallel to the growth of CALL is the growing realisation that learner autonomy is an important and applicable construct to a Japanese educational setting. Teachers who wish to help foster learner autonomy are turning to online learning and experimenting with the possibilities which the technology holds.

The proliferation of the use of technology for teaching has failed to be met by a parallel increase in the knowledge base of CALL theory and practice. Levy describes this imbalance "For educators, the rapid and continuing introduction of new technology into education has outpaced the ability of teachers and developers to evaluate it properly" (1997, p. 1).

Bonk, Wisher and Lee (2004, pp. 62-63) outline the shift that teachers often face when teaching in an online environment "As student-centered activities are increasingly facilitated by emerging technology, the role of the faculty member shifts to the facilitator, coach or mentor

who provides leadership and wisdom in guiding student learning."

Conrad and Donaldson (2004, p. ix) highlight the changing roles of teachers and learners due to the expansion of CALL. The challenge which teachers face is not only how to teach online effectively, but also how to help learners become more self-directed and comfortable with an online collaborative environment. Dam (2003, p. 135) agrees that the role of the teacher has been largely overlooked and points out that "we have been less precise in suggesting corresponding teaching paradigms for teachers."

### **3. Research design**

This research is founded on interpretivist notions of ontology and epistemology and set out to investigate how teachers view their roles, when using CALL as part of a group project. The design of this project was largely influenced by my research studies at Nishi Asia University (NAU = pseudonym). The research focuses on the views of five English teachers at NAU and their perspectives on how CALL projects can help foster learner autonomy and how they see their roles.

The interpretivist research framework was designed to allow the teachers' views to emerge and flow naturally from various data collection methods, namely; online questionnaires, semi-structured interviews, an informal focus group, as well as the detailed analysis of online classroom interaction and additional E-mail comments provided by the teachers (see Cripps, 2008).

The study explored the main research question: “What are teachers’ views on fostering learner autonomy through a CALL project?” A grounded theory approach to data analysis forms the basis of this study and thus other themes began to emerge from the data. This created a significant sub-question i.e. “To what extent does the teacher’s role change as the CALL project progresses?” Axial coding procedures were used in the analysis of the online questionnaire, interviews, the focus group and the transcripts of the online interaction.

#### **4. Group projects and learner autonomy**

The data provided four main areas related to group projects and learner autonomy.

##### *4.1 Learning to let go*

It was extremely difficult for some teachers to find a balanced role when working online. They often found that they were interacting with students more than they would have liked.

##### *4.2 Learning to use the technology*

Teachers reported that they felt like they had to try and stay ‘one step ahead’ of their students. This demonstrates the divide between digital natives and digital immigrants.

##### *4.3 Interdependence*

The teachers stated that interdependence is one of the backbones of the Japanese education system. Therefore, the multi-faceted nature of the group project provided students with the opportunity to work according to their own preferences.

##### *4.4 Helping students to take more responsibility*

The teachers agreed that the group project helped the students become more autonomous.

#### **5. Demystifying teacher’s online roles**

The teachers identified three main factors as being instrumental in shaping how they worked online.

##### *5.1 Class design*

Four of the five teachers emphasised and demonstrated the importance of scaffolding online work to help raise their students’ metacognitive skills. How the teachers approached the design of

their courses was dependent on their pedagogical beliefs, familiarity with technology and assumptions of their students’ capabilities.

##### *5.2 Intervention*

The issue of when to intervene and when to stay out of the online interaction was problematical for all of the teachers, especially during the initial stages of online interaction.

##### *5.3 Synchronous and asynchronous classes*

The teachers stated that they approached the teaching of synchronous and asynchronous online classes in different ways. There was a noticeable difference in the approaches of each teacher.

##### *5.4 Specific roles*

The teachers identified six major roles which they played throughout the chronology of the project. Below I provide a summary of their roles. (For more details see Cripps, 2008).

###### *5.4.1 Facilitator*

Most teachers saw their main and ideal online role as one of a facilitator. However, the actual roles which the teachers played were remarkably different.

###### *5.4.2 Shepherd*

This all-embracing term describes how teachers feel they have to ‘steer’ their students in the right direction. It implies that ‘the teacher knows best’ and that students are either incapable of making their own decisions, or need support to ‘steer’ them in the right direction.

###### *5.4.3 Guardian angel*

This role tends to be stronger at the beginning of the course but it is ever present throughout the chronology of the course. The teachers were supportive and reassured students who were worried about both working online and their English level.

###### *5.4.4 Modeling*

Modeling of online interaction acts as a motivational catalyst to help students achieve their goals. The teachers felt that their students required some semblance of a platform or scaffold upon which they could build and develop their own ideas.

#### 5.4.5 Authority figure

The teachers in this study often expressed frustration about having to continually ‘police’ the classroom (both in class and online). The policing role was much stronger than the shepherding role. The extent of each teacher’s policing role was not only influenced by how their students worked online, but it also appeared to be fashioned by their psychological make-up.

#### 5.4.6 Learner

Even though the students looked to them for guidance and advice, the teachers found themselves ‘learning on the job’. The teachers confessed that their lack of online teaching experience to a large extent shaped how they approached their online classes.

#### 5.5 Stated views and online interaction

The teachers’ perceptions of their online roles and the roles which they actually adopted during the online interaction were sometimes at a tangent to each other. One teacher’s insistence that “I let my students go” contrasts with his online roles. As the group project was reaching fruition he tended to be more supportive and involved towards the end of the project. Similarly, another teacher, who claimed that he gave his students ‘more freedom’ online, was nevertheless very much involved in the online interaction.

### 6. Recommendations

1. Teachers need to be aware of their online roles before they undertake the planning and implementation of online courses.
2. Teachers need to be aware of the fact that their online roles may change throughout the chronology of an online project.
3. Teachers also need to recognise that their expressed pedagogical views may be very different from the actual roles that they play online.
4. Exposure to similar research on online projects and teachers’ roles may serve to enhance teacher development and raise awareness of the salient pedagogical issues.
5. Teachers who aim to foster learner autonomy should focus on their role in the learning process and how it can be maximised to enhance the facilitation of autonomous learning.

### 7. Conclusion

Personal theories affect pedagogical practice regardless of whether they are stated explicitly (Williams 2001, p. 15) and this has an important affect on the online teaching environment. It is imperative that teachers examine their own views and beliefs about learning and remain vigilant that they are in effect ‘practicing what they preach’.

### References

- Bonk, C. J., Wisher, R. A., & Lee, J. (2004). Moderating learner-centered e-learning: Problems and solutions, benefits and implications. In Roberts, T. S. (ed.), *Online Collaborative Learning: Theory and Practice* (pp. 54-85). Idea Group Publishing.
- Conrad, R. & Donaldson, J. A. (2004). *Engaging the online learner*. San Francisco: Jossey-Bass.
- Cripps, A. C. (2008). *Teachers’ Views on Fostering Learner Autonomy through a CALL Project*. The University of Exeter. Unpublished doctoral thesis.
- Dam, L. (2003). Developing learner autonomy: The teacher’s responsibility. In Little, D., Ridley, J. & Ushioda, E. (eds.), *Learner Autonomy in Foreign Language Classrooms: Teacher, Learner, Curriculum and Assessment* (pp. 135-146). Dublin: Authentik.
- Levy, M. (1997). *Computer-assisted language learning: Context and conceptualization*. Oxford: Oxford University Press.
- Williams, M. (2001). Learning teaching: A social constructivist approach – Theory and practice or theory with practice? In Trappes-Lomax, H. & McGrath, I. (eds.), *Theory in Language Teacher Education* (pp. 11-20). Harlow: Pearson Education.



## **The JKCE Project: Japanese & Korean EFL Students Communicating Online**

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This paper provides an overview of the Japan-Korea Culture Exchange Project, an online program designed to connect EFL students studying in Korea and Japan. An outline of the project's genesis and development is presented, focusing on the CMC technologies that have been used successfully. Details are given about specific problems that were encountered over the last 4 years, as well as solutions and communication activities that were developed to address these difficulties. Lessons learned over the course of the project will also be provided.

### **1. Introduction**

The Japan-Korea Culture Exchange Project (Chase & Alexander, 2007) was started in the autumn of 2004, to facilitate English language communication between undergraduate students at Myongji University, in Korea, and Seinan Gakuin University, in Japan. Taking an approach consistent with the principles of communicative language teaching (Brown, 2001) project participants have been using a variety of inexpensive synchronous and asynchronous CMC technologies to communicate about their lives, interests and cultures.

### **2. Project Goals & Methods**

The JKCE project has been guided by specific pedagogical goals and action research methods (Chase & Alexander, 2007). For students, the project's authors attempted to provide authentic opportunities to 1) use the Internet for cross-cultural communication, to learn more about the culture and views of students from a neighboring country; 2) enjoy using English actively, providing four skills practice; and 3) gain experience with computer mediated videoconferencing and text message tools.

For ourselves as teachers, we wanted our project to 1) allow us to use communicative language teaching methods; 2) take an action research approach, informed by student feedback

and teacher reflection; 3) allow us to experiment continuously, responding to problems creatively and flexibly; and 4) be inexpensive and easy to implement.

### **3. Project Genesis: 2004**

This cross-cultural project was conceived in the winter of 2004, after I contacted members of South Korea's KOTESOL CALL SIG, seeking a telecollaborative partnership that used Internet based videoconferencing to connect students between our nations. Paul Alexander, at that time a teacher at Myongji University, proposed a collaboration that also made use of Moodle message boards for asynchronous text-based discussions (Alexander & Chase, 2006).

The project was begun in the autumn semester of 2004, with two small groups of Japanese and Korean student volunteers, four from each country. We equipped Windows based laptop computers with Logitech webcams and installed MSN Messenger, an IM program that allowed us to transmit synchronous text messages and video over the Internet, at no cost. Paul also set up a password protected discussion forum online, using Moodle's course management system. Students were asked to post asynchronous text messages on the discussion board during their free time. Videoconferences were held in university multimedia rooms during lunch hours, with

weekly themes provided to students for their discussions (Alexander & Chase, 2006).

While we considered the Moodle forum's text-based communications to be successful, numerous difficulties were encountered with MSN Messenger's audio during our videoconferencing attempts. Concerned that student volunteers were feeling a bit discouraged, Paul suggested that we mail Christmas gift boxes to each other, filled with snacks, canned drinks and other cultural items from Korea and Japan.

For our final videoconference in late December, students in both countries opened the gift boxes, simultaneously. Once again the audio failed to work, requiring Paul and myself to type text messages back-and-forth between students during the videoconference. Fortunately, the participants reported that they enjoyed the experience, and felt like they had really "connected" with one another, thanks to the project.



Dec 2004 videoconference, Japanese students

#### **4. Project Summary: 2005**

In the spring and autumn of 2005 we continued the project with text-based discussions on our Moodle forums and new groups of volunteers, but initiated two major changes. First, we switched to Apple Macintosh computers, using iSight cameras and iChat software for our videoconferences. We also decided to move the conferences into our offices, affording the students greater privacy.

Students were provided with weekly themes for their video discussions, giving them the opportunity to practice and prepare beforehand.

Topics such as music, travel and favorite foods offered initial themes for each week, although students were encouraged to go off topic if they felt like discussing something else.

The results we experienced in 2005 were quite encouraging. As teachers, we found ourselves using iChat frequently, for lesson planning and discussion. The Apple software was extremely reliable, providing excellent sound and video image quality. Our students reported that both the videoconferences and Moodle discussions were interesting and enjoyable. Both Korean and Japanese participants were actively using all four language skills, successfully communicating with their closest international neighbors, in English.

#### **5. Project Summary: 2006**

During the spring semester of 2006 we took a short hiatus from the Moodle boards and live video meetings in our offices. Instead, we decided to try a one-time videoconference with two whole classes of students, using our multimedia classrooms. This would be the first time we attempted to connect our students during class time, via videoconference technologies.

The results of this experiment were mixed. Unlike the videoconferences in our offices, where student-to-student communications usually flowed smoothly, the large classroom environment seemed to inhibit many of the participants. Students tended to feel shy, they spoke more softly, and the audio was harder to hear (Chase, 2007). Nevertheless, when feedback was collected from Japanese students at the end of the semester many of them described the videoconference as being the most interesting class of the semester.

Heartened by the positive student feedback we decided to try and bring everything together for the autumn 2006 semester. We arranged the Moodle discussion forum to host two classes of students for about six weeks. We also scheduled several live videoconferences in our multimedia classrooms, during class time.

The online forum discussions were a great success. With so many students we no longer had to pick weekly discussion topics and instead

created 14 general forum areas with specific topics such as movies, music, food, sports, hobbies and travel (Chase & Alexander, 2007). The level of involvement varied from student to student, but with so many participants there were usually a number of asynchronous conversations going on throughout the day.

Unfortunately, our videoconferences didn't go as well as we hoped. Just as we had witnessed in the spring, having a videoconference with two computers and large numbers of students is very difficult. During initial self-introductions the audio was hard to hear, students felt shy when it was their turn to speak and some looked disinterested.

In an attempt to spice things up a bit we decided to re-do the self-introductions, but to record them with handheld video cameras. Students were recorded in small groups, which was much more comfortable for them. During lunchtime several Seinan students met me at a local park, so that we could go down to the beach near our campus, videotaping interesting scenes along the way (Chase, 2007).

The Seinan students' videotape - mailed by traditional post - was a big hit with their Korean peers. The next month Paul and some of his students used a hand-held video camera to give us a tour of their campus, as well as the Christmas lights of downtown Seoul, at night. Seeing each other up close- introducing our university campuses and surroundings- was quite enjoyable, for everyone.

As for the in-class videoconferences, probably the most successful event was a true-and-false game that we organized with the two classes. Students were put into red and blue teams, then paired with someone from the other country. This meant that half of each team's members were on the other side of the video screen. Students asked their video-partner one of 10 prepared questions, such as "Have you ever been to Korea/Japan?" or "What is your favorite sport to watch?" The partner responded and then the questioner had to guess if they were telling the truth or not. If the questioner was right, their team received a point.

Based on their written feedback, the games were enjoyed by most of the students.

Throughout the semester many students continued to be active the Moodle forums, posting messages several times a week, a few posting almost daily. We also initiated a live "chat room" time period in the evenings that was deemed successful by those who participated.

## **6. Project Summary: 2007**

The year 2007 brought several changes to our project. First, Paul moved to SangMyung University in Seoul, where he had to contend with new students, courses and facilities. Secondly, we decided to hold our classes in CALL rooms, where our students would each have access to a computer, allowing the Moodle forum discussions to become the focus of class activity. Due to the large number of participants (now totaling about sixty) we placed students in small Moodle discussion groups and asked them to participate in live chat sessions together. We also set up our Macintosh computers to host a few one-to-one and small group videoconferences, during classes.

The results that semester were mixed. Instead of communicating throughout the week, in their free-time, many students were doing the majority of their asynchronous and synchronous posting during our joint classes. Consequently, the Moodle board's server was overloaded several times during class, especially during our live chat sessions. While we tried to provide the students with privacy during their videoconferences, many still tended to feel shy and spoke in low voices. Finally, as teachers we felt a bit overwhelmed by the demands of coordinating simultaneous activities with two full classes from week-to-week, and assisting students individually as well.

In the autumn of 2007 we decided to use the computer rooms again, but this time with smaller classes. The Korean students that semester were all graduate level, older (many in their late 20's), and included international members from France, China and Sri Lanka. We also initiated a major modification, inviting a teacher in the United States to join us, and changing our project name

to the *Global Culture Exchange*. My brother John Chase, a teacher in upstate New York, joined us in the Moodle forums with 6 high school students he was teaching that semester, as part of an advanced course. Videoconferences were not held that semester due to a firewall problem at SMU and time differences with classes in New York.

The results that semester were favorable, considering the lack of videoconferences and that we had students from so many different nations, backgrounds and levels of education. Although their numbers were small, most of the American students were quite active in the discussions. The international graduate students studying in Korea also posted messages enthusiastically. Moodle's asynchronous text message boards seemed to provide a very user-friendly international meeting place, by design.

### **7. Lessons Learned**

While we began our study with the intention of using a "dual mode" CMC approach - combining text message boards and videoconferencing technologies - in the end we discovered that a "multi-modal" strategy was most effective (Alexander & Chase, 2006; Chase & Alexander, 2007). Synchronous communications methods and technologies used at one time or another during our project included videoconferencing, instant text messaging, chat rooms, telephones and face-to-face conversations. Asynchronous student communications occurred via e-mail, Moodle message boards, cell phone video messages, videos created by handheld video cameras and gift packages posted.

A few other things that we learned over the last few years were that 1) student-to-student videoconferences are more successful when students have some privacy; 2) levels of student motivation effects participation; 3) outgoing sociable students make online activities more interesting and enjoyable for others; 4) meaningful synchronous and asynchronous audiovisual communications provide a sense of "real" face-to-face human contact; 5) teacher participation in CMC activities motivates

students; 6) teachers need more support for telecollaborative educational projects (e.g., the EU's program eTwinning); 7) three-nation telecollaborations seem promising; 8) most Korean and Japanese university students are already familiar with social networking text messaging technologies, but have not used them to communicate with English; and 9) to keep students motivated teachers must monitor class interest levels and respond creatively.

### **8. Conclusion**

While video conferencing has recently become popular among educators in Europe and other countries, the potential for using web-camera and message board technology with EFL students has received less attention in Asia. The success of the JKCE Project demonstrates that inexpensive CMC technologies can provide new opportunities for Asian EFL students to improve their language skills by actively using English in an authentic and meaningful way, to communicate with peers in other nations around the world.

### **References:**

- Alexander, P., & Chase, C. (2006). Developing ESL Communities of Practice between Japanese and Korean Students. Presentation made at the 10<sup>th</sup> annual KOTESOL Conference. October 29, 2006; Seoul, South Korea.
- Brown, H.D. (2001). *Teaching by Principles: An Interactive Approach to Language Pedagogy* (2nd Edition). Upper White Plains, NY: Pearson Education.
- Chase, C. (2007). Experimenting with Computer Mediated Communications Technologies: Connecting Japanese & Korean EFL Students Via the Internet. *Studies in English Language and Literature*. Vol. 47, No. 1/2/3; (195-223).
- Chase, C. & Alexander, P. (2007). The Japan-Korea Culture Exchange Project. In R. O'Dowd (Ed.), *Online Cultural Exchange: An Introduction for Foreign Language Educators*. Clevedon, UK: Multilingual Matters. pp. 259~263.

## Collaborative CALL Strategy Training for Teachers and Learners

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This paper reports on a five-year project at a US community college involving a collaborative CALL training model for ESL teachers and students aimed at implementing strategies to assist students in becoming more independent learners when using networked and online language learning software. Throughout the project, the primary issue for both faculty and students has been to move from the traditional approach of completing all activities of the software with a specific theme in mind to setting a language learning goal with specific strategies in mind. The five-year process for developing learner training included analyzing existing instructional software, designing reflective self-evaluation activities for students, and raising teacher awareness through training workshops and working with CALL materials on foreign languages. The paper describes the various stages and challenges in the training process as well as comments from faculty training workshops and discussion board postings from teachers' own experiences as CALL learners.

### 1. Introduction

For the past five years the Institute for Intensive English at Union County College (UCC) in New Jersey has been engaged in a project to develop learning training strategies and materials. The project stemmed from longstanding observations that the roughly 1700 students and 75 faculty in the six-level ESL program were not making most effective use of the instructional software used in their classes. Specifically, students did not know how to pace themselves, often racing to complete an assignment without reflecting on its value, and did not follow through on lab assignments. Some teachers used lab time for class preparation and grading rather than engaging with the students. Teachers and students did not consistently recognize the value of consciously connecting student software interaction with the learning objectives.

### 2. Learner Training Overview

With a grant from the college, a small group of instructors and an outside consultant began collaborating on developing learner training strategies and materials to improve the effectiveness of CALL in the program. They drew on a learner training model by Hubbard (2004) centered on five principles:

- Experience CALL yourself

- Give learners teacher training
- Use a cyclical approach
- Use collaborative debriefings
- Teach general exploitation strategies

During the first two years of the project (see Kolaitis et al. (2006) for details), the team met regularly, sometimes through conference calls with the consultant, to analyze features and exercises of the instructional software used at UCC and develop strategies for using CALL listening, grammar, and vocabulary software. They implemented learner training in their classes, created "CALL journals" in which students documented their reflective learning, and engaged in collaborative debriefings both with their students and among themselves.

An important focus during this period was the identification of learning goals for listening, grammar, and vocabulary that included an understanding of why particular activities or exercises were used to support learning targets. Once these goals were identified, sets of strategies to meet them were created. For listening, for example, this included pre-listening strategies, techniques for playing the audio and video clips, interaction between audio and video and the transcripts, strategies for using comprehension questions (such as hiding the set of answers for multiple choice ques-

tions initially), and doing dictations to highlight the form-meaning link.

### **3. Classroom Implementation**

Following the principles noted above, project faculty have implemented learner training with their students for the past five years. One hour weekly, students utilize networked software and web-based sites to improve listening, grammar and vocabulary skills. A major component of the training is the use of reflection/debriefing journals for listening, grammar, and vocabulary. The purpose of these journals is to focus student learning, provide instruction in language learning principles, develop an awareness of student language learning goals and strategies to meet these goals, and provide an opportunity for collaborative reflective learning. Throughout a semester, students share journals in small groups and in class discussion.

As a result of this learner training, we have observed some changes in student use of computers in the labs. Students use programs more slowly, are more engaged in utilizing hints/help, are more engaged in reflection/journaling, and have begun to think about their language learning goals. Student reflection responses have also indicated that students have recognized these changes. Several ESL students referred to their use of exploitation strategies and note-taking. "My suggestion for other students are they need use computer programs slowly, and they need more practice in home." "I think they should write down everything to notebook and later repeat and practice."

### **4. Using CALL on Our Own**

In training faculty, the major shift during the past three years has been from conducting a series of individual workshops to a six-week Collaborative Group Training Model of "Experiencing CALL On Your Own," in which faculty learn a language on-line. The goals of this training are to develop a first hand awareness of valuable CALL strategies and to consider how one might enhance his/her teaching approaches in and out of the lab to maximize student learning and retention.

In the implementation, faculty individually studied a chosen language with free online programs for one to two hours a week at home. The group met once a week for six weeks and used CALL in the lab and discussed experiences, focusing on the language learning goals and strategies utilized. Each week participants blogged about their experience and at the end of the training process, they gave a reflective presentation in a final roundtable discussion that was open to all faculty.

In order to facilitate a balance between faculty discovering strategies that met their learning goals and learning style and more directly moving the discussion toward why they are using particular strategies in relation to their language goal, they blogged weekly on the following directed prompts.

In the first week, faculty blogged on a learning styles survey that they had taken in the first meeting. For the second week, the focus was on describing the strategies used, "First I..., Next, I..., Then, I..." During the third weekly session, they blogged about language learning goals in relation to listening, grammar, vocabulary and speaking. The group explicitly discussed how various strategies might meet language goals and then explored what individual strategies they chose and why they chose them. Discussions continued with the third blog: "What have our language goals been? Describe the strategies you have used to achieve your language goals and why have you used those strategies?" Finally, the group blogged on how the level of difficulty of the language and content impacted on their strategies and how their teaching changed.

In general, we found that these prompts, along with more directed discussion of the connection between language goal and strategies, seemed to facilitate participants moving through a goal awareness process:

- 1) A lack of awareness of language goals while using software.
- 2) Use of programs and various strategies without thinking about why.
- 3) Through discussion of specific language learning goals, more awareness of goal setting.
- 4) Better ability to make conscious decisions on effective strategies to meet goals.

The recognition of movement through these stages was reflected in several faculty blogs. For example, one described her learning changing as a result of attention to goals and connecting them to strategies:

When I first started the program, I didn't really pay much attention to articulating specific 'goals' –other than that I wanted just more exposure to the target language. A very broad goal in itself. However, then I started to refine my goal setting and decided that I wanted to improve some specific skills – listening, vocabulary and pronunciation. This helped me to tailor my study to improve those areas. I decided to employ strategies such as turning off or covering up

transcripts, repeated listenings, turning up the volume, repeating expressions aloud and writing them down to hopefully cement them in my mind.

In the final presentations, faculty expressed insights that can be summarized in three main areas, goal setting, motivation and language acquisition.

- **Goal Setting:** Faculty stated that the experience reinforced the idea that students are the teachers when independently using CALL and that the role of the instructor in the lab is to assist students in learning—to make strategic choices based on their goals.
- **Motivation:** Faculty recognized the importance of materials that meet student interests, level and goals. Students do not invest time to use software effectively when the content is uninteresting or too difficult/easy for them.
- **Language acquisition:** Faculty were surprised how much repetition they needed in order to remember items. They found taking notes and repetition were essential, thus making them question what students were learning if they weren't taking notes and repeating sections.

In general, faculty found the training to be an eye-opening experience. They had not been students in language classes recently, and they had never used software to learn a new language. Faculty found it very useful to be in the “students’ shoes” and realized that they don’t always consider students’ differing needs or appreciate the difficulty of tasks.

## **5. What We Have Learned**

Through this five year project, we have learned the importance of setting language goals, giving more priority to collaborative reflection and debriefings, and incorporating learner strategy training into our regular classrooms on an ongoing basis. This coming year, based on the success of blogging with the faculty, we plan to incorporate blogging into student reflections. To better match the level and language goals of the faculty experiencing CALL, we plan to incorporate more targeted software.

## **References**

- Hubbard, P. (2004). “Learner Training for Effective Use of CALL” in S. Fotos & C. Browne, (eds.), *New Perspectives on CALL for Second Language Classrooms* (pp. 45-67), Mahwah, NJ: Lawrence Erlbaum.
- Kolaitis, M., Mahoney, M., Pomann, H. & Hubbard, P. (2006). “Training Ourselves to Train Our Students for CALL,” in P. Hubbard & M. Levy, (eds.),

*Teacher Education in CALL* (pp. 317-332), Amsterdam: John Benjamins.

## Developing Courseware to Preserve, Disseminate and Empower “Small” Languages: the Case of Modern Greek

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In the context of what has become known as the “computer culture” empowering and disseminating a less-spoken language mainly entails developing the language technologies required for its dynamic presence and even participation in the Information Society. These technologies that must be available to ensure the preservation and promotion of “small” languages include, among others, language learning modules developed within the CALL framework. In this paper, we shall first define the relation between ICT and lesser-used languages and we shall then present a CALL application which aspires to contribute to the dissemination of a “small” language such as Greek via the technology channel.

### 1. Introduction

Monolingualism is increasingly regarded as a handicap in a modern, globalizing world (Crystal, 2003; Hamel, 2006; Phillipson, 2003). Learning less widely used languages is considered an important step against sameness and towards preserving linguistic and cultural diversity, hence promoting linguistic rights.

Sharing the view that technology may function as a vehicle to safeguard and promote languages and cultures, in this paper we shall first define the affinity between technology and lesser-used languages and we shall then present “filoglossia+”, a courseware designed to contribute to the revitalization and dissemination of Modern Greek (MG) via the technology channel.

### 2. ICT and “Small” Languages

It has been argued that the distinction between widely and lesser-used languages could be conceived as analogous to the difference between “technology-rich” vs. “technology-poor” languages.

In the context of what has become known as the “computer culture”, empowering a small language is to a large extent interwoven with advances in the language engineering field. This mandates the development of the necessary language technologies and e-learning materials as an important compensatory measure that needs to be taken to avoid possible gradual attrition of less widely used languages and to contribute to maintaining a plurilingual (and therefore pluricultural) perspective.

### 3. CALL made in Greece: the filoglossia+ courseware

CALL constitutes a relatively new field in Greece. Despite its novelty, a considerable number of CALL applications have emerged in the local market.

In order to meet the increasing demand in MG witnessed in the last decade and to render it more accessible worldwide, the Institute for Language and Speech Processing (ILSP)/“Athena” R.C. has designed and developed “filoglossia+”, a courseware for learning MG currently available in two versions with English and Chinese language support. Four more versions are underway employing Albanian, Bulgarian, Romanian and Serbian as support languages to facilitate the cultural integration of immigrants of the above nationalities who reside and work in Greece.

filoglossia+ is considered state-of-the-art in the local market and is employed as a supplementary learning tool in various educational institutions abroad where MG is taught in Greece (e.g. Drexel University-USA, Universidad Nacional Autónoma de México, Universität Salzburg, Universidad Nacional del Sur in Argentina, Verband Wiener Volksbildung in Austria etc.).

The rapid growth of the Internet usage has led ILSP towards the development of a web-based application which comprises an on-line version of the courseware (which may be accessed at <http://www.xanthi.ilsp.gr/filog/>). This version retains the majority of the courseware features, however it includes a subset of the material and technologies of the CD-ROM version.

The future plans of the developers include moving the entire material on-line, publishing an accompanying book and integrating additional tools



and technologies to further facilitate the learning process. Furthermore, an ambitious plan concerns the design and development of a portal for the MG language and culture, which will function as a vehicle to disseminate MG globally.

### 3.1 User profile

The courseware targets adult learners of MG who have no previous knowledge of the language and wish to obtain the basic language equipment to carry out simple communicative tasks successfully.

The language material follows the specifications provided by the Common European Framework of Reference (2001) regarding the novice L2 learner.

### 3.2 Theoretical framework

In an attempt to replicate those conditions of a vis-à-vis interaction considered beneficial for SLA (Chapelle, 1998), *filoglossia+* enables modification of language input and negotiation of meaning by allowing its users to customize the presentation of the language input according to their individual learning styles and preferences and to access supportive learning material (e.g. enabling access to translation in L1 or to the integrated bilingual e-glossary, providing the transcripts of the videos, the aural rendering of written texts etc.).

Communicative fluency is achieved by exposing the user to abundant language input (Krashen, 1993), mainly in the form of videos filmed in authentic settings and dealing with everyday-life situations. Socioculturally appropriate language is deployed in the dialogue texts, as determined by the social norms of the target culture. The users are occasionally urged to switch their attentional focus from meaning to form in order to master the rich morphological system of the language and thus acquire linguistic accuracy.

In order to assist the learner to acquire lexical competence, all new words are presented in context, while negotiation of meaning is achieved by allowing access to L2 resources and supportive learning material (i.e. a bilingual Greek-X glossary, where X is the support language, in which the user may look up any word s/he encounters, and/or translation in X).

Paralinguistic and extralinguistic features have also been included to familiarize the L2 learner with facets of the target culture and thus combine language with culture learning (Levy, 2007).

In the current versions, error handling involves automatic and instant assessment of the user's input, which is restricted to the "right/wrong" type of feedback provided by an agent, while an answer key is also available to the user at any time.

### 3.3 Technologies and tools

*filoglossia+* basically deploys and exploits the multimedia technologies and potentials. Databases have been used for storing the language and multimedia material, while all video segments are linked to and synchronized with their transcripts.

Since one of the peculiarities of MG is its alphabet and the historical orthography (leading to difficulties in reading and pronunciation), two speech tools have been integrated to help the novice learner properly articulate the Greek phonemes: a Phonetic Transcription Tool which automatically converts arbitrary written input to its IPA equivalent and a Text-to-Speech converter, which provides aural rendering of free written input and functions in this context as a simplified Pronunciation/Reading Tutor.

In the currently available versions, the evaluation of the user's oral output is not assessed, rather the user is encouraged to record his/her voice and then compare it to the prerecorded native speaker's utterance. In certain cases, visual representations of the sound waves of the user's utterances are also provided in the form of spectrographs.

## 4. Concluding Remarks

Crystal (2002) argues that "An endangered language will progress if its speakers can make use of electronic technology" (p. 141). Along the same vein, we argue that developing the necessary language infrastructure may revitalize not only endangered but also small languages (such as MG) and place them in a decent and competitive position in the Information Society, hence ensuring their future and safeguarding the linguistic and cultural heritage of humanity.

Developing L2 learning materials within the CALL framework, in particular, nowadays constitutes a necessity and may significantly contribute to the dissemination of lesser-used languages, apparently combined with appropriate language policies and measures on a national and international level.

## References

- Chapelle, C. A. (1998). Multimedia CALL: Lessons to be learned from research on instructed SLA. *Language Learning and Technology*, 2(1), 22-34
- Council of Europe (2001). *Common European Framework of Reference for Languages: Learning, Teaching, Assessment*. Cambridge: CUP
- Crystal, D. (2003). *English as a global language* (2nd ed.). Cambridge: CUP.
- Crystal, D. (2002). *Language Death*. Cambridge:

Cambridge University Press.

- Hamel, R. E. (2006). The development of language empires. In U. Ammon, N. Dittmar, K. J. Mattheier & P. P. Truoghill (Eds.), *Sociolinguistics-Soziolinguistik. An international handbook of the science of language and society* (Vol. 3, pp. 2240-2258). Berlin: Walter de Gruyter.
- Krashen, S. (1993). *The Input Hypothesis: Issues and Implications*: Laredo Publishing Company.
- Levy, M. (2007). Culture, culture learning and new technologies. Towards a pedagogical framework. *Language Learning & Technology*, 11(2), 104-127.
- Phillipson, R. (2003). *English-only Europe? Challenging language policy*. London: Routledge

## **International Sharing of Learning Content and its Metadata in Language Education**

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Under the limitations of human and financial resources, sharing and reuse of digital learning content is one of the effective and sustainable solutions to assure the quality of e-learning or technology-enhanced learning. In order to search and discover the content efficiently, some organizations are tagging metadata and building cross-institutional search mechanisms with domestic and/or overseas repositories. However, the use of metadata is still in the primitive stage and any advanced search which adapts to various contexts has not been realized. In this study, the metadata elements which can make possible new distribution models in language education were examined and several critical factors for the advanced search were discussed.

### **1. Backgrounds**

With the innovation of information and communication technologies (ICT) and the spread of digital media, the educational uses of ICT are promoted in both developed and developing countries. One of the critical factors is the accumulation and utilization of high-quality digital learning content. In order to sustain the development under the limitations of human and financial resources, some strategies on the sharing and reuse of learning content are indispensable. While the “open educational resources (OER)” movement is one of such development/delivery models (OECD, 2007; D'Antoni, 2007), “learning object” is a technical concept of learning materials to realize it.

In the discussions on international distribution of digital learning content, several international consortia and alliances have been organized these past ten years. OpenCourseware Consortium (OCWC, <http://ocwconsortium.org/>) and Global Learning Object Brokered Exchange (GLOBE, <http://www.globe-info.net/>) are the examples.

OpenCourseware is one of the leading OER initiatives, which was originally advocated by Massachusetts Institute of Technology (MIT). Currently, more than 200 higher education institutions and associated organizations participate in the consortium from more than 25 countries.

GLOBE is the international consortium of the hub organizations in each country and region, which manage the functions for federated repositories and meta referatory. The original members were ARIADNE (Alliance of Remote Instructional Authoring & Distribution Networks

for Europe, <http://www.ariadne-eu.org/>, EU), education.au limited (<http://www.edna.edu.au/>, Australia), eduSource Canada (Canada; McGreal, R. et. al, 2004), MERLOT (the Multimedia Educational Resource for Learning and Online Teaching, <http://www.merlot.org/>, North America), and NIME. In Japan, NIME constructed a nationwide infrastructure for sharing and distributing digital learning content, called “NIME-glad (Gateway to Learning for Ability Development)” and is accumulating metadata based on IEEE LOM Version 1.0 (IEEE, 2002). It has English homepages (<http://nime-glad.nime.ac.jp/en/>) and has already started global federated search services under the collaboration with GLOBE. Now, the number of GLOBE members is ten; eduSourceCanada was replaced with LORNET (<http://www.lornet.org/>) in February 2006. Korea Educational Research and Information Services (KERIS, <http://english.keris.or.kr/>), European Schoolnet (<http://www.europeanschoolnet.org/>), the Center for Open Sustainable Learning, Utah State University, USA (COSL, <http://cosl.usu.edu/>), Latin-American Community of Learning Objects (LACRO, <http://www.laclo.espol.edu.ec/>) joined GLOBE in 2007, and Institute for Information Industry (III, <http://www.iii.org.tw/english/>, Taiwan) did in 2008.

In language education, discipline-specific projects, such as MERLOT World Languages Group and Lingu@net (<http://www.linguanet.org.uk/>), had been launched. Although Lingu@net was expected as European multilingual resources for language teaching and learning, it had to end as a project. World Language Community at MERLOT has

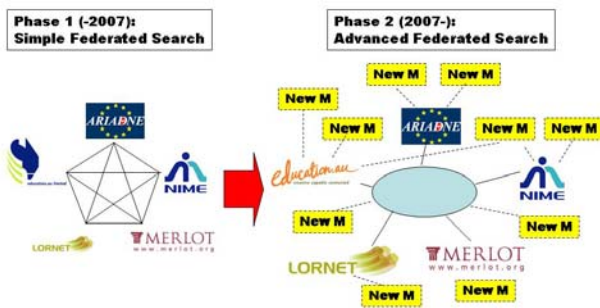


Figure 1 Transition of GLOBE search framework

accumulated more than 2000 materials and maintained a peer-review system for the quality assurance of their content collections.

## 2. Cross-institutional Search Using Metadata

Learning content is stored and managed in each institutional or personal repository on the Internet. Without some cross-institutional search mechanism, it is difficult for teachers and learners to find and retrieve the appropriate content from the deep Web. In order to facilitate global exchange and delivery among repositories, international standards are necessary in various aspects, such as metadata, query language and other specifications for federated repositories.

For example, GLOBE uses IEEE LOM version 1.0 for the metadata standards, and Simple Query Interface (SQI) for the query language (Simon et al., 2005). The GLOBE first-generation architecture adopted a simple federated search, in which each member exchanged data in one-to-one correspondence fashion (Figure 1). However, it was predicted the strategy has serious problems when the number of GLOBE members increases. The GLOBE Technology council has started discussions on the new architecture for the next advanced search, considering international standardization activities, such as, IMS-Global Learning Consortium (<http://www.imsglobal.org/>) and Advanced Distributed Learning (ADL, <http://www.adlnet.gov/>). As a result, after February 2007, harvesting (cf. Open Archive Initiative Protocol for Metadata Harvesting, OAI-PMH; Logoze et al., 2002) was added as a supplementary prerequisite for the participation in GLOBE Initiative.

## 3. New value-added services using metadata

In realizing new advanced search functions,

which are optimized to users' characteristics or met with their new demands, it is necessary to utilize more metadata elements and to describe various attributes in them in a standardized fashion. Actually, metadata elements used in present LOM-based repositories and referatories are basic and limited. By utilizing new elements, we can start new innovative value-added services and increase the quality of the services.

### 3.1 Right management

When we consider international sharing and distribution of learning content, we often meet with various roadblocks caused by differences among countries.

One of the critical issues is those on copyright and intellectual properties. Even if the agreements on "open" content, we have still some limitation from the legal system in each country and social and cultural differences. For example, Japanese "exemptions for educational uses" have some differences from the fair-use (for example, "the Creative Commons", <http://creativecommons.org/>). Using "rights" elements in metadata, we can describe details of the permission conditions referring to different legal frameworks.

In many disciplines, private publishers provide quality learning content and need considerations in order to sustain their development and to assure the quality.

In addition, there are many learning materials which we cannot put in the open space, not from economical interests but from educational and ethical considerations. We need some access control functions even in the repository system which originally orients to sharing and reuse of educational resources. For example, the copyright holders and original practitioners in medicines and public health often showed strong intentions to limit access only to educational uses and those to explain the original goals, purposes and contexts to users.

In the US, Digital Marketplace Project ([http://www.calstate.edu/ats/digital\\_marketplace/](http://www.calstate.edu/ats/digital_marketplace/)) proposed a comprehensive model for the exchange and delivery for both open and proprietary educational content. In Japan, NIME released a prototype model of copyright management system, called "EE-Card (Educational & Electronic Copyright Agreement for Reuse & Derivative)". The standardized description of rights elements in metadata is also necessary (cf. <http://www.xrml.org/>).

### 3.2 Quality assurance

Quality of the content and metadata is also an

important issue in the global distribution. MERLOT operates an excellent peer-review system for the learning content. In general, the organizations focusing on K-12 education are more sensitive in the quality while others have often only minimum standards. In many cross-institutional search services, selection of query results and display order depend on the local rule of each member. In this process, high-quality metadata which include the information of quality of the content will be preferable.

### *3.3 Educational and Pedagogical Information*

Educational effects of learning content are influenced by various contextual factors, such as readiness of learners and teachers' pedagogical strategies. In order to find more appropriate content and to utilize it more effectively, teachers and learners need such contextual information. Many metadata elements are prepared for learner characteristics (level, requirements, and so on), curriculum and actual use-cases (teaching plan and so on).

Especially in the international exchange and delivery, we found various differences in curriculum, pedagogy and other linguistic and cultural factors. Universities and faculties as content providers need some guidelines and supports when they export their content. On the other hand, learners often feel inconveniences when they use foreign content without localization.

## **4. Advanced search services in language education context**

For many years, language education has led other disciplines both in the utilization of new technologies and in the accumulation of quality content. Such status induced both merits and demerits in this field.

In the past ten years, cross-institutional search services have developed in public sectors, such as university libraries, and in more closely connected with open source / open content movements. In language education, private sectors had a share in the development and distribution of the learning content, and the awareness to sharing and reuse of digital learning resources was not sufficient. Recently, several organizations have developed the metadata systems which are specialized in language education (i.e., MERLOT World Languages Group and Lingu@net).

### *4.1 Right management*

As there are many commercial and proprietary learning materials in language education, the

information on the rights and cost are beneficial to both copyright holders and users. MERLOT metadata system does not have detailed description for copyright clearance. However, California State University System, which was the founder of MERLOT, is promoting "Digital Marketplace" project under the collaborations with several publishers, and its metadata will contain them more. As a result, learners as consumers can compare various products, open and proprietary, in one place.

### *4.2 Educational and Pedagogical Information*

We have not found out sufficient cases in utilizing metadata elements for quality assurance or educational/pedagogical information retrieval in language education yet. However, several international standards or frameworks to evaluate learning and teaching can be used for these purposes.

Common European Framework of Reference for Languages (CEFR or CEF) was originally developed for a guideline used to describe achievements of learners of foreign languages across Europe (Council of Europe, 2001). However, CEFR were translated and implemented in many non-EU countries. In Japan, Japan Foundation translated it into Japanese and open on the WWW (<http://www.jpf.go.jp/j/publish/japanese/euro/>); Accreditation Council for Practical Abilities (ACPA, <http://www.acpa.jp/en/>) utilizes CEFR both for their certification and accreditation of courses, course providers, educational institutions, lecturers, and trainees and for their certification of practical abilities of each individual.

Such an internationally common framework is very effective also in realizing cross-institutional search services worldwide. In the pilot study for new GLOBE advanced search, we launched an experimental repository in which use some elements for CEFR classification, and tagged metadata to learning objects on English or Japanese language education.

## **5. Prospects**

Through international collaborations in GLOBE initiative, we realized a simple federated search network. Now, in order to develop more intelligent and user-friendly search interface, we are investigating a next-generation advanced search architecture based on metadata. By using several LOM elements in Educational, Rights, Annotation and Classification categories, we examine new sustainable value-added services for right management and quality assurance. In addition, in

language education, fundamental studies on learning processes and pedagogical techniques progressed, and international collaboration for common standards and frameworks were realized. Such scientific results and international agreements should be embedded in our new advanced search system. Language Education is one of the well-prepared fields for international sharing or distributing digital learning resources. Toward the goal, more intimate collaborations among teachers, content experts, researchers and IT specialists are expected.

### **Acknowledgments**

This research is partially supported by Grant-in-Aid for Scientific Research (A) to the author (Grant No, 20240072).

### **References**

- Council of Europe (2001). *Common European Framework of Reference for Languages: Learning, Teaching, Assessment*. Cambridge University Press. 276p.
- D'Antoni, S. (2007). Sharing content: access to knowledge, International Institute for Educational Planning Newsletter, Vol. XXV, N° 2, [http://www.unesco.org/iiep/eng/newsletter/2007/apr\\_e07.pdf](http://www.unesco.org/iiep/eng/newsletter/2007/apr_e07.pdf).
- IEEE (2002). Draft Standard for Learning Object Metadata (IEEE 1484.12.1-2002).
- Logoze, C., Van de Sompel, H., Nelson, M. & Warner, S. (2002). The Open Archives Initiative Protocol for Metadata Harvesting. <http://www.openarchives.org/OAI/openarchivesprotocol.html>
- McGreal, R., Anderson, T., Babin, G., Downes, S., Friesen, N., Harrigan, K., Hatala, M, MacLeod, D., Mattson, M., Paquette, G., Richards, R., Roberts, T., & Schafer, S. (2004). EduSource: Canada's Learning Object Repository Network. *The International Journal of Instructional Technology and Distance Learning*, [http://www.itdl.org/Journal/Mar\\_04/article01.htm](http://www.itdl.org/Journal/Mar_04/article01.htm).
- OECD (2007). *Giving Knowledge for Free: The Emergence of Open Educational Resources*. OECD.
- Simon, B., Massart, D., Van Assche, F., Ternier, S. & Duval, E. (2005). A simple query interface specification for learning repositories. CEN Workshop Agreement (CWA 15454)

## The Use of ICTs in Foreign Language Teaching: The Challenges of a Teachers' Education Program

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In Brazil, a country where the majority of the population does not have access to any kind of ICTs, there is a share of teachers who are constantly looking for professional growth and are willing to overcome the difficulties that may arise on the way. There are many aspects involved in teaching foreign languages, but the focus of this investigation was the profile of foreign language teachers and some of the issues concerning the integration of ICTs in their everyday teaching. This paper presents the results of a research conducted with foreign language teachers who attended CELEM, the Specialization in Foreign Language Teaching Course at UTFPR. The main objectives of the research were to investigate the teachers' profiles and also their ICTs knowledge, experiences and skills development. Our goal is to offer one specific example of research whose results may provide course developers with insights for improving teachers' education programs.

### 1. Introduction

The contemporary society is on a process of great changes and people presently have access to a myriad of technologies, from small daily use objects to sophisticated computers and electronic gadgets. The Information and Communication Technologies (ICTs) play an important role in this context. As pointed out by Kenski (1993) and Moraes (1997), they provide fast and easy access to information allowing people to follow the changes of a world in permanent evolution. The influence of these resources on education cannot be ignored. Therefore, bringing these resources to the school environment is a way of enriching the classroom activities, bringing them closer to the students' reality and making them more meaningful for the students. This way, it is imperative for the teachers to incorporate the use of technologies in their classroom practice in order to create a learning environment adequate for the students' needs.

Considering the above mentioned facts the following questions about the foreign language teachers enrolled in CELEM were made:

- Who are they: what is their academic background, age, and how long have they been teaching?
- Do these teachers have enough knowledge to incorporate technologies in their teaching?

In order to answer the questions a survey was conducted with CELEM's participants at Federal University of Technology in Paraná (UTFPR).

The aim of this paper is to present the survey results and describe the teachers' profiles and their ICTs knowledge, experiences and skills development.

### 2. The foreign language teachers

According to André (2002) teachers are beings, who keep on building values, beliefs, and they act according to some personal characteristics which distinguish them from each other. Having that in mind we sought to identify some of the features of a group of foreign language teachers who searched for professional development at the Specialization in Foreign Language Teaching course. The data was collected during the course through questionnaires, résumés and application forms analysis. The questionnaires were partly based on the *Teacher Self-Observation Form*, adapted by Brown (2001).

The course is *lato sensu* and for the students to be considered specialists they must do the course and also write a monographic work on a course related theme.

In 5 years (2004 – 2008) there were 126 students enrolled, being 17% male and 83% female, all of them with university degrees. Despite the fact that all student-teachers work or intend to work in the area of foreign languages, 74% have majored in Languages and 26% have majored in areas such as psychology, journalism, engineering and others.

The participants' age ranged from 23 to 61,

nevertheless, most of them are in three different age groups: 35% are between 21 and 30; 33% are between 31 and 40; 26% are between 41 and 50 years old.

About half of the participants have been working in the area for about 5 years (52%). Those working for between 6 and 10 years are 22%; between 11 and 15 are 9%; between 16 and 20 years are 8%; and the others (9%) have been working for between 21 and 35 years.

English is by far the foreign language (EFL) mostly commonly taught, 76% of all participants. As for the other participants 12% teach Spanish; 9% French; 7% Portuguese; 4% German; 4% Italian and 1% Japanese. The total value is higher than 100% due to the fact that some participants teach more than one foreign language.

### 3. The Teachers from the Sample and the ICTs – survey, results and analysis

According to Davies (2006) foreign language teachers who want to integrate ICTs into their teaching should be familiar with the *Windows* operating system and a series of other software applications. Davies (2006) lists 19 applications and for each of them there is a range of essential tasks the teacher should be able to carry out to feel comfortable working with each software. The author calls them *ICT “can do” lists*. The tasks and applications were selected according to their usefulness for teaching foreign languages (Davies, 2006).

With the beginning of the discipline *Technology in Foreign Language Teaching* in the Specialization in Foreign Language Teaching course in 2004 it was noticed that not all the teachers taking the discipline were able to do certain basic tasks with some ICTs. The group was made up of teachers with different levels of ICT knowledge. The same happened the following year. There was the need then to carry out a survey to try to identify how much the course participants knew about ICTs, what basic abilities they had.

A questionnaire was then prepared based on the *ICT “can do” lists* developed by Davies (2006). From the 19 applications 7 were selected: Windows, Word, Browsers, Email software, PowerPoint, Excel and Anti-virus and security software. The author<sup>1</sup> agreed that the lists were adapted and used.

<sup>1</sup> The author only asked that his name and the copyright message in English and Portuguese were displayed at the bottom of the document as well as the indication that the lists originated at the ICT for Language Teachers website <http://www.ict4lt.org>

These 7 applications were chosen because they were the most basic.

The lists were then translated into Portuguese and adapted. In part 1 of the survey participants must indicate their level of knowledge under each heading on a scale of 1 to 3, 1 being basic, 2 intermediate and 3 advanced. In part 2 participants must place a tick in the box in the right hand column if they can do something or leave blank if they do not know how to do it. In part 3 participants must check the statements “I understand” that are essential under each selected application. Here they must check only the ones that they know about. In Table 1 below is an adapted sample of the three parts of the questionnaire.

Table 1. Example: PowerPoint

<b>PART 1</b> <b>I would describe my ability to use PowerPoint as (1 – 3)</b>	
<b>PART 2</b> <b>Now indicate what you can do: tick (✓) for “yes”, leave blank for “no”. I can:</b>	
Start PowerPoint.	
Exit PowerPoint.	
<b>PART 3</b> <b>Essential things that I understand:</b>	
I understand that certain color combinations in slides must be avoided in order to make slides legible: e.g. avoid red/green.	
I understand that fonts must be of a certain size in order to be legible – at least 24-point.	

Data was collected from the specialization course groups in 2006, 2007 and 2008. Therefore, the participants were the students enrolled in the course in this period of time. The total population was 72 teachers. The questionnaire was given to the participants in the classroom and they were asked to answer it at home and bring it back the following classes. The participants were not asked to identify themselves to avoid possible distortions in the answers given. The response rate was 87%.

In part 1 of the survey participants should indicate their level of knowledge of the application. Although instructions were clear, 2% of the students decided to write 0 for PowerPoint and Excel and 8% for Anti-virus and security software. It was inferred that participants wanted to make it clear that they had no knowledge at all of the applications. Some of the results obtained showed that 30% of the students consider their level of knowledge of Email software as advanced. Although the Internet has been increasingly used by all sectors of society (Warschauer, Shetzer &



Meloni, 2000), 32% of the participants indicated their level of knowledge of Browsers as advanced. Results about PowerPoint, Excel and Anti-virus and security software are the ones that stand out. Respectively 25%, 13% and 10% of the participants consider their level of knowledge of these applications as advanced. In Table 2 below are the results obtained in part 1.

Table 2. Level of knowledge on a scale of 1 – 3 (1= basic / 2= intermediate / 3= advanced)

	1	2	3	Didn't answer	Wrote 0	Total
Windows	5%	33%	57%	5%	0%	100%
Word	3%	37%	50%	10%	0%	100%
Browsers	17%	40%	32%	11%	0%	100%
Email software	11%	49%	30%	10%	0%	100%
PowerPoint	33%	33%	25%	6%	2%	100%
Excel	49%	27%	13%	10%	2%	100%
Anti-virus and security software	51%	19%	10%	13%	8%	100%

In part 2 of the survey participants were asked to tick the tasks they knew how to do. Table 3 below shows the number of tasks for each application.

Table 3. Number of tasks for each application

Windows	18 tasks
Word	39 tasks
Browsers	26 tasks
Email software	25 tasks
PowerPoint	23 tasks
Excel	35 tasks
Anti-virus and security software	11 tasks

**Windows** – the tasks with the lowest rate of affirmative answer – 81% - were *Find a file that I have mislaid* and *Format a floppy disk*. Other difficulties presented were: *Use Windows Explorer to examine the contents of a disk and of different folders* and *Use the Windows task bar to toggle between applications* (14%); *Restore a window* and *Move or copy a file from one disk to another* (10%). The tasks with 100% of affirmative answers were *Open a Windows application*, *Maximise a window* and *Minimise a window*.

**Word** – Some of the tasks participants did not

know how to do were *Insert an audio file into a document* (62%), *Make hidden formatting characters visible or invisible* (51%) and *Convert existing text to a table* (43%), among others.

Results from part 1 and part 2 about Windows and Word were compared. The difficulties to do the tasks are not many. The percentage of participants who cannot do certain activities is not significant, nevertheless it still surprises that some tasks cannot be done. Although participants marked they were able to do almost all the tasks, they did not feel confident enough to state that their level of knowledge of these two applications was advanced. By analyzing the results from part 2 it was expected that the percentage of participants with an advanced level of knowledge would be higher, but this did not happen. There is not enough data to explain this verification.

**Browsers** – More difficulties were found here than in the previous applications. The results confirmed what was found in part 1. Some of the tasks participants did not know how to do were *Remove “web clutter” from my computer* (92%), *Unzip a downloaded ZIP file* (46%), *Copy a graphic or picture into another application* (37%) among several others.

**Email software** – Most of the difficulties found here are related to discussion lists: 68% cannot *Resume receiving mail from a discussion list*, 60% cannot *Temporarily suspend mail sent to me via a discussion list*, 49% cannot *Join a discussion list* or *Leave a discussion list*. Discussion lists are a very useful application for FL teachers because they allow communication and collaboration among professionals in the area, besides providing forums for international exchange of ideas, questions and experiences (Warschauer, Shetzer & Meloni, 2000).

**PowerPoint** – Some of the tasks participants did not know how to do were *Insert a video file into a slide* (60%), *Insert a sound file into a slide* (56%), *Remove transition and animation effects from a presentation* (43%), among several others.

**Excel** – According to Elvin (2007) the use of Excel by language teachers offers several advantages and provides some easiness in doing certain tasks. However, this was one of the applications whose results from part 2 of the survey confirmed the low rate of participants with an advanced level of knowledge (13%) in part 1. Some of the tasks participants had problems were *Calculate an average of a column or row of figures* (70%), *Convert a set of figures into a graph or chart* (67%), *Sort a set of cells into order, based on a selected column* (63%), among many others.

**Anti-virus and security software** – This was the

application with the lowest level of knowledge (51% basic, 19% intermediate) in part 1. The results in part 2 confirmed what was shown in part 1. Most of the tasks had an affirmative response rate below 50%. Some of the tasks the participants did not know how to do were *Configure my anti-adware / spyware software* (83%), *Install email filtering software on my computer* (79%) and *Configure my firewall software* (78%), among many others. The conclusion is that in relation to the security of their computers participants need more orientation and appropriate training.

Part 3 of the survey verified the section “*Essential things that I understand*”, where some statements are made about the applications. Participants should check only the ones they knew. There were statements for 4 of the 7 applications.

There were 8 statements for Browsers. Participant could understand most of them, but only 22% understand how frame-based websites work.

There were 5 statements for Email software. Participant could understand most of them, but only 49% understand basic “Netiquette”.

There were 2 statements for PowerPoint (see Table 1). 83% of the participants understand the first and 79% understand the second. Despite the difficulties shown in part 2, participants understand these two essential statements.

There were 8 statements for Anti-virus and security software. 90% of the participants understand that it is essential to update their anti-virus files regularly. The difficulties were in relation to understanding the terminology used in the area. For example, for the statement *I understand the term “hoax virus”, and I know how to avoid being tricked by people who send me information about hoax viruses*, 65% of the participants answered that they did not understand it, and for the statement *I understand the term “adware”, and I know how to remove it from my computer*, 78% answered no. The results obtained in this part confirmed the ones obtained in part 1 and part 2 about Anti-virus and security software.

#### **4. Final Remarks**

The use of technological resources can help foreign language teachers to make their classes more dynamic, efficient and attractive. Nevertheless the use of such resources per se does not guarantee the change, once many of the teachers are not ready to explore them properly.

We agree with Moraes (1997) that it is crucial for the teachers to be updated not only on their subject

matter, but also on the new teaching technologies and methodologies. However, the results of the present survey show a gap: the foreign language teachers’ knowledge about ICTs is not enough to facilitate and improve their teaching practice;

During the survey it was observed that the level of knowledge about ICTs greatly varies among the participants and the teachers in the sample have difficulties to do tasks considered ‘essential’ by Davies (2006).

The results from this survey, which have already been used for improvements in the discipline *Technology in Foreign Language Teaching* that presently emphasizes more practical work, confirm the teachers’ ICT abilities observed in the 2004 and 2005 CELEM classes.

According to Kenski (1993) it is necessary to prepare the teachers for the effective use of ICTs once many teachers are not skilled enough to use and explore the resources in their classes.

We are aware that this survey is one initial step but we hope that these results can offer some reference for changes in undergraduate, teachers’ development and training courses. We truly believe that the assessment and adjustments of such courses must be an ongoing process.

#### **References**

- André, Marli. *Formação de professores no Brasil (1990-1998)*. (2002). Série Estado do Conhecimento nº 6. Brasília: MEC/INEP/Comped. [http://www.publicacoes.inep.gov.br/arquivos/formacao\\_de\\_professores\\_148.pdf](http://www.publicacoes.inep.gov.br/arquivos/formacao_de_professores_148.pdf)
- Brown, H. Douglas. (2001). *Teaching by principles: an interactive approach to language pedagogy*. New York: Longman.
- Davies, Graham. (2006). ICT “can do” lists for teachers of foreign languages. Retrieved February 12, 2006, from [http://www.ict4lt.org/en/ICT\\_Can\\_Do\\_Lists.doc](http://www.ict4lt.org/en/ICT_Can_Do_Lists.doc)
- Elvin, Chris. (2007). Twenty practical uses of a computer for the EFL professional. Retrieved October 25, 2007 from <http://www.eflclub.com/elvin/publications/20computeruses.html>
- Kenski, Vani Moreira. (1993) O ensino e os recursos didáticos em uma sociedade cheia de tecnologias. In: OLIVEIRA, Maria Rita Neto Sales (org.) *Didática: ruptura, compromisso e pesquisa*. Campinas: Papyrus, p.127 – 147.
- Moraes, Maria Cândida. (1997). *O paradigma educacional emergente*. Campinas: Papyrus,
- Warschauer, Mark; SHETZER, Heidi; MELONI, Christine. (2000). *Internet for English Teaching*. Alexandria: TESOL.

## Using CALL and computerized dictionaries to maximize vocabulary and language learning

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This study describes an innovative online reading and writing course. It analyzes key factors emerging from results of implementing this course with graduate Japanese engineering students in Tobata, Kitakyushu. These students learned how to improve their use of online tools and vocabulary learning strategies (VLSs) to empower their own independent English and technical language learning for life. We believe these factors should be considered when designing or assessing any online reading or writing course for ESL/EFL students, particularly task-based elements and technical or pedagogical innovations which can help foster more effective and enjoyable learning for teachers and students who prefer a blending of online and face-to-face interactions. Finally, it is hoped that this model can serve as a model of what can be done to enhance online EAP/ESP/ETP courses, as well as any other online reading or writing course being designed for speakers and readers of languages other than English.

### 1. Introduction

Reading online has many differences from reading print, and many advantages that can be provided, especially to help non-native readers of most of the major languages of the world be able to read more smoothly with the benefit that various kinds of online support can provide. This work addresses a large gap in this new field of CALL-enhanced second language reading and vocabulary acquisition and development by demonstrating how many of the most innovative, technologically advanced and educationally useful and effective language learning websites may be integrated to help maximize such online reading and vocabulary development, as has been done at the writer's website [www.CALL4ALL.us](http://www.CALL4ALL.us). It integrates thousands of language learning websites and programs to help teachers more systematically teach and track vocabulary development online.

### 2. Literature Review

Various reading strategies and skills are widely recognized as important variables needing development to achieve fluent, independent L2 reading. These characteristics have been identified by many models of reading, but generally include development of the following kinds of global reading skills, whether in L1 or L2 reading:

**1. Attentiveness and Awareness**--including **Phonemic Awareness**, basic orthographic knowledge of the sound-symbol associations of any target script or characters; and an Attention to meaning and an Awareness of what words are not recognized but important for understanding textual

meanings.

**2. Accessibility and a Rapid Accessing Rate**--The benefits of enabling students to use portable, desktop, laptop or online bilingual dictionary and translation software also need to be further examined for their great potential for much more rapid L1 meaning confirmation and L2 vocabulary accessing and expansion (Loucky 2002a, 2002b; 2007).

**3. Ability to Monitor and Allocate Appropriate Strategies**--Knowing whether and to what degree lexical and comprehension strategies exist in one's own reading and which need to be used when is crucial. Awareness of and Attention to both vocabulary and text-processing strategies needed, as well as when and how to use them efficiently needs to be taught and developed systematically in good language programs. Reading researchers need to develop better measures of a learner's degree of "Strategy Consciousness," or metacognitive awareness of the importance of these specific strategies.

**4. Automaticity**--of word recognition and decoding skills is crucial to the development of both Phonetic and Lexical Proficiency.

**5. Accuracy**--of Comprehension. Degree of Accuracy depends upon the level of one's vocabulary, as well as upon higher level reading and reasoning skills.

**6. Anticipatory Set**--Ability to predict accurately relevant and appropriate 1) Lexis, 2) Collocations or Colligations, 3) Idiomatic/Figurative Expressions, 4) Syntax, 5) Rhetorical structures is needed to achieve textual cohesion.

**7. Appropriateness and Allusions Understood**--of gender, register, tone, mood, ability to detect bias or point of view, style, cultural and social setting and relevance or suitability, cross-references and historic and literary allusions, all need to be understood.

**8. Ability to Adjust Reading Speed/Reading Rate Flexibility**--A reader's ability to adjust his or her rate to fit various reading purposes and types of texts is well known to be an essential skill for fluent, versatile reading. Complexity of a text's semantic, syntactical and rhetorical structure, as well as the reader's purpose and overall L1 and L2 reading proficiency levels, all contribute to determining how successful a reader is in processing a particular text.

**9. Systematic and Effective Strategy Use**--involves an ability to think about one's reading purposes so as to read with an overall plan of action in mind, so that meanings are grasped and images and language experienced as intended by the writer, so the reader is duly informed or entertained. Other factors affecting a reader's degree of comprehension include: degree of familiarity or background knowledge, interest, reading purpose and choice of texts. These are some of the factors that have been shown to enhance interest and comprehension in L2 reading (Carrell & Wise, 1998). Such factors also affect what kind of texts learners choose for their own free/independent/extensive reading.

### **3. Method**

Our students were given time to interview each other using their comprehension questions when they had read the same articles online, but did not spend time summarizing the articles orally. With limited time, this was mainly to allow them to practice more focused listening, and give them a chance to correct grammar mistakes in their own questions, which were marked before being returned for this activity.

Online readings used in this course had real purposes rather than being artificial texts or tasks. The English technical readings, for example, were chosen by 12 Japanese engineering professors who wanted these students to be able to process texts like these for their technical journal studies. Readings chosen from the [www.L.E.A.R.N.net](http://www.L.E.A.R.N.net) site were also selected because they related to their field of science. Writing topics, while broad, included vocabulary most common to their field of science and to related academic fields of anthropology, sociology, history and scientific experimentation.

All of the activities used in this online EAP

Reading Course were designed to help learners better interact with new vocabulary to develop their lexical processing skills and comprehension strategies using information from online passages. Writing 'Reading Report Summaries,' served to build up their global language proficiency as well. Focusing on meanings of new words in various contexts, and then having tasks which engaged learners in actually USING information from passages read, all helped to reinforce their L2 vocabulary acquisition, as did the use of instant glossing and online web dictionary translation engines.

We developed an innovative website, [www.CALL4ALL.us](http://www.CALL4ALL.us), with thousands of links for reading, vocabulary, online dictionary tools and general language learning at all levels. In this graduate course, mainly two sections of the site were used: 12 online EAP articles assigned by various engineering teachers, and a full online reading lab.

### **4. Procedures**

This graduate level English reading course was designed around the requests and required ESP readings of 12 teachers who submitted academic articles for students to read. These were uploaded from Word text files to ([www.CALL4ALL.us](http://www.CALL4ALL.us)) to make them more accessible anytime for in- and out-of-class use by students.

Besides making all these articles accessible, our instructional plan included the following basic steps. First students were taught how to read through each article more quickly after being put through a bilingual glossing engine (Rikai.com or WordChamp.com). By using this single word translation engine, students were then shown how to: 1) Test and confirm or correct guessed meanings of new words in context; 2) Automatically record these words and review their meanings online; and then 3) Print out new words for Homework review; 4) Orally read one article per week in class; 5) Write a 4-part "Reaction Paper" for each article including a) a Summary paragraph, b) Impressions Paragraph, c) 5 free comprehension questions and answers of their own, and d) Construct complete sentences for each new word they had listed. 6) Students could hand in their assignments either by Email attachments or by hand, by printing and bringing them to class. 7) The instructor focused on correcting any important errors in learners' grammar construction of self-generated comprehension questions, five of which they wrote or each article.

Frequent re-encounters, spaced review and

activation opportunities are known to be crucial techniques and components of vocabulary acquisition, as Nation (1990, 1994, 2001) has shown. For this reason our learners were given many opportunities to meet and interact with new word meanings. They could also recycle and re-encounter new word forms and meanings, while practicing authentic written and oral use of them.

## **5. Results**

When designing language learning websites three major parameters--subjective enjoyment, objective effectiveness and technological efficiency--should all be considered. To better do so, students' objective improvement during this one semester course was assessed by two measures: a) average performance on written reports about twelve online articles, and b) overall performance during three sessions reading Online Reading Lab articles. Their performance when reading these articles was assessed in three ways: 1) by the average number of stories read, 2) by their average speed when doing these timed readings, and 3) their average percentage of comprehension for all stories read during each session.

For all readings done on each of three days, from an initial average score of 54.19%, their comprehension scores went up to 63% and 60.5% on two subsequent days. Each time they were encouraged to try to read ten online articles on topics in areas of their choice. Students' total overall "Online Reading Averages" when doing timed online extensive readings on topics of their choice were as follows: 1) Average \*Comprehension, for Day 1: 54.19; 2) Average Comprehension, for Day 2: 63; 3) Average Comprehension, for Day 3: 60.5; Total Average Comprehension was 59.39% over three days using this online reading lab (\*=% of online reading questions whose answers were guessed correctly). Students' wrote brief reports on each reading including a) a Summary paragraph, b) Impressions Paragraph, c) 5 free comprehension questions and answers of their own, and d) Construct complete sentences for each new word they had listed. Final class grade average for ten of these reports required was 78%.

This five-month semester course emphasized developing online reading skills using bilingual glosses and regular, blended and balanced integration of CALL with all 4 communication skill areas. It was necessary to try to balance an intensive reading approach to cover higher level technical articles assigned by other engineering teachers, with an extensive approach using an online reading lab.

The students' general surveys (N=38) showed an appreciation for both approaches, and improvement in their speed and comprehension during second and third sessions using the online reading lab as follows. They averaged reading 18 stories over three weeks, at an average speed of 6.78 minutes. While average comprehension scores were close to just half (54.18) during the first week, they improved to 63 and 60.5% during weeks 2-3.

72.2% of the students (26/36) in this study did not have or use a computerized dictionary of their own, while only 27.78% (10/36) said they have and use electronic dictionaries (EDs) regularly. This shows us that rather a high percentage of these graduate engineering students in Kyushu, Japan have not yet discovered the advantages of having and using rapid access, portable electronic lexicons. Reasons seem to be lack of training or exposure in their schools by former English teachers, satisfaction with book dictionaries, or failure to carry any kind of dictionary to use, since many have clearly gotten used to using free web dictionaries and translation engines online (many introduced at : [www.CALL4ALL.us](http://www.CALL4ALL.us)).

## **6. Conclusions and Pedagogical Implications**

The practical pedagogical question was how to most effectively use CALL resources to best enhance online learning of the most helpful and essential foreign language vocabulary and reading skills, which form a basis for developing other language communication skills. Our brief answer is to try to give language learners as broad an array or palette of language learning sites as possible, since their learning styles and proficiency levels differ so much, as do levels of computer literacy. This array of sites for all-around 4-skills language development include: text analysis, collocation, concordancing and glossing/translation engines; along with and text-to-speech (TTS) and listening support, audio/video clips, Clip Art or other multimedia tools Most of these most essential and engaging functions are collected and integrated at the author's Virtual Language Education Encyclopedia, [www.CALL4ALL.us](http://www.CALL4ALL.us), which incorporates Cobb's [www.LexTutor.ca](http://www.LexTutor.ca) and [WordChamp.com](http://WordChamp.com), as well as 3,500 other language learning links for ease of use.

Wise use of computerized corpora and online high frequency vocabulary word lists can greatly help to address this primary problem of language learners. Teachers need to learn how to use computer programs to automatically help learners remeet and recycle most essential, common core vocabulary in various contexts, and learning to use

them in different ways to aid in their retention, until they are mastered. CALL programs can be set to help language learners meet new words a minimum number of times, which research shows is needed for most terms to be remembered. Re-encounters have not been studied in enough detail, however, to state precisely what kind of re-meetings these should be. Based on what we do know, however, one could reasonably guess that effective re-meetings would be ones that follow a systematic and progressive series of steps, such as those suggested in our “Depth of Lexical Processing Scale,” (Loucky, 2006). Various vocabulary learning strategies (VLSs)--such as those discussed by Schmitt, (1997) and Loucky (2005, 2006)--should be practiced by language learners, and some strategies used from each of these most essential phases of lexical processing to ensure new words are being manipulated as thoroughly as possible for maximum retention to take place. Both receptive tasks and productive uses should be included for this to happen effectively.

### **References**

- Carrell, P. L., & Wise, T. E. (1998). The relationship between prior knowledge and topic interest in second language reading. *Studies in Second Language Acquisition*, 20, 285-309.
- Loucky, J. P. (2002a). Assessing the potential of computerized bilingual dictionaries for enhancing English vocabulary learning. In Lewis, P. N. D. (Ed.), *The changing face of CALL: A Japanese perspective* (pp. 123-137). Lisse: Swets & Zeitlinger.
- Loucky, J. P. (2002b). Comparing translation software and OCR reading pens. In Swanson, M., McMurray, D., & Lane, K. (Eds.), *Pan-Asian Conference 3 at JALT 2001: 27<sup>th</sup> International Conference of JALT, National Conference Proceedings CD*. Kitakyushu. Pp. 745-755.
- Loucky, J. P. (2005). Combining the benefits of electronic and online dictionaries with CALL Web sites to produce effective and enjoyable vocabulary and language learning lessons. *Computer Assisted Language Learning*, Vol. 18, No. 5, (December 2005), pp. 389-416.
- Loucky, J. P. (2006). Maximizing vocabulary development by systematically using a depth of lexical processing taxonomy, CALL resources, and effective strategies. *CALICO Journal*, 23, No. 2 (Jan.), 363-399.
- Loucky, J. P. (2007). Computerized dictionaries: Integrating portable devices, translation software and web dictionaries to maximize learning. In *Major Reference Works, Encyclopedia of Computer Science and Computer Engineering*. Rawah, N. J.: John Wiley & Sons, Inc.
- Nation, I.S.P. (1990). *Teaching and Learning Vocabulary*. New York: Newbury House.

- Nation, P. (1994). Nation, P., (Ed.). (1994). *New ways in teaching vocabulary*. New Ways in TESOL Series: Innovative classroom techniques. Alexandria, VA: TESOL.
- Nation, I.S.P. (2001). *Learning Vocabulary in Another Language*. Cambridge: Cambridge University Press.
- Schmitt, N. (1997). Vocabulary learning strategies. In Schmitt, N., & McCarthy, M. (Eds.), *Vocabulary: Description, Acquisition and Pedagogy*. Cambridge: Cambridge University Press.

### **Websites Referenced:**

- [www.CALL4ALL.us](http://www.CALL4ALL.us)  
[www.L.E.A.R.N.net](http://www.L.E.A.R.N.net)  
[www.LexTutor.ca](http://www.LexTutor.ca)  
[www.Rikai.com](http://www.Rikai.com)  
[www.WordChamp.com](http://www.WordChamp.com)

## **Teaching to the Test with Technology**

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This paper describes a CALL course that prepares students for the TOEFL iBT independent writing question. First, I describe the setting (curriculum) and goals of the course, then explain how CALL activities function to achieve these goals, and finally review the results. Seven different technologies are used, including word processing under simulated test conditions, practicing keyboarding with online typing practice sites, email, using online concordancers to explain points of usage, and providing feedback on essays using various word processor functions.. The key technology is developing “data-driven motivation” by providing students with analytic data about their essays (number of words, number of unique words, type/token ratio, etc.) using online text analyzers.

### **1. Introduction**

Preparing students to take high-stakes tests such as the TOEFL® (Test of English as a Foreign Language) is a major aspect of ESL/EFL education around the world; in Japan, TOEFL preparation courses are offered not only by private language schools but even by colleges and universities, sometimes as extracurricular “qualifications” courses and sometimes as credit-bearing courses within the regular curriculum, this despite the considerable doubts about both the effectiveness and ethicality of such courses (e.g., Hamp-Lyons, 1998). The present paper does not consider these broader issues but focuses on the CALL technologies and practices that can be used to teach a TOEFL preparation course aimed specifically at preparing students for the independent essay question on the TOEFL iBT® (Internet-based Test).

Test preparation is perhaps the main component of the curriculum for freshman students in the department in which I teach this course because all students are required to spend one year studying overseas at an institution of higher learning in an English-speaking country from the middle of their second year. The curriculum includes required courses to prepare students for all six question types found on the TOEFL iBT. Given that the test itself is delivered over the Internet and must be taken on a computer, all courses make some use of CALL.

The independent essay question, which is the subject of this course, is a 30-minute timed essay on a given prompt; there is no choice of prompt. The ETS (Educational Testing Service), who produce the TOEFL, advises test takers that they

should “write an essay that states, explains, and supports their opinion on an issue” (ETS, 2007, p. 23) and that “an effective essay will usually contain a minimum of 300 words” (ibid.). ETS researchers note that the independent writing tasks “require the test takers to depend on their personal experiences or general knowledge rather than stimulus material to respond to a writing prompt” (Lee & Kantor, 2005, p. 1). Data on the test scores is available from ETS (2008). Given that this essay question is very similar to the previous TOEFL essay question (Cumming, Kantor, Baba, Erdosy, Eouanzoui, & James, 2005, p. 6; ETS, 2007, pp. 23, 25; Zareva, 2005, p. 50), we can note that Lougheed (2004, p. 40), writing about older versions of the essay question, claimed that there are four types of questions: making an argument, agreeing or disagreeing, stating a preference, and giving an explanation; Mizuno (2005, p. 5) found four somewhat different types; and an ETS research report on TOEFL CBT® writing prompts (Breland, Lee, Najarian, & Muraki, 2004, p. 52) found no fewer than eight question types.

### **2. Description of the Course**

This course, in typical Japanese university practice, meets once per week for 90 minutes, over two semesters of 14 weeks each. The first (spring) semester is devoted completely to preparation for the independent essay question. The homework each week consists of planning an essay for a given prompt in less than five minutes; in class we discuss whether or not the students have understood the meaning of the question and if their plan would result in a good essay. We then practice

an essay each week under test conditions: at the computer, no dictionaries, with a 30-minute time limit. Finally, we do some exercises from a TOEFL test preparation book. In the second semester we continue the TOEFL essay practice but also begin to study more general academic writing skills

### **3. Uses of Technology**

This course uses seven types of CALL activities to help students write better essays for the test. The first six are well-known so the descriptions are brief.

#### *3.1 Composing on the computer*

Considering that the test itself must be taken on a computer, this is an obvious point but it cannot be emphasized enough because students who can write quite a good essay under test conditions by hand may produce rather poor results on the computer until they get accustomed to composing at the keyboard. Many of my students enter university with computer experience but it still takes most of them several weeks to become comfortable with composing at the keyboard.

#### *3.2 Submitting essays by e-mail*

Students send their completed essays to me by email attachment after each practice test. They get used to the techniques of transferring digital files and of course it is convenient for the instructor as well.

#### *3.3 Internet-based keyboarding practice*

Every week students spend the first five minutes of class practicing keyboarding using Internet-based typing practice sites such as: *e-typing* (<http://www.e-typing.ne.jp/>), *PowerTyping* (<http://www.powertyping.com/>) or *Touch Typing* (<http://www.sense-lang.org/typing/>).

#### *3.4 Online concordancing*

We sometimes use online concordancers when students have questions about shades of meaning or usage (see, e.g., Sinclair, 2003). For example, if a student asks about the difference between “however” and “moreover,” the concordancer shows immediately that “moreover” is in a sentence initial position much more frequently than “however”; clicking on a few examples shows the differences in meaning. I use the online concordancer at Tom Cobb’s *The Compleat Lexical Tutor* ([http://www.lextutor.ca/concordancers/concord\\_e.html](http://www.lextutor.ca/concordancers/concord_e.html)) because it is quick and shows up nicely on the

classroom screen but there are many others available on the Internet.

#### *3.5 Feedback with Word®*

The highlighting, font colors, drawings such as arrows and other features of powerful word processing programs such as *Microsoft Word* enable a teacher to provide feedback on student essays that is readily understandable by the student without demanding too much of the instructor’s time (see e.g., Iribe, 2003; Susser, 2005, p. 8). The key point is to develop and maintain a consistent system and provide it to the students. For example, I use red letters to indicate my changes and additions, and use color highlighting consistently in this way:

Red highlight: Grammar, vocabulary, or mechanical problem

Grey highlight: Should be cut out

Yellow highlight: My comment (IN RED CAPITALS) focuses on this

Aquamarine highlight: Compare these (not consistent) (Example: problem with noun-verb agreement)

Green highlight: Combine (two sentences into one sentence) or (these sentences into one paragraph)

#### *3.6 Class blog*

I set up a class blog so that students could improve their fluency in writing at the keyboard outside of a test practice situation; researchers such as Fellner and Apple (2006) have found that blogs are a good way to develop writing fluency. A few students participated actively but most did not.

### **4. Data-driven Motivation**

The six examples mentioned above are not new but the last one is something that I have not seen in the literature. Borrowing Johns’s concept of “data-driven learning” (see e.g., Johns, 2000), I call it “data-driven motivation.” This is data about students’ practice essays provided by text analysis sites and given to them in table and chart form for the purpose of increasing their motivation to write better essays by establishing specific goals for them to work toward.

The first step was to find the discourse features that TOEFL researchers found were useful for assessing writing (Cumming, Kantor, Baba, Eouanzoui, Erdosy, & James, 2006, p. 15). These are:

1. text length (number of words)
2. lexical sophistication (average word length and type/token ratio)



3. syntactic complexity (number of clauses and words per T-unit)
4. grammatical accuracy (holistically rated)
5. argument structure (propositions, claims, data, warrants, oppositions, responses)

I selected from these the ones that I could get from free, Internet-based text analyzers such as: *Vocabulary Profiler* (<http://www.lex tutor.ca/vp/eng/>) and *Advanced Text Analyzer* (<http://www.usingenglish.com/members/text-analysis/>).

Of the five discourse features useful for assessing writing I was able to obtain only two from these sites:

1. text length (word count)
2. lexical sophistication (average word length and type/token ratio)

However, much other data produced by these sites are related to writing quality; I chose the following:

3. number of different words
4. number of sentences
5. average number of words per sentence
6. average word length (number of characters per word)

7. percentage of words at the 1,000- and 2,000-word frequency levels

The next step was to analyze model essays to provide students with a goal to work toward. I found 18 examples of 5-point (top score) essays from ETS publications, test preparation books, and research studies, and ran them through the analyzers. The average results appear in Table 1.

Table 1. Averages for 18 model essays

Discourse features	Average
1) Holistic score	5.00
2) Word count	346.44
3) # of different words	165.11
4) # of sentences	19.83
5) Ave. words/sentence	17.96
6) Ave. characters/word	4.74
7) 1,000-word level %	87.03
8) 2,000-word level %	4.60
9) Type/token ratio	0.47

The chart I gave to the students had the data for each essay as well as the averages of all 18; I showed them that most of these model essays were over 350 words, had more than 10% of their words above the 1,000-word level, were between 18 to 20 sentences, etc. Further, the students could see that the few essays under 300 words were outstanding for other reasons: much higher type/token ratio,

higher than average percentage of words at the 2,000-word level, etc.

The final step was to provide to the students every three weeks or so an updated table with charts of data about their own weekly essays that they could compare to the data of the model essays as well as to their previous efforts. In other words, the plan was to motivate the students to write longer and better essays by giving them two sets of data: their own previous results, which they could try to better, and the results of model essays, which they could strive to emulate.

## 5. Results

Given the small number of students that I taught, and the impossibility of isolating this treatment from all of the other courses they were taking at the same time, presenting data on individual students would serve no purpose. However, I did compute the average scores for the students who took this class in the first semester of 2007 and 2008. Table 2 gives the averages of the essays done by a total of 20 students on the first day of class and on the last day.

Table 2. Averages of student essays

Discourse features	First	Last
1) Holistic score	2.65	3.85
2) Word count	188.4	285.45
3) # of different words	92.95	134.60
4) # of sentences	12.4	18.40
5) Ave. words/sentence	15.86	15.40
6) Ave. characters/word	4.84	4.49
7) 1,000-word level %	86.92	88.78
8) 2,000-word level %	3.62	5.27
9) Type/token ratio	0.51	0.49

It is clear that the students' essays improved significantly in quality and length but there is no way to tell to what extent if any data-driven motivation or even this course as a whole contributed to this improvement. Hopefully, this concept will be used more widely, generating enough examples to allow us to test the results formally.

## References

- Breland, H., Lee, Y.-W., Najarian, M., & Muraki, E. (2004). *An analysis of TOEFL CBT writing prompt difficulty and comparability for different gender groups* (TOEFL Research Reports, Report 76, RR-04-05). Princeton, NJ: Educational Testing Service. Retrieved August 10, 2008 from <http://www.ets.org/Media/Research/pdf/RR-04-05.pdf>

- Cumming, A., Kantor, R., Baba, K., Erdosy, U., Eouanzoui, K., & James, M. (2005). Differences in written discourse in independent and integrated prototype tasks for next generation TOEFL. *Assessing Writing, 10*, 5-43.
- Cumming, A., Kantor, R., Baba, K., Eouanzoui, K., Erdosy, U., & James, M. (2006). *Analysis of discourse features and verification of scoring levels for independent and integrated prototype written tasks for the New TOEFL* (TOEFL monograph series MS-30). Princeton, NJ: Educational Testing Service. Retrieved August 10, 2008 from <http://www.ets.org/Media/Research/pdf/RR-05-13.pdf>
- Educational Testing Service. (2007). *TOEFL® iBT tips: How to prepare for the TOEFL iBT*. Princeton, NJ: Educational Testing Service. Retrieved August 9, 2008 from [http://www.ets.org/Media/Tests/TOEFL/pdf/TOEFL\\_Tips.pdf](http://www.ets.org/Media/Tests/TOEFL/pdf/TOEFL_Tips.pdf)
- Educational Testing Service. (2008). *Test and score data summary for TOEFL® Internet-based and paper-based tests: January 2007-December 2007 test data*. Princeton, NJ: Educational Testing Service. Retrieved August 10, 2008 from [http://www.ets.org/Media/Research/pdf/71943\\_web.pdf](http://www.ets.org/Media/Research/pdf/71943_web.pdf)
- Fellner, T., & Apple, M. (2006). Surfing the wave: A CALL curriculum for writing fluency development. *The JALT CALL Journal, 2*(1), 15-26.
- Hamp-Lyons, L. (1998). Ethical test preparation practice: The case of the TOEFL. *TESOL Quarterly, 32*(2), 329-337.
- Iribe, A. (2003). Wa-do wo tsukatte wan ranku appu no sakubun shido wo [Improving composition instruction using Word]. *Gekkan Kokugo Kyoiku, 23*, 28-31.
- Johns, T. (2000). *Tim Johns data-driven learning page*. Retrieved August 10, 2008 from <http://www.eisu2.bham.ac.uk/johnstf/timconc.htm>
- Lee, Y.-W., & Kantor, R. (2005). *Dependability of new ESL writing test scores: Evaluating prototype tasks and alternative rating schemes* (TOEFL monograph series, MS-31). Princeton, NJ: Educational Testing Service. Retrieved August 10, 2008 from <http://www.ets.org/Media/Research/pdf/RR-05-14.pdf>
- Lougheed, L. (2004). *Barren's how to prepare for the TOEFL essay: Test of English as a foreign language* (2nd ed.). Hauppauge, NY: Barrens Educational Series.
- Mizuno, K. (2005). Improving TOEFL writing scores through collaborative learning on the Internet. *APACALL Newsletter Series, 7*, 2-12.
- Sinclair, J. (2003). *Reading concordances*. London: Pearson Longman.
- Susser, B. (2005). CALL and JFL teacher education in Japan: A course description. *The JALT CALL Journal, 1*(3), 3-16.
- Zareva, A. (2005). What is new in the new TOEFL-iBT 2006 test format? *Electronic Journal of Foreign Language Teaching, 2*(2), 45-57. Retrieved August 10, 2008 from <http://e-flt.nus.edu.sg/v2n22005/zareva.htm>

## Integration of ICT for Effective Learning, Teaching and Assessment

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So-called emerging technologies such as wikis, blogs and e-portfolios are becoming familiar learning and teaching tools. Social networking websites such as Facebook, and VLEs such as Second Life are also being explored for their educational potential for language learning. This paper discusses examples of how technologies have been integrated into Japanese courses to achieve desired learning outcomes. It will show how, with holistic assessment approaches, they are used as effective tools to assess the more complex learning outcomes ie development of learning competencies that foster life long, autonomous learning. It also discusses initial explorations of the potential of Second Life for language learning and intercultural competence.

### 1

#### . Background

Technology is a natural ally for language learning, enabling access to authentic materials, interaction with native speakers, and providing the environment and tools to foster the development of learning competencies. Its use facilitates a holistic approach to learning, teaching and assessment, encompassing experiential learning and [connectivism](#), and fosters the development of life long autonomous learning.

However to achieve this, technology must be integrated carefully into the curriculum (Hoven, 1999). This paper reflects on why the integration should link to learning outcomes and learning, teaching and assessment activities. In other words, that consideration be given to pedagogical issues, the best way to resolve them, and only then whether or how technology could play a part. This is based on findings from previous research on a kanji software package (Corder & Waller, 2005), the initial findings from trialling an e-portfolio for learning, my own experience as an [online student](#), and examples from two papers in the BA programme at AUT that illustrate the resulting enhanced student learning. The term 'technology' includes earlier technologies as well as the emerging technologies.

I introduced technology to foster autonomous learning when I co-developed a kanji (Japanese characters) software package.

Findings showed that for students to use the software effectively, teachers had to provide scaffolding to help students identify learning needs. This revealed the importance of teacher/student and student/student dialogue to develop learning strategies and competencies, and most significantly, the ability to reflect and self assess, which is linked to deep learning.

An e-portfolio was then developed to facilitate and manage this learning across the Japanese programmes. The findings (Moffat, 2008) show successes but it was hard to get students to engage. Although most students eventually recognized the benefits of reflection and self assessment, they only continued because it was assessed. As Jafari (2006) says, students are familiar with blogs, wikis, Facebook, and portflios, but portfolios are not 'integrated into their lives' yet. In addition, there were issues with the e-portfolio, including the design, which was teacher centred, not allowing for student ownership, online social networking nor development of online identity. For an e-portfolio to be successful, I believe it must incorporate wider social processes, and have institutional support.

The most significant finding was that the learning, teaching and assessment activities, did not provide students with the learning experience on which to reflect. For autonomous learning to develop, learning and teaching needs to be interactive, dialogical,

experiential, collaborative, authentic, holistic with relevant content and activities, allow for student initiative and responsibility, and provide opportunities for reflection (Kohonen, 2006).

## **2. Integrating technology**

As Prensky (2001) says 'One of the most interesting challenges and opportunities in teaching Digital Natives is to figure out and invent ways to include reflection and critical thinking in the learning. . . We can and must do more in this area.' It was necessary to integrate technology in such a way that it became invisible or 'normalised', and something that students used naturally in their learning (Bax, 2006). The following illustrate 'strategic' integration of technology and revised learning, teaching and assessment activities.

### *2.1 Third year Japanese paper*

This paper has six weeks of translation, exposing students to material they could be asked to translate in the workplace just because they have studied Japanese.

For the assessment, they used to have materials decided by the teacher. These were often badly translated and poorly presented, indicating little interest in what the teacher had selected. So I gave them the chance to select their own material. They had to justify their choice, and could get help but had to hand in versions of before and after the help, with an analysis of the difference. They were also required to reflect on the experience following trigger questions.

The result was much greater engagement, deep learning, and a standard beyond what had previously been achieved. Student reflection included words such as 'style', 'interesting to the reader', 'expressive vocabulary', 'written literally', 'make it flow', 'needed a simile', 'great words that I'd like to remember', 'literal translation' and 'unnatural'. They were analyzing and reflecting beyond expectations, without training. They found it challenging, but enjoyed the freedom of choice: it provided relevance to their language study. By using online dictionaries, search engines and websites, they were using technology naturally and purposefully. To ensure collaborative learning, open wikis will be used in future to record work and reflection.

### *2.2 Intercultural Competence Paper*

Language teachers are now expected to integrate intercultural competence into the curriculum. In addition to knowledge we have to factor in affective, attitudinal and behavioural components. These involve complex learning outcomes that do not lend themselves to traditional teaching and assessment methods.

To deal with this, I based learning outcomes on Sercu's (2004) assessment framework which is based on Byram's (1997) *savoirs*, and added graduate competencies such as use of technology and reflection. Content input is by experiential learning activities, followed by debriefs, explanation and handouts. [Portfolios](#) seem to be preferred for developing and assessing intercultural competence, but I am using blogs and wikis within Blackboard until I have access to an e-portfolio that meets the learning, teaching and assessment needs. Learning, teaching and assessment activities include YouTube, the Internet, Powerpoint, videos and so forth as required.

Blogs are used to ease the students into the online environment to start reflecting informally with self introductions and comments on what they have learnt in the class and what was important for them. Students post a minimum of five blogs and comment in at least one other student's blog each time. The results show good interaction and engagement: after only four weeks my own blog had 126 views, though only seven comments; students blogs ranged from 40 to over 80 views, some postings recording nine comments. The more analytical blogs recorded more views after the first two weeks.

Wikis are used for formal reflection in a 'DIE' (adapted from Cornes, 2004) requiring students to Describe, Interpret and Evaluate an intercultural incident. They write four DIE entries and have to comment in at least one other student's DIE each time. The criticality required can be challenging but the benefits of collaborative learning are apparent with 80 views in less than a week for the DIEs that are done well. Group work can be problematical, so wikis are also used to record group work, meetings and assignment of tasks, as well as individual work, which can then be assessed independently. The teachers also have blogs and wikis.

The assessment method is standards based with performance indicators, as the traditional

percentage and weightings method is no longer suitable.

Initial evaluation indicates that there is greater student engagement with open blogs and wikis than when they were closed: the stronger students model for weaker students, and the monitoring from the teacher ensures scaffolding as required.

### **3 Second Life**

Some students seem to have limited life experiences on which to reflect. Although we have multicultural classes and can role-play critical incidents, Second Life could provide the real time intercultural interaction needed. It has the appeal of the gaming aspect, and at the same time, students can be observed in their interaction and are kept 'honest' in the interaction. Ideas for interaction with students from a university in Japan are being formulated and include self-introduction, description of one's own culture, questions about each other's culture, story telling, and planning weekend camps.

### **4 Conclusion**

Initial evaluation of student learning in both papers is promising: the integrated technology is allowing student learning to go beyond the classroom, and enabling teachers to have greater interaction with students and understanding of their needs. Students are taking responsibility for their learning by interacting and engaging in reflection in the classroom and outside of the classroom. This has been achieved by purposeful use of technology to enhance the learning, teaching and assessment activities, which in turn have been made more relevant and authentic.

### **Acknowledgments**

The Sasakawa Fellowship Fund for Japanese Language Education, NZ for funding attendance at the conference.

### **References**

Bax S. & Chambers A. (2006). Making CALL work: towards normalization. *System* 34 (4), 465-479.

Byram, M. 1997, *Teaching and Assessing Intercultural Communicative Competence*. Clevedon: Multilingual Matters

Corder, D. and Waller G. (2005). An analysis of the effectiveness of an in-house CALL software package for the learning and teaching of kanji (Japanese characters) and the development of autonomous language learning skills. *CALL-EJ Online*, 7 (1). <http://www.tell.is.ritsumei.ac.jp/callegonline/journal/7-1/Corder-Waller.html>.

Jafari, A., & Kaufman, K. (Eds.). (2006). *Handbook of Research on e-portfolios*. Hershey, USA & London, UK: Idea Group Reference.

Kohonen, V. (2005). Experiential learning, intercultural learning and teacher development in foreign language education. In J. Smeds, K. Sarmavuori, E. Laakkonen, & R. de Cillia (eds). *Multicultural communities, multilingual practice*. Turku: Annales Universitatis Turkuensis B 285, 123-135.

Moffat, S. (2008). *Student attitudes towards and perceptions of e-portfolios in a first year Japanese language programme*. Unpublished masters thesis, Auckland University of Technology, Auckland, New Zealand.

Prensky, M. (2001). Digital natives, digital immigrants, Part II: Do they really think differently? From *On the Horizon* (NCB University Press), 9 (6). <http://www.twitchspeed.com/site/Prensky%20%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part2.htm>

Sercu, L. (2004). Assessing intercultural competence: a framework for systematic test development in foreign language education and beyond. *Intercultural Education*, 15 (1), 73-89.

## Help Shape TESOL's New Technology Standards

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International TESOL (Teachers of English to Speakers of Other Languages) is currently developing sets of standards related to using digital technology in language teaching. The standards are designed to clarify appropriate uses of technology and support best practices in CALL in diverse settings around the world. We begin by describing the process through which the current versions of the standards have been developed since the project was initiated in early 2006. We then present the current drafts of the Learner Standards and Teacher Standards and discuss the roles of the performance indicators and vignettes in interpreting the standards. We conclude with an outline of the next steps in the development process. The authors are two of the six members of the TESOL Technology Standards Task Force.

### 1. Introduction

Following previous standards development projects for K-12 ESOL learners and adult ESOL education programs, in 2006 International TESOL (Teachers of English to Speakers of Other Languages) implemented a task force to develop technology standards. The charge to the task force was to draft a set of standards for both teachers and learners that would be international in scope and relevant for elementary, secondary, and adult settings. This paper reports on the progress of the technology standards project to date and includes a description of the development process and the current drafts of the goals and standards.

The standards aim to have following positive impacts on language teaching and learning

- Prompt teachers to learn to use technology in their teaching
- Articulate a clear set of stages for the development of teacher IT competence
- Provide direction and motivation for integrating technology into language teacher education
- Guide administrators and policy makers
- Help minimize the digital divide - between countries and within countries

The standards framework document, which will be the initial publication of the Task Force, consists of several parts:

- An introduction providing an overview of the aims and rationale for the standards, including relevant research

- Separate sets of standards for language learners and language teachers, performance objectives for each standard, and a sample vignettes illustrating selected standards
- A glossary of terms used
- Descriptors for the English proficiency levels in the standards

### 2. Process

The Task Force began with an initial meeting at the spring 2006 TESOL Conference. This was followed by a series of email interactions and online discussions, which continued throughout the process. Early work centered on reviewing existing technology standards for general education, e.g., those from ISTE (International Society for Technology in Education) and the European Union, as well as other TESOL standards volumes. Face to face meetings with four members were held at the 2007 & 2008 TESOL conferences, with the others joining by Skype when feasible. The most significant meetings were two 2-3 day gatherings face-to-face with all six members at TESOL Headquarters in Alexandria, Virginia. In mid-2007, a draft framework document was sent to the TESOL Standards Committee and posted on the TESOL website for online public review. Teacher input was also solicited at the GloCALL Conference in Vietnam a few months later. A second draft was submitted in January 2008, followed by a second formal review by the Standards Committee and a group of five external evaluators.

The standards have been presented at several other conferences including WorldCALL, and a third draft addressing the points raised by the external evaluators has been submitted.

### **3. Goals & Standards**

#### *Standards for Language Learners*

The Learner Standards include three overarching goals with two to five standards each for a total of 11 standards. These are supported with performance indicators and vignettes (see below).  
Goal 1: Language learners demonstrate foundational skills and knowledge in technology for a multilingual world.

Standard 1: Language learners demonstrate basic operational skills in using various technology tools and Internet browsers.

Standard 2: Language learners are able to use available input and output devices (e.g., keyboard, mouse, printer, headset, microphone, media player, electronic whiteboard).

Standard 3: Language learners exercise appropriate caution when using online sources and when engaging in electronic communication.

Standard 4: Language learners demonstrate basic competence as users of technology.

Goal 2: Language learners use technology in socially and culturally appropriate, legal and ethical ways.

Standard 1: Language learners understand that communication conventions differ across cultures, communities, and contexts.

Standard 2: Language learners demonstrate respect for others in their use of private and public information.

Goal 3. Language learners effectively use and critically evaluate technology-based tools as aids in the development of their language learning competence as part of formal instruction and for further learning.

Standard 1: Language learners effectively use and evaluate available technology-based productivity tools.

Standard 2: Language learners appropriately use and evaluate available technology-based language skill-building tools.

Standard 3: Language learners appropriately use and evaluate available technology-based tools for communication and collaboration.

Standard 4: Language learners appropriate use and evaluate available technology-based research tools appropriately.

Standard 5: Language learners recognize the value of technology to support autonomy, li-

felong learning, creativity, metacognition, collaboration, personal pursuits, and productivity.

#### *Standards for Language Teachers*

The Teacher Standards include four overarching goals with three to four standards each for a total of 14 standards. Like the learner standards, these are supported with performance indicators and vignettes.

Goal 1. Language teachers acquire and maintain foundational skills and knowledge in technology for professional purposes.

Standard 1: Language teachers demonstrate knowledge and skills in basic technological concepts and operational competence, meeting or exceeding TESOL technology standards for students in whatever situation they teach.

Standard 2: Language teachers demonstrate an understanding of a wide range of technology supports for language learning and options for using them in a given setting.

Standard 3: Language teachers actively strive to expand their skill and knowledge base to evaluate, adopt, and adapt emerging technologies throughout their careers.

Standard 4: Language teachers use technology in socially and culturally appropriate, legal, and ethical ways.

Goal 2. Language teachers integrate pedagogical knowledge and skills with technology to enhance language teaching and learning

Standard 1: Language teachers identify and evaluate technological resources and environments for suitability to their teaching context.

Standard 2: Language teachers coherently integrate technology into their pedagogical approaches.

Standard 3: Language teachers design and manage language learning activities and tasks using technology appropriately to meet curricular goals and objectives.

Standard 4: Language teachers use relevant research findings to inform the planning of language learning activities and tasks that involve technology.

Goal 3. Language teachers apply technology in record-keeping, feedback, and assessment.

Standard 1: Language teachers evaluate and implement relevant technology to aid in effective learner assessment.

Standard 2: Language teachers use technological resources to collect and analyze infor-

mation in order to enhance language instruction and learning.

Standard 3: Language teachers evaluate the effectiveness of specific student uses of technology to enhance teaching and learning.

Goal 4. To use technology to improve communication, collaboration, and efficiency

Standard 1: Language teachers use communication technologies to maintain effective contact and collaboration with peers, students, administration, and other stakeholders.

Standard 2: Language teachers regularly reflect on the intersection of professional practice and technological developments so that they can make informed decisions regarding the use of technology to support language learning and communication.

Standard 3: Language teachers apply technology to improve efficiency in class preparation, grading, and maintaining records.

#### **4. Performance Indicators**

Performance indicators, as the name implies, are statements that characterize what learners and teachers can do to demonstrate that a given standard has been met. Each standard has two or more of these. Learner Standards have a single level, while Teacher Standards distinguish basic and expert levels. Here is an example of the latter:

Teacher Goal 3, Standard 3: Language teachers evaluate the effectiveness of specific student uses of technology to enhance teaching and learning.

Base level

- Language teachers use appropriate procedures for evaluating student use of technology (e.g., rubrics, checklists, matrices – these may look at enjoyment).
- Language teachers elicit student feedback in order to improve student use of technology.

Expert level

- Language teachers develop and share procedures for evaluating student use of technology.
- Language teachers examine student outcomes that result from use of technology (e.g., examining chat logs for more complex language).

#### **5. Vignettes**

An important part of the standard framework is the vignettes, descriptions of learning settings using technology, designed to illustrate language teaching and learning scenarios in detail to provide support for the goals and standards. Each vignette presents a specific context and lesson

with varied descriptions for levels of technology resource access, along with links to particular standards and performance indicators. A few example vignettes are set to appear in the initial framework document with additional ones in the full volume. The goal is to cover a wide range of ESL and EFL settings, including young learners, teens, adults; school courses, intensive English programs, adult workplace English, and English for specific purposes (academic and professional); one-computer classroom, class-lab, and fully on-line environments.

#### **6. Next steps**

We anticipate the final review of the draft standards presented here will take place soon after this writing, with the initial framework document published a few months later. The expanded volume with additional vignettes and other support materials will appear a year or so after that. An online component has also been proposed to make the standards available to a wider audience and to allow others to submit vignettes from their own experiences thereby covering a wider range of settings.

Comments on the standards may be sent to the authors and will be forwarded to the Task Force.

#### **Acknowledgments**

The work reported here is the collective effort of the TESOL Technology Task Force. The remaining members, who were unable to attend the WorldCALL Conference, are Deborah Healey (Chair), Oregon State University; Volker Hegelheimer, Iowa State University; Sophie Ioannou-Georgiu, Cyprus Pedagogical Institute; and Paige Ware, Southern Methodist University



# Facilitating Collaborative Language Learning in a Multicultural Distance Class over Broadband Networks: Learner Awareness to Cross-cultural Understanding

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The network technology has enabled us to realize multi-point connections on the Internet using videoconferencing systems that are blended with classroom activities. Assessing the use of this kind of integrative technology, however, has not been surveyed enough to facilitate language learning in a multicultural distance class over broadband networks. This paper discusses different pedagogical effects concerning learners' awareness to cross-cultural understanding. The analysis based on questionnaires put to the participants indicates that when placed in a three-point connection environment, as opposed to a two-point connection environment, students with certain characteristics tend to participate more positively and with more awareness to cross-cultural understanding. This leads us to the conclusion that a synchronous distance class using a multi-point connection can provide students with a better environment for raising cross-cultural awareness.

## 1. Introduction & Literature Review

The role of networking technologies has become increasingly more important with the employment of broadband networks which can facilitate cross-cultural understanding anywhere around the globe. The development of IP networks or the Internet made it possible for us to send all phases of voice, images, and text data, simultaneously and inexpensively, thereby facilitating language classes in a global setting (Simonson et al., 2005).

There has been much data accumulated between educational institutions in two countries, and a number of studies have been conducted in this area (Fernandez et al., 2001), (Kishida et al., 2003), (Yamada et al., 2006). For multilateral institutions, however, it is still a challenge to develop educational software on the Internet. Our project promoted synchronous and symmetric communication within high-quality video conferencing in multicultural language classrooms where non-verbal communication plays an important role for mutual understanding (Nishihori et al., 2004).

It is important to accumulate data in order to evaluate what kind of benefits this network enlargement can give to students (Nishihori et al., 2006) and to integrate technologies and learning flow into classroom activities (Barr, 2004). This paper compares the data of Japanese students experiencing the change of setting from a two-point connection to a three-point or even a four-point connection.

## 2. Distance Class & Network Configurations

This project was implemented in an English writing class at Hokkaido University, Japan, during the second semester of 2005, with an emphasis on computer-mediated communication. Interactive communication was achieved by means of a text-based chat called "Chat'n'Debate" and a web-based voting system called Culture Box along with a full-specification High-definition Digital Video conferencing system called "Ruff-HDV" with students in Seoul, Korea and Shanghai, China. In 2006, this was expanded to include Thailand.

A high-definition videoconferencing system, whose images were projected onto large screens rendering them life-sized, was introduced to establish high fidelity communication for this project. The HDV standard was designed to focus on recording HDTV (High-definition Television) formatted signals on DV (Digital Video) tape. We have developed a new 1080/60i HDV conferencing system, which was implemented as software running on the Microsoft Windows XP operating system.

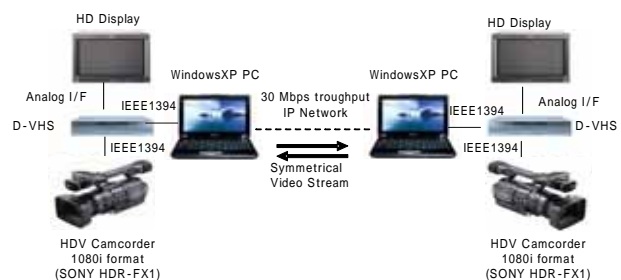


Fig. 1. Ruff-HDV Configuration

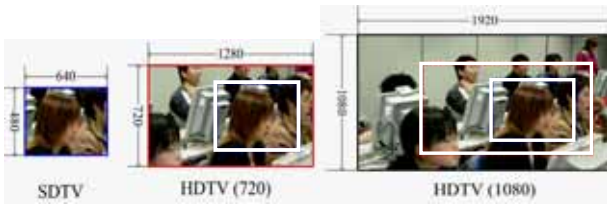


Fig. 2. SD and HD Comparison

Fig. 2 shows the difference in the view angular distance. Since HDTV has three or six times more pixels than SDTV, the HDTV system can cover more students than SDTV with fixing the number of pixels per subject. Only one student and the space in his/her neighborhood can be taken by using the SDTV system. By using HDTV, however, five or eight students can be shown with the same precision and a wide field angle shooting camera without panning. One of the most important features of a video conferencing system for distance learning is the fidelity of its reproduced life-sized image and sound which is instrumental in creating a high-fidelity environment (Nishinaga et al., 2008).

With regard to the network, an Internet connection was used in addition to a high-speed network for academic research between JGN2 in Japan and KOREN in Korea to connect four universities in Asia.



Fig. 3. Distance Class Overview

### 3. Data Collection and Analysis

The results of our multicultural project were obtained by the following questionnaires.

#### 3-1 Questionnaire 1 (Perceived Usefulness)

Students' perceived usefulness of this type of multilateral distance class was gained from five perspectives; whether this class was (1) enjoyable, (2) informative, (3) better than ordinary language classes, (4) preferable in terms of its activities and

(5) successful in meeting students' expectations. After this experimental class, an anonymous questionnaire in English was distributed to students in three countries who awarded a numerical score from five (strongly agree) to one (strongly disagree) on the five-point Likert scale.

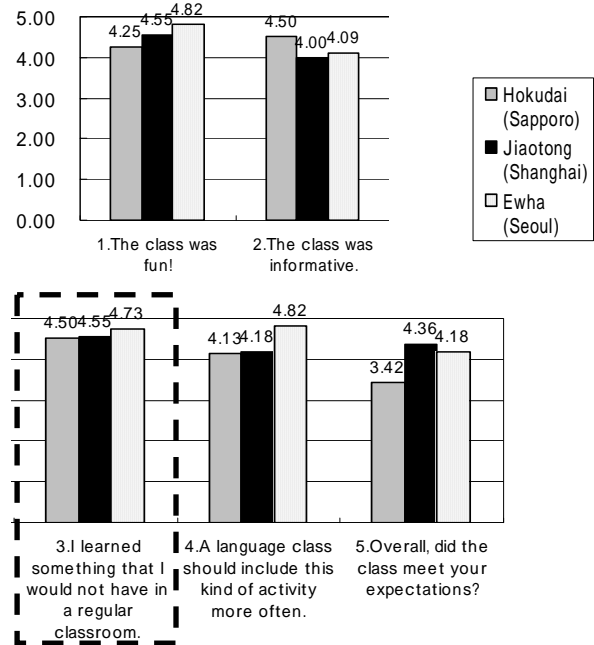


Fig. 4. Results of Questionnaire 1

The results indicate that there was a high degree of unanimity among students: they were very positive in actively involving themselves in the real-time exchange of opinions. The average evaluation exceeds four points in all the questions except item No.5. As marked in Fig. 4, item No. 3 showed the highest unanimity among three countries about the new type of learning.

#### 3-2 Questionnaire 2 (Reactions at a Glance)

It is essential to capture and compare the exact nature of the students' reactions which were simultaneously coming in from three separate countries, although we did in fact notice a high degree of unanimity among them. PCA (principal component analysis) was employed in our study in order to obtain this multi-dimensional data. PCA involves a mathematical procedure that transforms a number of possibly correlated variables into a smaller number of uncorrelated variables. In order to promote multicultural connections for educational purposes such as ours, we needed to develop a method to analyze data and capture a clear image of multicultural reactions at a glance. Principal components obtained by this method can project the multivariate data vectors on the space to visualize three-way reactions.

In order to grasp the correlations within a multilateral context, a number of correlated variables are transformed into a small number of uncorrelated variables, called principal components, by way of the PCA.

Table 1. Principal Component Loading

	PC1	PC2	PC3
q1	0.9963985	0.08479405	7.517198e-16
q2	-0.8375678	0.54633344	4.832634e-16
q3	0.9086710	0.41751282	-2.690394e-15
q4	0.8398175	0.54286884	1.992162e-15
q5	0.8311057	-0.55611452	5.142347e-16

(e-16 stands for ten to the power minus sixteen.)

With regard to PC1, questions 1, 3, 4 and 5 indicate that the loading is large; but for question 2, we can see that it is small (Table 1). We can conclude that PC1 shows perspective (1) “enjoyable”. With regard to PC2, the loading of questions 2, 3 and 4 is relatively large; but for questions 1 and 5, it is small. We can assume that PC2 concerns perspective (2) “informative”.

Table 2. Cumulative Proportion

	PC1	PC2	PC3
Standard Deviation	1.979	1.041	3.5e-15
Proportion of Variance	0.783	0.217	0.0e+00
Cumulative Proportion	0.783	1.000	1.0e+00

The cumulative proportion becomes one by PC1 and PC2. According to this analysis, the obtained principal components can project the multivariate datavectors on the space using PC 1 and PC 2.

By using a plot of the new data points, we are now able to grasp the relative reaction of students in each country at a glance.

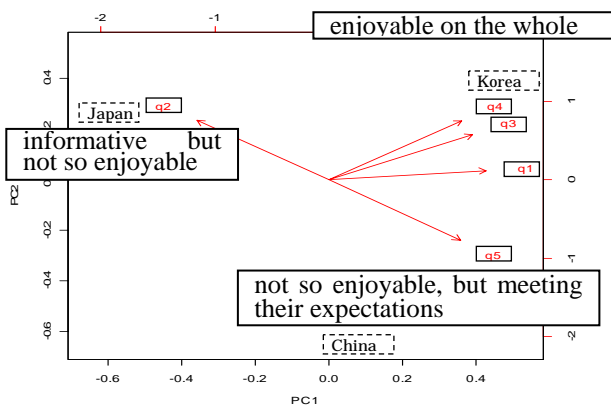


Fig. 5. PCA Analysis

3-3 Questionnaire 3(Three or More Connections)

In order to compare the effects between two-point and three point connections, a questionnaire was

distributed only to Japanese students who participated in both classes. Students awarded a numerical score from five (very much) to one (not at all) on the five-point Likert scale to the questions from Q1. awareness of being watched (or listened to), Q2. learned anything? , Q3. efforts to watch other classes, Q4. efforts to listen to the class, and Q5. efforts to participate actively.

Figure 6 shows the comparison of average scores of Q1 to Q5 in both types of connections. The results of Q5 shows that there is a significant difference in efforts to participate actively in the case of the three-country connection compared to those for the two-country connection. (t=2.453; df=43; p<0.05) (Nishihori, Akakura, Nagaoka & et al., 2007)

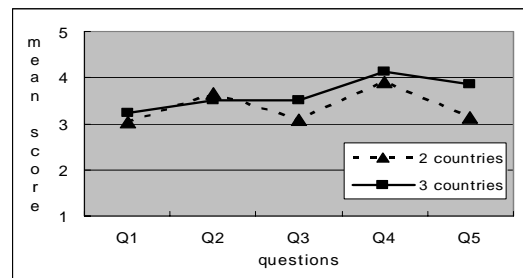


Fig. 6. Comparison of the Mean Score from Q1-Q5

This data indicates that the three-country connection has a more positive impact in the following areas, compared to those of the two-country connection.

a	awareness of being watched (or, listened to) by other class(es)
b	efforts to watch other class(es)
c	efforts to participate actively

There is no significant difference between the two types of connections. However, we can see a difference between the two groups of students in the three-point connection. This will be explained by comparing the class attitude of the two groups of students; those who answered that they learned much, i.e. PE (positive evaluation) group, and those who answered that they learned less, i.e. NE (negative evaluation) group in response to Q2.

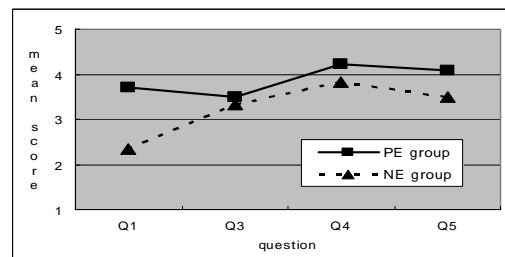


Fig. 7. Comparison of Evaluation by the Difference of Awareness to Learning

Fig. 7 shows that the PE group participated in the class more actively than the NE group. In particular, there is a valid significance concerning Question 1. ( $t=2.441$ ;  $df=18$ ;  $p<0.05$ )

The students were asked about their preference with regard to the number of participating countries: Q7. How many countries do you think should participate? The PE group chose three countries more than the NE group which didn't even chosen four countries at all.

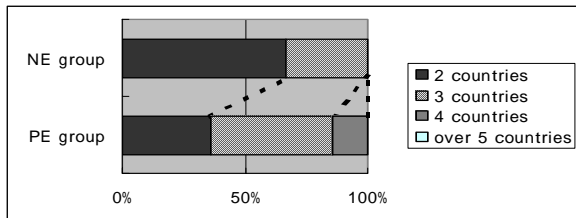


Fig. 8. Number of Countries Preferred

Fig. 9 shows that in the NE group there are many students who chose the answer “chat” only; whereas in the PE group, many students have chosen the answer both “chat and visual images”. Most of them have backed this up with the reason: a. “It gives us information.”

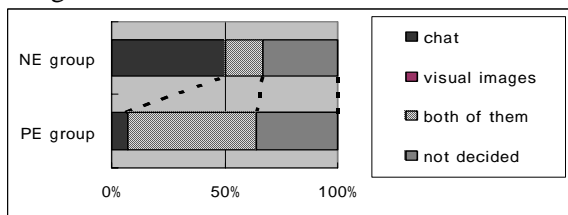


Fig. 9. Visual Images VS Chat

As shown in Fig. 10, it is interesting to see that students included cultural factors in their answers when choosing the three countries to Q7. Students chose d) and f) from the various answer choices, which shows a strong tendency to want various participants for various viewpoints. The possible answers were: a) too many participants to think about, b) too many participants to read the results & watch, c) too many participants who turn us into onlookers, d) a variety of participants to understand various cultures and ways of thinking, e) a variety of participants to have various viewpoints, f) a variety of participants will make the class lively and fun, g) other.

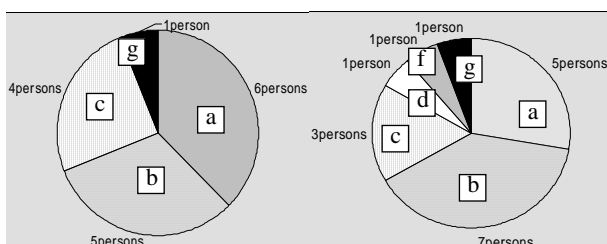


Fig. 10. Answers for [1.two] (left) & [2. Three] (right)

#### 4. Conclusions and Future Considerations

It is certain that the utilization of videoconferencing using multi-point connections is of great importance to facilitate collaborative language classes on the Internet for students to acquire a better awareness of cross-cultural understanding. Further investigation will be necessary in order to promote multi-point connections based on a much more detailed survey of learners' awareness corresponding to more expanded network environments.

#### Acknowledgments

This study is supported by Grant-in-Aid for Scientific Research (B) No. 17300275 from Japan Society for the Promotion of Science.

#### References

- Barr, D.(2004). *ICT-integrating computers in teaching: creating a computer-based language learning environment*. Switzerland : Peter Lang Publishing.
- Fernandez, D., Garcia, A. B., Larrabeiti, D., Azcorra, A., Pacyna, P., & Papir, Z. (2001). Multimedia services for distant work and education in an IP/ATM environment. *IEEE Multimedia*, 8(3), 68-77.
- Kishida, T., Maeda, K., & Kohno, E. (2003). Realization of active collaboration in distance-learning on the internet. *Information and Systems in Education*, 2, 77-84.
- Nishihori, Y., Akakura, T., Nagaoka, K. & et al. (2007) A comparative analysis of learner awareness between multi-point connections in a videoconferencing class. *The Supplementary Proceedings of ICCE2007 Poster Papers*, 45-46.
- Nishihori, Y., Nagaoka, K., Nishinaga, N. & et al. (2006). Enabling a multilateral distance class between China, Korea and Japan. *Effective Utilization of Technologies: Facilitating Intercultural Understanding*, 383-386. IOS Press.
- Nishihori, Y., Nishinaga, N., Nagaoka, K., Tanaka, K., Okabe, S., & Yamamoto, Y. (2004). Enabling cross-cultural learning communities - collaborative networking technologies and their pedagogical implications - . *Information and Systems in Education*, Vol.3, No.1, 57-66.
- Nishinaga, N., Nishihori, Y., Nagaoka, K., & et al. (2008) Developments in networking technologies to create a multilateral class in the internet, *International Journal of Internet Education*, Vol.3, 78-85.
- Simonson, M., Smaldino, S.E., Albright, M.J. , & Zvacek, S.(2005). *Teaching and learning at a distance: foundations of distance education*. NJ : Prentice Hall; third edition.
- Yamada, M., & Akahori, K. (2006). Presenting information to assist learners in learner-centered communicative language learning using videoconferencing. *Information and Systems in Education*, Vol.5, No.1, 5-16.

## Phonics Rhymes

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Phonics teaching in Japan has had its problems when put to practical use. Students who grow up in an English-speaking environment can easily associate the sounds with the alphabet letters; however, to other students, who lack the early years exposure to these sounds, find it difficult in recalling them. These students need a better method in remembering those foreign sounds that lead to reading.

We have developed a program that uses phonics in a blend of vowels and consonants. This sight-reading approach is set in a rhythmical cadence for the students to practice. We call this program PHONICS RHYMES.

### 1. LESSON OBJECTIVES

#### 1.1 PHONICS THROUGH SOUNDS

This Phonics Rhymes program exposes students to English letters in a rhythmical form. This helps them to capture the intonation and phrasing.

The students listen to words and immediately repeat in fast tempo. In this way they naturally learn proper pronunciation. Rhythmical repeating of these rhyming words makes them clearly sound out the vowels. In addition, the fast tempo drill causes the students to avoid unnecessary vowel sounds.

In turn, they can gradually move somewhat effortlessly into text reading.

The overall improvement in their pronunciation naturally leads to effective reading and writing skills.

#### 1.2 PRESENT PHONICS APPROACH IN JAPAN

Generally in Japan, students are taught phonics rules in addition to single letter sounds. Presently, learning single letter sounds of the entire alphabet is the basic premise of phonics in general.

However, this approach takes immense amount of time for ESL students to master. And ESL students are not familiar to native English sounds.

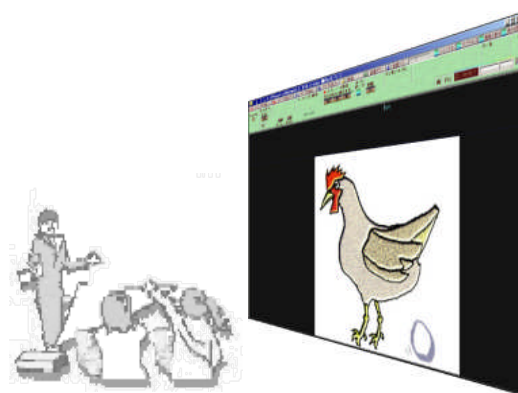
Therefore, their pronunciation sounds Japanese rather than English. It is called "katakana eigo".

In addition, phonics rules have many

exceptions that cause students to become confused. For example "come, some, love, dove, glove, move, prove" does not follow the silent "E" rule like "dome, home, Rome, stove, grove."

Our new phonics approach "Phonics Rhyme" is not to teach students the number of rules as a step in introducing reading techniques. But instead we approach it in a manner that is easy to begin reading practice. Phonics Rhyme approach is to practice common set letter groups in a rhythmical and rhythmic jingle style manner. This technique showed immediate results in early students.

### 2. LESSON FLOW



#### 1.1 STEP 1 / Card1 / Listen & Speak

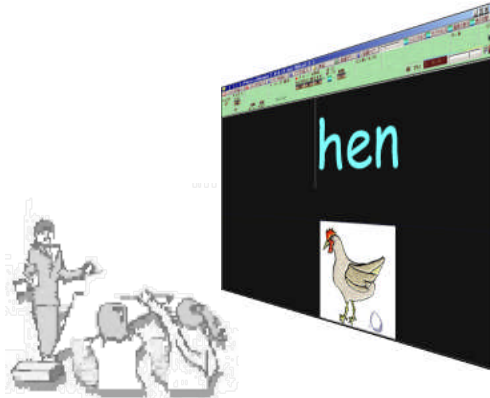
In the beginning, Phonics Rhyme Cards are used to introduce 18 new words.

The students focus on the picture and the sound

along with a text simultaneously. The text is first very small and next much larger. The simple illustrations make it easier to understand the meaning of the words with minimal use of Japanese directions. The instructor can vary the way words are introduced to keep the students interested as well as challenging them.

With clear sound and large illustrations, students can learn the words quickly.

### 1.2 STEP 2 / Card2 / Listen & Speak



The text becomes much larger than in Step 1.

The students watch the letters along with the sound simultaneously. Then they can learn the sound of the letters. Students begin to read the words naturally.

### 1.3 STEP 3 / Tri-Card / Listen & Speak



The students practice with three rhyming words that are grouped together as illustration and repeated in quick tempo.

The two-letter syllable is repeated twice followed by the three family words illustrations.

The students practice the words through the pictures.

They will learn the meaning of the words in preparation for the next step.

### 1.4 STEP 4 / List / Listen & Speak



Phonics Rhyme List is used as a drill in repeating the sounds and words without pictures. The entire list of words is seen all at once.

Sounding out the syllables followed by the 3 words family, the students can tune themselves to the correct pronunciation without much effort.

Pronunciation is enhanced through rhythmical drills. Basically the consonants are clearly heard as well as the vowels. That is the consonants are pronounced as consonants without vowels following them like Japanese sounds.

### 1.5 STEP 5 / Text / Listen & Speak



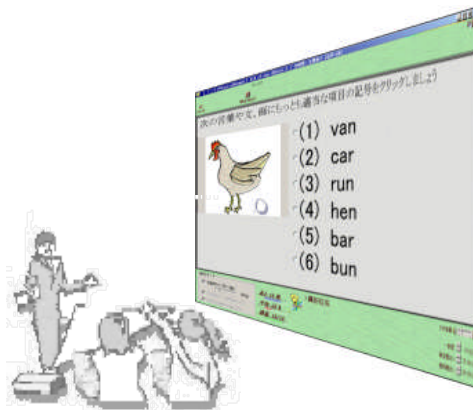
From step 1 to 4 students have been practicing single words.

And now step 5 this drill incorporates those

words within a sentence. In addition other words are included as a means to make a complete sentence. These words are colored in black and the practiced words are in red. The expectations were that they could read the red words but in actual practice they learned to read the black words as well. Since these black words appear often in other sentences, students naturally learn them. Actually teachers gave little instructions on how to read them.

The students tend to read in phrases unlike the staccato reading of past students who practiced phonics in Japan. The intonation is very natural and fluid. This makes it easy to listen and understand for native speakers of English.

### 1.6 EXERCISE / e-Games / Listen & Speak

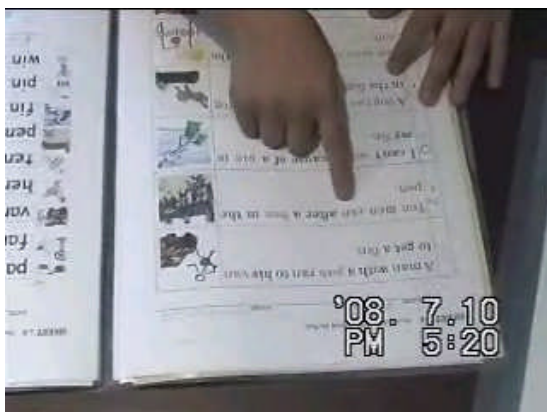


After the students can relatively read out loud, they can begin training by use of several different word games.

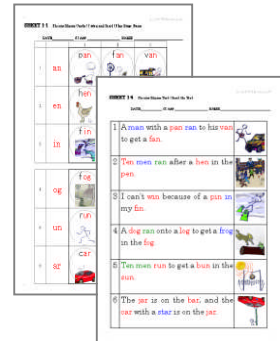
These games involve hearing, reading, dictating and understanding in an amusing format.

The students can playfully practice with little stress.

From the instructor's view point this is a very good observation time to see how much the students have achieved recognition of these words. And also it allows the instructors to move ahead or review once more according to the student's present level.



### 1.7 EXERCISE PRINT / Drills / Read & WRITE



In the final stages of the sections, students can put to use what they have been practicing.

In these drills, their ability to recognize, read and write is developed further by building confidence.

However, it is important not to be too critical of their mistakes.

The objective is to reinforce their lesson content.

### 3. SUMMARY

Within less than a year of practicing this phonics rhyme program, students were able to read actual sentences with some understanding.

The student's pronunciation improved greatly as well as letter recognition.

The intonation is very natural and fluid.

Natural phrasal reading has taken hold.

Students' confidence in reading has grown.

- A The students take to the sound focused program with great interest.
- B Through clear audio letter recognition is enhanced.
- C The students learn natural phrasing and pronunciation.
- D This vowel emphasized drill is suitable for ESL Japanese students.
- E Phonics Rhyme Method shows great potential.

## Software System

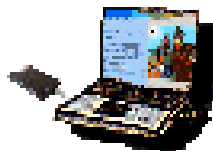


This computer assisted language lesson consists of the use of a computer, a projector, a screen, a speaker system and a movie-Boxed. Showering the students with sound and large illustrations along with text, is the main element of the lesson. The average number of students in a class is 10.

The classroom in general does not have to have internet access or a special computer lab setting. Any classroom can be used for this type of lesson.



The phonics rhyme program is contained in the movie-Boxed unit. By connecting this unit into the USB port, the instructor can immediately use it. The lesson plan can be prepared at home by connecting the unit to the computer. Then the unit can be taken to the school computer for classroom use.



This unit also contains multi-media player Mint and other lesson materials: Mother Goose nursery rhymes, phonics rhymes, chants, songs, stories, vocabulary list, and movies with motion-flash card program...

This Player Mint can simultaneously presents sound, pictures and text, in various format. For example, in single words, phrases, or sentences that can be repeated, silenced, reviewed, and set at different speeds or tempo. The instructor can quickly search and find sections that is needed for presentation.

The advantage of using this program is for the students to learn the meaning of the words without the need for Japanese translation. Through the illustrations as they are hi-lighted to show the focus of the word, phrases and sentences, the

students naturally learn the meaning.



With this program, ESL students are exposed to native English speaking (sounds with meaning) environment as a basis for learning English.

## Reference

TABUCHI Ryuji & Mike CANEVARI (2008)  
Improvement In pronunciation through phonics rhyme drills; *LET (The Japan Association for Language and Technology) Kanto Chapter, The 120th Conference*

TABUCHI Ryuji & Mike CANEVARI (2007)  
Learning natural English through motion pictures: Developing data based corpus, English expressions without the use of Japanese translations; *LET (The Japan Association for Language and Technology) The 47th Annual Conference*



## Metacognitively Enhanced Writing Courseware: "Kagoshima Academic Writing Space"

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In this paper, we report on the pilot stage of development of CALL courseware, entitled "Kagoshima Academic Writing Space" (KAWS) for introductory academic writing courses. The paper reports on the following three stages of development: 1) theoretical background; 2) technical and organizational design; and 3) results of pilot studies in 2004, 2007 and 2008. The courseware may be used as self-study material, in-class material, or in combination with other materials. It is also packaged in two versions: a Web version and an offline USB version, both of which include DokuWiki as primary writing practice platform with links to tools, such as WebLEAP and ETS Criterion<sup>SM</sup>. The Web version also uses Moodle to provide interactivity lacking in the html-based materials.

### 1. Introduction

The use of CALL materials in Japanese universities has become increasingly common since the late 1990s. In recent years, the diversification of the "General English" curriculum has stimulated the development of CALL materials designed for use in skill-specific courses, such as preparation for standardized proficiency tests. Few CALL materials have been developed for writing courses, particularly those at the more advanced level.

In this paper, we report on the pilot stage of development of CALL courseware, entitled "Kagoshima Academic Writing Space" (KAWS) for introductory academic writing courses. The paper reports on the following three stages of development: 1) theoretical background; 2) technical and organizational design; and 3) results of pilot studies in 2004, 2007 and 2008.

KWAS aims to create a learning environment that raises metacognitive awareness of the salient characteristics and cognitive processes of academic writing. The courseware follows the five design guidelines outlined in Chan and Kim (2004): "1) maximizing interactivity and increasing learner involvement; 2) catering to individual preferences and abilities; 3) facilitating the acquisition and use of strategies; 4) encouraging and enabling inductive learning; 5) aiding cognitive processing and increasing metacognitive awareness." The

courseware also encourages learners to apply their knowledge of academic writing in Japanese to academic writing in English, and, depending on individual needs, to learn more about academic writing in Japanese. The courseware is also designed to fit the 90-minute-once-a-week structure of university classes in Japan.

### 2. Outline of Materials

"Kagoshima Academic Writing Space" is flexible for both learners and teachers. It may be used as self-study material, in-class material, or in combination with other materials, such as textbooks and websites. KWAS has its origin in "Miyako Academic Writing Space," a 10-unit set of html-based materials developed by Robert J. Fouser at Kyoto University. These materials consisted mostly of explicit descriptions of academic writing with an interactive exercises interspersed in the reading. Upon receiving a Grant-in-Aid from the JPSP in 2007, five units were adapted for use within Moodle, and new exercises designed to increase interactivity were developed. In 2008, a Japanese translation of the English text was produced to help students who wish to check their understanding of the English descriptions.

Several additional tools have been added to the materials since 2007. WebLEAP, a Java Web corpus analysis tool that was originally developed by

Yamanoue Takashi has been incorporated into the project, both in a USB and Web version. Links to other supplementary materials, such as ETS Criterion<sup>SM</sup> and online dictionaries have been incorporated into the project. Original plans called for using AbiWord as a practice writing space, but DokuWiki was chosen instead because each draft can be saved, and compared with subsequent drafts and the final product. DokuWiki can also be used on easily on a USB, without the need to login. Files in DokuWiki are saved as text files, and can be accessed without going into a database. A demo version of USB-based system was developed for the World CALL 2008 presentation and will be tested in pilot studies in 2008 and 2009.

### 3. Pilot Studies

The first pilot study was conducted in 2004 in a second-year writing class of 30 students at Kyoto University. Students used ten units of "Miyako Academic Writing Space" and completed a ten-page academic paper in English. Students also wrote writing journals each week to reflect on their progress in writing. A questionnaire on the materials showed that students were pleased with the content, but found the materials somewhat difficult to read on the computer screen.

The next pilot test took place in 2007 in two first-year writing classes of 12 students each at Tokyo University. Five units of "Miyako Academic Writing Space" were adapted for use in Moodle. Using Moodle created a more interactive environment than the html-based materials. Writing assignments using the "exercise" and "forum" functions of Moodle allowed teachers to provide open and private feedback on student writing. The "forum" function allowed students to share ideas with and to learn from each other. A questionnaire at the end of the semester showed that students were pleased with the contents, but that they found onscreen reading burdensome. They also found the Moodle exercises helpful. This confirms the findings of the 2004 and suggests that students have clearly defined views of what is appropriate for onscreen reading.

A pilot study at Kagoshima University was also conducted in 2007. A USB version of WebLEAP was distributed to a first-year English class of 50 students. The class required short writing assignments, and students were encouraged to use WebLEAP to check their writing. Though clear instructions were given, few students used the USB, and it was difficult to determine those who had. This suggests that clear instructions and frequent follow up is necessary to show students tangible

benefits of using tools, such as WebLEAP.

The most recent pilot study took place in a small writing class for three graduate students at Kagoshima University. This class used the html-based materials linked to a class site in Moodle. The class made extensive use of ETS Criterion<sup>SM</sup> to encourage students to improve their writing as they apply what they learn in the materials and other supplementary materials. Results showed that students made considerable improvement over the semester, particularly in organization and paragraph development.

### 4. Conclusion and Future Directions

Conclusions from the pilot studies suggest that materials with explicit explanations about academic writing help students to become aware of the style and conventions of academic writing. In structured tasks, most students are able to apply this knowledge effectively, which suggests that materials that increase metalinguistic awareness of academic writing are effective improving student writing ability in a relatively short period of time.

In the pilot studies, students generally had a positive impression of the explicit explanations and the organization of the materials, but that they were not positive toward onscreen reading. Student impressions of materials are critical in encouraging students to use the materials because, as in other areas of learning, materials must reach a certain level of user-friendliness so that students will actually use them.

Revisions after each pilot study and ongoing extensions have produced a system as described in Fig. 1 below.

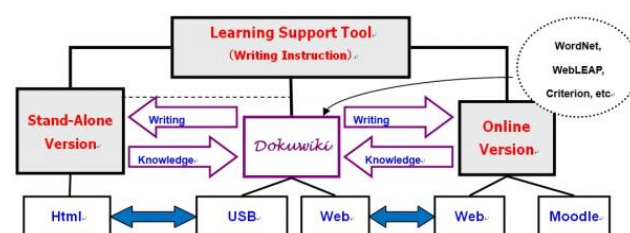


Fig. 1. Overview of emerging system as of August 2008

DokuWiki is the main practice writing space, with explicit descriptions of and exercises related to academic writing presented in online versions (Moodle and html-based Web), and an offline stand-alone html version. The entire system may be used offline on a USB or complete online, depending on needs. A hybrid system of online materials and an offline DokuWiki writing space is another possible approach. This hybrid system will be piloted at Kagoshima University in the fall of

2008. Teachers and students are free to develop their own hybrid approaches depending on their needs and technological environment.

The combination of wiki-based writing practice and explicit explanations of academic writing and related practice tasks forms the basis of the system of courseware that will be completed in 2009. The benefits of using wikis, particularly the capability to compare versions will be explored in detail in future pilot studies. Future developments also include use of "Moodle Lite," a mobile version of Moodle developed at Kagoshima University that can be accessed on Japanese mobile phones and other mobile devices, such as PDAs and iPod Touch. Incorporating Moodle Lite into the courseware opens the door to development of various vocabulary and mechanics exercises. Another area of future development is incorporating tools into the DokuWiki editing window and interface and into the USB-based version of Firefox that is used to access DokuWiki

### **Acknowledgements**

The authors would like to thank the Japan Society for the Promotion of Science (JSPS) for providing funding for the research with a Grant-in-Aid (Project No. 19500810) from 2007-2009.

### **References**

- Allison, D. (2004). Creativity, students' academic writing, and EAP: exploring comments on writing in an English language degree programme. *Journal of English for Academic Purposes*, 3, 191–209.
- Chan, W.-M., & Kim, D.-H. (2004). Towards greater individualization and process-oriented learning through electronic self-Access: Project "e-daf." *Computer-Assisted Language Learning*, 17(1), 83-108.
- Coffin, C. et al. (2003). *Teaching academic Writing: A toolkit for higher education*. London: Routledge.
- Dodigovic, M. (2003). Natural language processing (NLP) as an instrument of raising the language awareness of learners of English as a second language. *Language Awareness*, 12(3&4), 187-203.
- Hirose, K. (2003). Comparing L1 and L2 organizational patterns in the argumentative writing of Japanese EFL students. *Journal of Second Language Writing*, 12(2), 181–209.
- Katznelsona, H., Perpignanb, H., & Rubin, B. (2001). What develops along with the development of second language writing? Exploring the "by-products." *Journal of Second Language Writing*, 10, 141–159.
- Mohan, B. A., & Lo, W. A.-Y. (1985). Academic writing and Chinese students: Transfer and developmental

- factors. *TESOL Quarterly*, 19, 515–534.
- Samraj, B. (2004). Discourse features of the student-produced academic research paper: variations across disciplinary courses. *Journal of English for Academic Purposes*, 3, 5–22.
- Schoonen, R. et al. (2003). First language and second language writing: The role of linguistic knowledge, speed of processing, and metacognitive knowledge. *Language Learning*, 53(1), 165-202.
- Swales J, & Feak, C. (1994). *Academic writing for graduate students*. Ann Arbor: University of Michigan Press.

## CALL in Turkey: Past, Present and Future

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The use of computers in Turkey started during the 1960s firstly in governmental institutions in Turkey and later in private sectors. In 1985, computers were introduced to secondary schools and computer laboratories were established in more than fifty schools. Starting from 1985 and through 1990s, computers were introduced to other schools and new laboratories were established. However, there seems to be a problem regarding the use of computers in language as well as other classrooms. Throughout these developments, something goes unnoticed: the importance of training teachers and exploiting the use of computers more than as a word processor in the classroom. The current situation in Turkey, especially from the point of CALL, can be best described as “We have the hardware, we have the software, but we lack the humanware” (Warschauer, 2002). This paper deals with CALL in Turkey with reference to the brief history of use of computers, qualitative and empirical studies on CALL in Turkey and the importance of training language teachers.

### 1. A brief history of use of computers in Turkey

The use of computers in Turkey started during the 1960s firstly in governmental institutions in Turkey and later in private sectors. During the 1970s and 1980s, computers were widely used in these institutions. However, it was not until 1984 that the use of computers by institutions related to teaching and learning were taken into consideration by Milli Eğitim Bakanlığı (MEB) (Ministry of Education). Committees related to CAI in Ministry of Education were formed and studies with the framework of ‘New Information and Communication Technology’ were commenced (MEB, 1991). In 1985, computers were introduced to secondary schools (Anatolian High Schools and one high school in each city in Turkey) and computer laboratories were established in more than fifty schools by Ministry of Education with the help of World Bank. Software related to Mathematics, Physics, language and many other subjects were distributed to these schools.

Starting from 1985 and through 1990s, computers were introduced to other schools and new laboratories were established. As a result of the widely introduction of computers in schools, there was a high demand for trained teachers. In 1998, in more than twelve universities, departments of Computer Education and Instructional Technology were established to train teachers in the field of computers and computer education. Table 1 outlines a brief history of the use of computers in education in

Turkey.

Table 1  
A brief chronological history of computers in education in Turkey

1960	Introduction of computers in state institutions and private sectors
1960s and 1970s	Wide-scale adoption of computers in state institutions and private sectors
1984	Preliminary studies regarding the use of computers in education by Ministry of Education
1985	Introduction of computers to secondary schools and establishment of computer laboratories
1985-1990s	Wide-scale adoption of computers in schools
1998	departments of computer education and instructional technology
1990s and 2000s	Experiments in the integration of computers into education Research in Computer-assisted instruction

### 2. Qualitative and empirical studies on CALL in Turkey

In the literature, almost all of the studies conducted with regard to CALL in Turkey are qualitative studies carried out as master theses or dissertations. In these studies, suggestions were made regarding computer-based instruction and some models were proposed for the integration of computers in classrooms (Gökdaş, 1996; Titiz, 1997; Yaşar, 1997; Dursun, 1998; Bayır, 1995). Gökdaş

(1996) discussed the computer education in the faculties of education in Turkey. Dursun (1998) reviewed the literature in regard to CALL and the qualifiedness of the teachers to work with the help of CAI in classrooms. The participants were teachers of computer education, teachers working in computer laboratories and administrators, 80 participants in total. The results suggested that only 32.4 percent of the participants felt comfortable while benefiting from computer-assisted instruction and using computers. In Bayır's experimental study (1995) 42 employees from the Central Bank of Turkish Republic (graduates of high school and university) were the participants. The results suggested that computer-assisted multimedia instruction had a significant effect on learning according to one's own pace. The results also indicated that participants preferred computer-assisted multimedia instruction, and the participants explained that they learnt better in this type of instruction. For recent discussions on CALL in Turkey, please refer to The Turkish Online Journal of Educational Technology (<http://www.tojet.net>), a quarterly, peer reviewed international electronic journal, which includes studies conducted in Turkey as well as the ones in other countries with free access to all of the issues.

### **3. Importance of Teacher Training**

In recent years, technology has been used in all parts of our lives from communication among friends to shopping, from education to media tools. By means of computers and inevitably the Internet, it is getting easier for people to communicate throughout the world. Furthermore, the development of technology has not stopped and no doubt it will go on developing and this makes "the world flattened". As Friedman (2005) claimed "The world is being leveled"; and this leveling process is continuing on every minute. No matter where someone is, in Turkey, in Poland, in Australia, in India or elsewhere, s/he has the opportunity to contact with people around the world without time constraints; and this communication occurs through the computers and the Internet. As for the field of education, it is becoming more important to study the integration of technology. However, throughout these developments in Turkey, something goes unnoticed: the importance of training teachers and exploiting the use of computers more than as a word processor in the classroom. Today, almost all of the schools in Turkey have a computer lab or more, access to the Internet with at least 1 MB speed and some have other equipments such as data projectors and smart boards. Yet, this does not

guarantee the successful application of CALL and it is not enough to just send computers to schools without training language teachers regarding the use of them in language learning. Therefore, the current situation in Turkey, especially from the point of CALL, can be best described as "We have the hardware, we have the software, but we lack the humanware" (Warschauer, 2002). The other question is whether teachers are ready for integrating technology into their classrooms. In other words, it is questioned whether teachers who are "digital immigrants" are ready to teach this generation who are "digital natives". These two terms – digital immigrants and digital natives – were coined by Prensky (2001, p.1). He stated that "our students have changed radically. Today's students are no longer the pupils our educational system was designed to teach". Yet, teacher training programmes often ignore training in the use of information and communications technology and teachers are often far less knowledgeable and skilled than their own students when it comes to using current technology. Considering the technological developments which happen at a breath-taking rate, it has become necessary that teachers change, be trained in terms of technology integration and be equipped with the required tools to meet the current needs of our schools and students who are looking forward to coping with various educational contexts.

In order to achieve this, an appropriate Computer Assisted Language Learning (CALL) training should be provided to pre-service and in-service teachers in Turkey. We need "teachers with basic technological skills who understand the capabilities and limitations of technology in teaching, and who accept responsibility for critically examining the options and their implications" In other words, teachers need to know how to use technology and to understand why they are doing so" (Chapelle & Hegelheimer, 2004, as cited in Chapelle, 2008, p. 589).

### **Acknowledgments**

Literature section is based on my Master's thesis titled as "The effect of computer-assisted language learning on learners' achievement on the TOEFL exam."

### **References**

- Bayır, G. O. (1995). Hizmet içi eğitimde bilgisayar destekli öğretimin etkinliği [Efficiency of computer-assisted instruction in in-service training]. Unpublished master's thesis. Ankara University, Ankara.

- Chapelle, C. A. (2008). Computer assisted language learning. In B. Spolsky and F. M. Hult (eds), *The Handbook of Educational Linguistics* (pp. 585-595). Singapore: Blackwell publishing.
- Dursun, F. (1998). Öğretmenlerin bilgisayar destekli öğretime ilişkin yeterlilikleri ve eğitim ihtiyaçlarının saptanması [Teachers' qualifiedness in regard to computer-assisted instruction and determining the needs of education]. Unpublished master's thesis. Ankara University, Ankara.
- Friedman, T. L. (2005). *The world is flat: A brief history of the twenty-first Century*. New York: Farrar, Straus, & Giroux.
- Gökdaş, İ. (1996). Bilgisayar eğitimi öğretim teknolojisi [Computer education teaching technology]. Unpublished master's thesis. Ankara University, Ankara.
- MEB. (1991). Türkiye'de bilgisayar destekli eğitim [Computer-assisted instruction in Turkey]. Ankara: Metargem.
- Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5), 1-6.
- Titiz, T. (1997). Ezbersiz eğitim yol haritası [The map of way for learning without memorizing]. İstanbul: Beyaz Yayınları.
- Warschauer, M. (2002). A developmental perspective on technology in language education. *TESOL Quarterly*, 36 (3), 453-475.
- Yaşar, Ş. (1997). Expanding the effective use of computers in middle and high schools in Turkey. Eskişehir: Anadolu University Publications.

## Intermediate Online English: an example of self-access courseware development

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The recent proliferation of web-enhanced language learning environments led the author to initiate an R&D project, known as *Proyecto InGenio*, to establish the theoretical background on which to base the creation of a pedagogically sound online dedicated CALL authoring shell. This language-independent tool, which includes templates that integrate video, graphics, audio and text, allows language teachers from around the world to design and publish materials to suit their students' particular needs. Besides having designed the authoring shell, a "content manager" has also been developed to allow language specialists to create a database from which to select materials. In addition, a Language Learning Environment offering courseware for learners of English for Specific Purposes has also been produced.

The increasing demand for high quality innovative foreign language (FL) teaching and learning materials has no doubt influenced the fact that language teachers have had to develop new skills in CALL materials design. Although many language specialists are still reluctant to develop their own materials using dedicated authoring tools, it is the changing understanding of methodological approaches to language learning that has driven the need to offer the FL teaching community a flexible and robust web-delivered authoring tool.

This was the goal underlying *Proyecto InGenio*, one of the R&D projects carried out by the CAMILLE Research Group at the Universidad Politécnica de Valencia in Spain; the creation of a web-delivered language-independent authoring tool capable of managing databases on a remote server and allowing teachers from around the world to design and publish materials to suit their students' particular needs. The implementation of materials is based on the template approach to software authoring (Gimeno 2005), with predefined templates that integrate video, graphics, audio and text. The system includes a "content manager" enabling subject specialists to create a database from which to share and select materials by organising the multimedia components and materials (learning objects) according to a number of specifications (e.g. language, level, skill, target group, etc.), thus creating a pool of multimedia exercises and resources. The authoring tool automatically converts the contents into learner-ready materials in the form of an online course, delivered via the *InGenio* web-based Learning Environment. In addition, the system incorporates an online tutoring and student

assessment utility that allows course tutors to supervise student scores, written input and overall progress. Lastly, the *InGenio* system also includes a module allowing any of the courses designed with the authoring tool to be adapted into any number of source languages to comply with different learner L1 needs.

When combining the principles underlying teaching languages and e-learning as in *InGenio*, one comes to the conclusion that the learning process must foster a number of strategies to ensure deep learning<sup>i</sup> through critical thinking and analysis of new information and ideas, linking these to already known concepts, and leading to understanding and long-term retention of (newly acquired) knowledge. In addition, the use of Information and Communications Technologies (ICT) in the language curriculum has, to some extent, been responsible for the shift from focusing on the teacher to focusing on the learner when designing web-enhanced materials, and has led courseware designers to adopt a constructivist approach to learning, whereby the student is encouraged to actively construct knowledge and the teacher becomes a guide to support learners through the process of learning. In so doing, students must be equipped with all the necessary tools to become independent learners and take responsibility for their own learning. As pointed out by Blin (2005, p.33), "Independent language learning environments present language learning opportunities that do not require the constant intervention of a teacher or that can be pursued outside the framework of an educational institution."

Thus, online learning resources such as the ones

which can be developed using the *InGenio* system should ultimately encourage “active learning”, that is, a context where the learner is encouraged to write, speak, actively participate, interact with fellow learners, etc. in a resourceful and stimulating learning environment, yet not necessarily under the constant supervision of a teacher. This scenario naturally implies making use of currently available technologies such as video and audio conferencing tools, instant messaging tools, blogs, wikis, etc. The very nature of these tools provide learners with a fair amount of independence which nevertheless also requires guidance by a qualified tutor to help the learner orient his or her activity toward the learning process itself and avoid deviating their attention towards other possible distracting scenarios. Learner autonomy, understood as the capacity to self-manage learning, is also one of the key concepts which has rapidly evolved due to the integration of Computer Assisted Language Learning (CALL) into the language curriculum. As Littlewood (1997, p.83) points out, “The autonomous learner takes responsibility for his or her own learning, has developed useful and effective learning strategies and is able to work independently.” In CALL materials’ design, most authors are aware of the fact that a variety of teaching strategies have to be implemented in the courseware in order to facilitate and encourage learners to take up the endeavour of second language acquisition. To this end, the *InGenio* authoring tool has been designed to include, as well as a considerable number of exercise templates, reference materials such as grammar notes, cultural information, multilingual sound-enhanced glossaries, etc. in order to provide learners with all the necessary resources that contribute toward enriching comprehension and understanding of the target language. Another important factor to bear in mind is the need for the inclusion of meaningful corrective feedback on which the learner can rely to support the acquisition process.

In terms of methodology, *InGenio* can be adopted to suit a large number of teaching methodologies, ranging from structural methods to a more communicative approach to language learning. The exercise templates are particularly suitable for designing courses that attempt to acknowledge the fact that a true linguistic competence implies being able to use the language that is appropriate to a given social and cultural context in order to achieve a specific communicative goal. To do this, learners need knowledge of the linguistic forms, meanings and functions for a given context. To achieve this end,

*InGenio* provides a variety of goal-oriented learning strategies in a media rich electronic environment that supports the study of the target language. The notion of supporting the study of the language is crucial here. Our objective was not so much the creation of software to “teach” a language, but the construction of learning resources in the shape of an environment that would provide the student with all the tools and information, short of a live teacher, that they might need to undertake a language course.

Because “there are strong arguments to support the notion that students will need higher levels of explicit and implicit assistance in computerised than in face-to-face environments” (Trinder, 2006, p.97), online courseware must replace the absence of face-to-face interaction with techniques and strategies which give the student appropriate support and backing. To this end, the *InGenio* system has been designed to foster independent learning and ensures that the most recent Internet-based developments can be integrated into the online courses and, due to its versatility, can be constantly updated as the need may arise.

This is the case of *Intermediate Online English*, a course designed by the author for learners of English for engineering purposes which integrates a fully operational online tuition system allowing course tutors to communicate and interact with registered learners, thus enabling the provision of personalised corrective feedback. Additionally, because learner performance is automatically transferred to the server while the materials are in use, students can call up progress reports and monitor their performance during the course of their work. Their results are presented in percentages, registering date and time, number of completed exercises, scores, etc.



Fig. 1 Exercise from *Intermediate Online English*.

To conclude, the course aims to provide the conditions in which learners can develop communicative competences in their own way and



in their own time. This is achieved, among other things, by presenting a default route to follow, by offering diversity of activities and by developing a progression which moves from receptive to productive skills. Various strategies have been included that are designed to encourage problem solving and resolution of specific tasks, aiming at developing the learner's ability to apply and adapt their knowledge of the target language to specific communicative scenarios. The problems and the tasks, therefore, have been designed to encourage learners to use the target language for a communicative purpose in order to achieve an outcome.

## **References**

Blin, F. (2005). *CALL and the development of learner*

*autonomy - an activity theoretical study*. Unpublished doctoral thesis, Institute of Educational Technology, The Open University, UK. Retrieved June 10<sup>th</sup>, 2007, from <http://webpages.dcu.ie/~blinf/BlinThesis.pdf>

Gimeno, A. (2005). New challenges in developing an online CALL authoring shell, content manager and courseware: the *INGENIO* model. *The EUROCALL Review*, No. 7 (pp 2-11). <http://www.eurocall-languages.org/news/newsletter/7/index.html> [19/08/2008]

Littlewood, W. (1997). Self-access: why do we want it and what can it do? *Autonomy and independence in language learning*, Essex: Longman – Applied Linguistic and Language Study, 79-91.

Trinder, R. (2006). *Language Learning with Computers: The Student's Perspective*. Frankfurt: Peter Lang.

Weigel, V. B. (2002). *Deep learning for a digital age: Technology's untapped potential to enrich higher education*. San Francisco: Jossey-Bass.

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<sup>i</sup> *Deep learning* as opposed to *surface learning*. Weigel, V. B. (2002).

## Blended Learning of Japanese between Tokyo and Taipei

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Currently, various computer/Internet technologies are being utilized to impart education. However, there remain many unresolved issues pertaining to their use. In particular, it is difficult for teachers and learners with different mother tongues to teach or learn the basics of a foreign language through e-learning.

In this study, Japanese teachers in Tokyo taught basic Japanese to Taiwanese learners in Taipei through blended learning. Learners accessed the self-study content on the Internet, and the teachers incorporated 'Moodle' for the course management. A weekly virtual lesson was also organized through a TV-Net meeting system between Taipei and Tokyo. In this paper, we will demonstrate how these courses were managed and on the basis of the evaluation questionnaire that the learners filled out, we will gauge the extent to which the learners enjoy the classes and the level of stress they experience. We will also discuss the future opportunities for language education through computer and Internet technologies.

### 1. Purpose of the project

Currently, various computer/Internet technologies are utilized to enable people to learn Japanese. However, only a few forms offer a comprehensive e-learning Japanese course.

The Taiwanese have numerous opportunities to study the Japanese language. Most universities in Taiwan have a department dedicated to the Japanese language and/or Japanese studies. There are many Japanese-medium schools in major cities. Therefore, in general, Japanese language learners in Taiwan need not have to take the recourse of distance learning. This project aims to explore the possibilities of blended learning. Herein, we have attempted to create a comprehensive blended Japanese learning course.

### 2. Course outline

This project attempts to teach elementary Japanese to novices, and enable them to reach the same level as students in the 4th grade of the Japanese Language Proficiency Test—the official test of the Japanese language. The 4th grade generally requires over 150 hours of learning.

The participants were five university learners who were living in Taipei. We conducted this course from September to December, 2006.

### 3. Details of Blended Learning

Blended learning is the combination of multiple approaches to learning. It can be imparted through the "blending" of virtual and physical resources.

Examples include combinations of technology-based materials, face-to-face sessions, and printed materials.

In this course, the combined approach for blended learning involved a multimedia-supported e-Learning module, controlled by a course management system (CMS). This module system was called "Moodle."

Therefore, even though "Moodle" was based at Tokyo Metropolitan University (TMU), the video and sound files were stored at both the Taipei Municipal University of Education (TMUE) and TMU in order to avoid problems arising from long access time, wastage of time, and irritation to learners. In this manner, all files were accessible from the learners' preferred location.

Further, all learners were able to access the internet from both their universities and homes.

Face-to-face sessions through video conferencing using an IP-based network were used to teach how to communicate and pronounce, which is difficult to accomplish by self-learning. We had 16 weekly lessons over 3 months. Each lesson lasted for 90 minutes, during which we explained sentence patterns in Japanese and vocabulary in Chinese. Subsequently, we performed oral drills and communicative practices in Japanese.

Herein, we did not control the self study of learners; however, in the absence of any supervision, not all learners would diligently study contents on the web. Therefore, the

instructor prepared unit tests after the face-to-face sessions. Learners studied for the unit test through Moodle and then sent the answers by e-mail to the instructor.

**4. Key inquiry of this course**

Non-verbal communication is usually a helpful and direct method used in teaching. Sometimes in e-learning (i.e., face-to-face sessions), learners are unable to make contact through non-verbal communication. This is especially true in the case of teachers and learners who cannot make eye contact via an internet meeting system (Morikawa et al 2001, Sakai et al 2003).

In the case wherein a teacher’s language differs from the learner’s, it is difficult for both to communicate verbally and non-verbally, owing to the language barrier. Moreover, it is challenging for a teacher to provide support to the learner in the classroom through non-verbal communication, emails, forums, or discussion boards.

**5. Access log to study contents**

Table 1 shows the access logs for all learners. Learner 5T accessed course content more frequently than did the other learners. We hypothesized that her access results might affect other results. Therefore, I added up the access results and excluded the results of her access log.

Table 1. Access logs for each learner

learner	s	number of	note
	x	accesses to	
		study contents	
1Y	m	253	a postgraduate learner, he likes Japanese animation
2H	f	334	a university learner
3C	f	332	a university learner, holder of the 4th grade of the Japanese Language Proficiency Test.
4O	f	261	a university student
5T	f	1071	a university student, she loves Japanese singers.

The left side, A, provides a count of all learners’ access patterns. The right side, B, shows the results for four learners except 5T. In both A and B, the contents that comprise only the English version are lower. These are “New word,” “Grammatical Notes,” “Useful Daily Expression,” and “Sound System of the Japanese language.”

A learner commented on the questionnaire that “When I looked at the site and saw that it was full of English, I was afraid.”

In some Asian countries, many teachers and learners are not proficient in English. Moreover, it is difficult for a learner to study another language in a language that is not their mother tongue.

Table 2. Access logs for all learners

	A: All learners		B: Four learners except 5T	
1	257	Unit Test	222	Unit Test
2	245	PDF Text	103	PDF Text
3	134	Virtual Lesson	51	Intro Quiz
4	103	Video Quiz	43	Video Quiz
5	79	Dialogue	41	Virtual Lesson
6	77	Intro quiz	40	Dialogue
7	66	PPT	32	Drill
8	64	Drill	30	Writing System of Japanese
9	44	Writing System of Japanese	24	PPT
10	31	New Word	20	New Word
11	27	Grammatical Notes	15	Grammatical Notes
12	19	Sound System of Japanese	11	Useful Daily Expression
13	18	Useful Daily Expression	9	Sound System of Japanese
14	17	Kana Sound quiz	4	Kana Sound quiz
15	2	Te-form		

Another noteworthy point is that certain learners accessed a forum board, which we did not use in this course. If we can effectively utilize such a forum function to teach learners and give assignments, the learners may learn the course content more effectively.

Therefore, when learning a language, it is necessary to bring learners and teachers together, especially at the beginner’s level.

**6. Consideration**

In this course, the instructor did not instruct the learners to study the entire course content. Instead, the instructor entrusted the learners with the responsibility of studying the course content. As a result, the access logs were different for each learner.

Fung reported that the lack of time and the learners’ preference for spending time on online learning formed the most significant barriers (Fung 2004), also showing that some learners did

not thoroughly study in the self-study material in this course.

However, one learner who did not fully access the contents performed well in the face-to-face sessions. Moreover, he sent post cards to the instructor when he was traveling. Such learners cannot be expected to study on the web by himself; however, he may extract some learning value through direct contact with a native Japanese teacher.

Learner 5T actively accessed the contents. However, she hesitated in face-to-face sessions, was unable to answer fluently, and would ultimately stop answering. It appeared that she was shy by nature and afraid of making mistakes. However, she was highly motivated and loved Japanese pop culture. I consider that self-study contents are helpful to learners like her.

### 7. Requirement of teaching assistants (TAs)

In this course, a Taiwanese teaching assistant (TA) assisted the Japanese instructor in the face-to-face sessions. Currently, there are many international learners studying in Japanese universities. With their support, we may be able to effectively conduct e-learning classes even when teachers and learners do not share a common mother tongue.

This would constitute an unprecedented dynamic activity, and we may be able to provide learners with a unique learning opportunity.

For example, native Japanese teachers in Japan might cooperate with non-native Japanese teachers in other countries to administer such courses.



Fig.1. Face-to-face session

### 8. Next subject

E-learning classes could be an effective method of learning, even when teachers and learners do not share a common mother tongue.

Regretfully, in this course, we did not conduct an achievement test to assess learners' learning. For that reason, we cannot make objective conclusions. However, we will conduct a course similar to this one in the near future. At that time, we will also administer an achievement test. We will subsequently consider the access logs, questionnaire responses, and test results, and I will evaluate the course more objectively.

### Acknowledgments

Prf. Jiro Nishigori, Professor of Graduate School of Humanities, Tokyo Metropolitan University

Prf. Masaaki Shimizu, Associate Professor of Osaka University

Prf. Akinobu Kanda, Associate Professor of Graduate School of Humanities, Tokyo Metropolitan University

Ms. Kyoko Komatsu

Ms Feng Chiu-yu

Prf. Katsumi Sugiura, Associate Professor of Open University of Japan

### References

TMU mic-j :

<http://japanese.human.metro-u.ac.jp/mic-j/>

### Sample References

Shima, Kunihide Nakamura, Ken-ichi Matshimoto (2003) WebTracer; A New Web usability Evaluation Environment Using Gazing Point Information, Information Processing Society of Japan, *IPSJ Journal Vol.44 No.11* ,pp2575-2586

Osamu Morikawa, Juli Yamashita, Yukio Fukui and Shigeru Sato(2001) Relation between Video Resolution and Gaze Recognition in video communication--- High accuracy is not necessarily good in video communication ----, *Virtual Reality Society of Japan, Vol.6 No.1*

Yvonne Y.H.Fung(2004) Collaborative online learning: interaction patterns and limiting factors, *Open Learning19(2)*,135-149

## Utilizing ICT to Enhance Teacher Collegiality

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It is challenging for teachers to understand how the efficiency of student learning is enhanced through increased teacher collegiality. The authors introduced how an e-learning system has supported teachers engaged in a secondary education action research project to reflect on how their collaborative efforts have impacted student motivation and autonomy. After describing the design and outlining the functions of the system, they then shared narrative data demonstrating how the teachers were empowered to articulate and reflect on their shared intentions of redefining learning, promoting student autonomy, and in the process, advancing their own teaching practices.

### 1. Introduction

Many high school English teachers in Japan report that they seldom collaborate with their colleagues on goal-setting, lesson planning or the creation of teaching and testing materials (Collins and Nakamura, 2007). Reasons they cite for this situation include limited time and administrative support, as well as a desire to work independently.

In response to these norms of low collegiality, and with the benefits of teacher collaboration in mind, Tokai University's Research Institute of Educational Development (RIED) has developed an educational model which promotes both teacher relationships and learner autonomy. The model features project-based lessons, English as the language of instruction, and an integrated e-learning system (Suzuki & Collins, 2007a; Suzuki & Collins, 2007b, Collins & Suzuki, 2007).

### 2. Purpose of this study

One objective of the e-learning system is to increase teacher opportunities to share and discuss their own students' experiences with and responses to lesson plans and materials uploaded and stored in the system's data bank. This paper will introduce how the design and functions of RIED's e-learning system has supported teachers and students at "School S," which has been engaged in a three-year, Ministry of Education, Culture, Science, Sports and Technology (MEXT)-sponsored "Super English Language High School" (SELHi) research project. It will then present narrative data demonstrating how the e-learning system has enabled teachers to

become reflective practitioners (Schön, 1984), analyzing the impact of their own collegiality on the efficiency of their students' learning.

### 3. Three-year project overview

The evolution of collegiality among English teachers at School S can be traced from the beginning of the project. At the beginning of Year 1, the department made the major decision that English would be the language of instruction in all classes. This commitment necessitated the creation of unified lesson plans and teaching materials which would provide the scaffolding students needed in an all-English classroom environment. An online databank was soon established where teachers could submit and share these plans and materials, ask for and receive constructive feedback, and post all revised and final versions for downloading and in-class use.

At the start of Year 2, subject teams were established for first-, second-, and third-year English teachers. Uploading materials to the BBS allowed - and sometimes pressured - teachers to spare time regularly to discuss the challenges and successes they and their students had experienced with the team's materials. As a result, departmental meetings soon shifted away from the traditional "announcements" style. Team leaders began reporting student attitudes and learning outcomes, assisted by a computer and LCD projector showing individual student entries in online journals. Additionally, meeting minutes were posted on the BBS for future reference and for access by absent

teachers.

By Year 3, team meetings and leader meeting minutes reflected enhanced teacher autonomy. Additionally, most teachers demonstrated a greater willingness and ability to view learning from their students' stance. In turn, this shift in perspective enabled them to upgrade both their written term-tests and performance-based assessments of their students' communication abilities.

#### 4. e-learning system

The system used at School S was originally developed by RIED (Gaynor, Suzuki & Odaira, 2002; Suzuki & Fujieda, 2004) to facilitate participant learning and communication during various in-service teacher development programs. Its three primary components function as follows:

1) The Teacher File Server. This serves as a data bank where teachers can share their planning and teaching materials, as well as meeting minutes. Additionally, files such as class videotapes, recorded student interviews and data analyses emerging from these can be stored and accessed.

2) The Teacher Webpage. This is primarily a tool for facilitating online teacher communication. It consists of a Calendar where teachers share departmental and individual schedules; Announcements to all English teachers; Materials Links to shared syllabi, lesson plans, worksheets and tests; and Class Journals, where teachers report and reflect on their own classes.

3) Class Webpages. These are parallel, though simpler, versions of the Teacher Webpage above. Class Webpages provide a forum where each teacher's students can check the class schedule, download materials, submit assignments, contribute to teacher-student and student-student discussion boards, complete cgi quizzes and respond to cgi questionnaires (Sekita & Nakamura, 2008).

Over the course of the three years, the authors came to understand the key roles the upgraded ICT environment was playing in the English departmental culture at School S. For one, it allowed teachers to overcome practical obstacles to collaboration, such as different teaching schedules. It also encouraged regular, productive teacher-teacher interaction, frankly lacking in most high school English departments.

Additionally, these ICT components provided an accessible and precise database of teacher planning, materials creation, and reflection. Within these data we find evidence of how both improved educational perspectives and teaching practices emerged from the enhanced collegiality.

#### 5. Data collection

Since the beginning of the project, RIED has gathered data on this emerging collegiality from a variety of sources. These data include comparisons of materials created early and late in the project. Meeting minutes, whether in Japanese, in English, or a combination, as well as Class Journal entries provide additional insights. A fourth source of data is found in the annual year-end reports submitted to MEXT. These reports have necessitated periodic reflection about learning and teaching, as well as renewal and revision of goals. Finally, RIED has conducted follow-up surveys and interviews asking teachers to share their views on both the benefits and challenges inherent in fundamentally altering departmental culture to forge teacher collegiality.

#### 6. Results of evolving collegiality

##### 6.1 Materials creation

Certainly one of the most visible benefits of teacher collaboration was the improved quality of the teaching materials used in class. Early on in the project, worksheets were often problematic, reflecting limited understanding of the goals of learning English and of appropriate task sequencing. Constant collaboration helped teachers build important brainstorming and negotiation skills. Consequently, worksheets created for the same subject toward the end of the project demonstrate a deeper sense of how students learn and a more accurate perception of their proficiency, as seen in Figure 1.

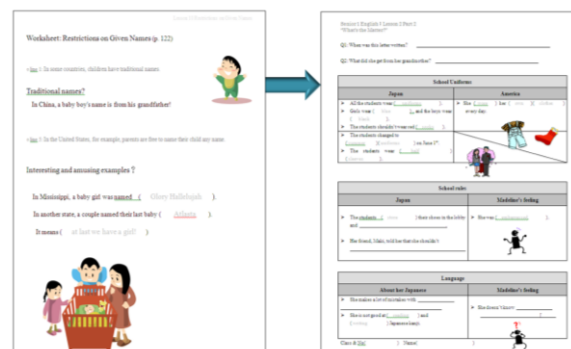


Fig. 1. English I worksheets made in early 2005 and late 2007

Another significant development is that while in 2005, full-time NETs at School S created materials independently, by the end of the project, they were collaborating fully with their JTE colleagues, from the planning stages through to the reflection phase. One NET commented in a follow-up interview that:

July 1, 2008 interview: Teacher A (NET)

...having to submit the material and being required to do that, especially in the beginning stages... sort of forced us into a situation where we had to communicate with each other about teaching materials. We had to know who was submitting: "Is this project finished or not? Has it been submitted or not?"

### 6.2 Class Journals

Some of the most revealing data emerge from the Class Journals, an important component of the Teacher Webpage. Table 1 shows that as the number of contributing teachers grew, the postings

Table 1. Evolution of Class Journals

Aspect/year	2005	2007
Participants	full-time JTEs only, 1 teacher per class	JTEs (full-time, part-time) 2 NETs, 1 – 3 teachers per class
Frequency	didn't start until almost the end of the year	from once a week, up to once per class
Uses	- summarizing class timetable - commenting on student effort	- noting student attitudes - comparing classes - analyzing learning
Interpersonal dynamic	minimal; thanking others teachers	question and response, problem and advice

themselves reflected more meaningful interaction between team members. One teacher, reflecting on how the Class Journals evolved, had this to say:

July 1, 2008 interview: Teacher B (JTE)

At the beginning, there's no rule in the journal, so everyone writes what they want, there's no trend. But gradually... there comes a rule to write about the problem or write about good things... gradually the writers communicate: "What do you think?" Asking for advice or opinions. In answering it, the posting increases.

Other teachers noted that while continually posting to the Class Journals in English was both time-consuming and at times inhibiting, they were always aware that doing so allowed the full-time NETs at School S to read and respond to JTE postings.

### 6.3 Meeting minutes

The fact that some meeting minutes were taken in Japanese and others in English presents a data

analysis challenge. Still, dramatic shifts in the goals, dynamics and outcomes of the meetings can be seen by revisiting the skimpy minutes from Year 1 and comparing them with the extensive minutes taken in Year 3. Table 2 shows how over the course of the three-year project, the English teachers at School S were increasingly able to reflect on teaching and to set practical goals. By mid-Year 3, each meeting was based on a concrete "to be discussed" list, and ended with a compilation of "to discuss next time" items.

Table 2. Evolution of meeting minutes

Aspect/year	2005	2007
Purposes	- receive "instruction" - short-term planning	- report progress - short- and long-term planning - reflection
Agendas	- sometimes none - often "regular meetings"	- always provided - took advantage of RIED presence
Group dynamics	- passive / lack of response - turn-taking - hampered by vertical culture	- able to initiate responses - able to ask for, give constructive feedback
Language used	primarily Japanese	primarily English

By the end of the project, though meetings still featured team reports, the group dynamic was significantly more interactive. Offering constructive feedback, unthinkable in Year 1, became almost commonplace by Year 3, as shown in this excerpt:

From the Nov. 1, 2007 meeting minutes

(Teacher) explains: He uses last year's idea basically and it seems there is a little sharing of ideas. Many teachers pointed out that we couldn't see strong connection between the worksheet and the textbook.

Other comments show that teachers had moved away from simply reporting what students did, and were exploring student perspectives on learning English and on their classes:

From the Nov. 30, 2007 meeting minutes

The communication skill Ss are expected to build is "reconstruction of information" and "scanning information." We are worrying about the pressure from the other subjects and we have to give them proper homework.

## 7. ICT as facilitating collaborative relationships

In the beginning stages of this research project the School S English teachers seemed to have shared goals. It proved extremely difficult for them, however, to shift their mindsets and alter their routines. Without making time to discuss lesson plans, teachers lost sight of their objectives, and fell back into their pattern of creating materials and teaching independently. Departmental term tests, though unified, were never entirely suited to any one class.

By the end of the project, however, term-tests had been completely overhauled, their contents and test forms fair and relevant to all students. This was due in large part to each subject team carefully reflecting on the contents and activities students had experienced, a process greatly facilitated by ICT.

As a result of this reflective process, teachers' collaborative relationships were strengthened. Parallel activity systems (Engeström, 1987; Yamazumi, 2006) in Activity Theory (Fig. 2) demonstrate how teacher collegiality affects the

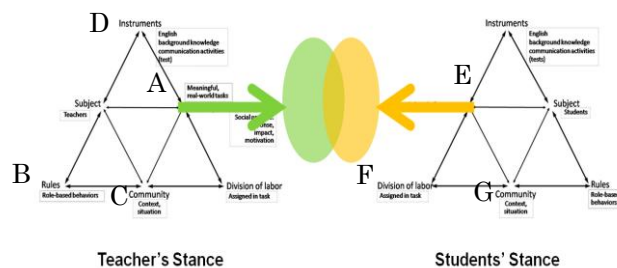


Fig.2. Teacher and student activity spheres

quality of education in each teacher's classroom. When teachers within one team share teaching situations and students' learning problems, they can work together to set appropriate teaching goals and objectives (Fig.2, A) and to plan and create materials (Fig.2, D). This helps them clarify their roles (Fig.2, B, G). In the classroom, students can then more clearly see each day's lesson goals as presented by their teacher (Fig.2, A) which in turn helps them to understand their own situation and roles (Fig.2, G, F) and what is expected of them (Fig.2, E). As teachers get to know more about student learning and students better understand teacher intentions, the two activity spheres begin to overlap and form a shared activity sphere. These relational developments enhance both teacher and student learner autonomy.

## 8. Ongoing research

As with all research into the dynamic nature of human working relationships, the authors' study of teacher collegiality at School S has given rise to questions for further study, including:

1. How sustainable is teacher collegiality? Which habits of collegiality are hardest to maintain, and why?
2. Can the impact of teacher collegiality on student learning outcomes be "proved?" If so, how?
3. How precisely can the impact of ICT on collegiality be separated out from other day-to-day aspects of a work environment?

These questions deserve more detailed investigation, both in this and in other settings.

## References

- Cole, M. (1996). *Cultural Psychology: A once and future discipline*. Harvard University Press.
- Collins, P. & Nakamura, T. (2007). Overcoming low collegiality to achieve high collaboration. *Tokai University Bulletin of the Higher Education Research Institute*, 15. 55-76.
- Collins, P. & Suzuki, H. (2007). "Teacher autonomy as it emerges from collaborative working relationships." *The Independent Learning Association 2007 Japan Conference*. Kanda University of International Studies, *Programme and Abstracts*, 225.
- Engeström, Yuri. 1987 *Learning by expanding. An activity-theoretical approach to developmental research*. Helsinki: Orienta-Konsultit.
- Engeström, Yuri. 2008. *From teams to knots; Activity-theoretical studies of collaboration and learning at work*. CUP.
- Gaynor, R., Suzuki, H., & Odaira, M. (2002). "A system for design and integration of CALL materials." CALL professionals and the future of CALL research. Antwerp, Belgium. *CALL Conference 2002 Proceedings*, p. 77.
- Schön, D. (1984). *The reflective practitioner: How professionals think in action*. USA: Basic Books.
- Sekita, N. & Nakamura, T. (2008). "Outcomes of secondary education interactive e-learning systems." *WorldCALL 2008*, August 9<sup>th</sup>, Fukuoka, Japan.
- Suzuki, H. & Collins, P. (2007a). "The teacher development in English program; facilitating teachers' own learning." *Teacher Education in Language Teaching: Anthology Series 48*, 283-309.
- Suzuki, H. & Collins, P. (2007b). "Empowering EFL teachers in implementing 'expansive learning'". *2<sup>nd</sup> International Conference on Task-Based Language Teaching*. University of Hawaii, Honolulu, *Book of Abstracts*, 34.
- Suzuki, H. & Fujieda, M. (2004). "Designing an e-learning system to promote human communication in EFL classroom." *EuroCALL 2004*, Vienna, Austria. *EuroCALL Conference 2004 proceedings*, p. 225.
- Yamazumi, K. (2006). *Shakai henka no naka no gakko (Schools in a changing society)*. *CHAT Technical Reports*, 2. Osaka: Yubunsha.



## Modeling Language Learners' Knowledge State: What Are Language Students' Free Written Productions Telling Us?

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Language learner models usually provide intelligent tutoring systems with information about the learner's knowledge state, i.e. the individual's weaknesses and strengths in the target language. The information is normally collected via answers to pre-defined written production types. However, storing information from essay-type questions is more challenging, as this requires the use of instruments that can differentiate errors from mistakes. This paper investigates whether observing incorrect, as well as correct forms in the learners' input provide us with a better insight into the learners' competence. It explains how an analysis of an error-tagged and part-of-speech encoded learner's input help compute the ratio of incorrect to correct forms. The results of a preliminary analysis focusing on morpho-syntactic errors show that the exclusive use of this ratio may, in some cases, be inadequate to discriminate errors from mistakes and, therefore, to represent the learner's knowledge in terms of competence.

### 1. Introduction

Providing diagnostic feedback to language learners is a controversial, yet enticing and challenging topic for intelligent computer assisted language learning systems, not to mention language teachers. Computers as well as humans have to determine somehow which learners' incorrect forms are worth spending time on. Indeed, a deviance from the norm due to tiredness or emotional states will be regarded as a slip of the pen. From a sociocultural perspective, incorrect forms may be considered as genuine slips of the pen when learners rely on themselves to correct their own written texts without help or minimum help (Aljaafreha & Lantolf, 1994).

Mistakes, or slips of the pen, are considered as occasional lapses in a learner's performance as opposed to errors that represent gaps in a learner's knowledge or competence (Ellis, 1997). Therefore, differentiating errors from mistakes in students' free written productions will help model the learners' competence, i.e. the underlying knowledge that will provide information on learners' strengths and weaknesses.

While learner modeling enables intelligent tutoring systems to observe, record, analyse and even infer reasons of an ill-formed word (Heift & Schulze, 2007), it has been noted "that student performance cannot be directly mapped to knowledge", this being due to variables such as slips of the pen that affect the knowledge representation in terms of competence (Beck & Chang, 2007, p. 138).

For example, Michaud & McCoy (2003) aim to capture the learner's performance in terms of grammar proficiency by comparing user-written essays to stereotype expectations. Even if the learner's performance is (a) compared to an expert's knowledge and (b) considered as a subset of this expert's knowledge, slips of the pen are not taken into consideration.

In this paper, learners' natural language input is, with regard to form-related features, analysed to shape the extendibility to which correct as well as incorrect forms provide information about the learner's knowledge. More specifically, we are interested in investigating the following question:

How can we interpret the scores, i.e. the ratio of incorrect to correct forms in language learner's input?

Measuring the distance between scores and amount of assistance learners require when self-editing their own incorrect forms will assess the validity of this ratio. In the following, we present the participants and their self-editing tasks. The paper then analyses the data encoding processes and, how a computer assisted error encoding program, Markin<sup>1</sup>, can be used in conjunction with a part-of-speech tagging tool, TreeTagger<sup>2</sup> to tag a corpus of free texts produced by language learners. Finally, results and future work are discussed.

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1 [www.cict.co.uk/software/markin/index.htm](http://www.cict.co.uk/software/markin/index.htm)

2 [www.ims.uni-stuttgart.de/projekte/corplex/TreeTagger](http://www.ims.uni-stuttgart.de/projekte/corplex/TreeTagger)

## 2. Participants and their Tasks

During spring 2008, a study was conducted at a university in a French language course that included 76 learners of French in their first year, in which 13 students consented to participate in this study. All participants had English as their first language.

Participants were asked to write a 200 word film review. To do so, students were provided with four short films that were relatively unknown in order to maintain learners' originality and authenticity in terms of written productions. Afterwards, participants were asked to self-edit their own work twice during a laboratory session. They were provided with two electronic copies of their own text. For the first self-editing exercise, all errors were highlighted. For the second self-editing exercise, all errors were highlighted and information about the error types were included. This information was visible with a mouse roll-over action on the incorrect forms.

Participants were asked to fill in the blanks for each highlighted incorrect form. Figure 1 shows how error types were provided to students during the second self-editing exercise.



Fig. 1. Second self-editing exercise

## 3. Procedure

The learner's input is initially error-encoded then part-of-speech-encoded. Both encoding processes combined together provide a representation of the learner's performance, which is then compared to the self-editing data to shape the learner's competence. A diagram of data encoding processes is provided in Fig. 2.

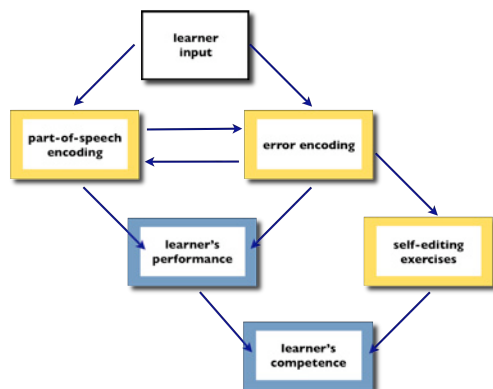


Fig. 2. Data encoding process

### 3.1 Error encoding

The error classification includes (a) selection errors such as the use of an incorrect lexeme or gender, (b) syntactic errors that relate to the syntax of the sentence, including omission and addition, (c) morpho-syntactic errors that are characterised by an incorrect, missing or misplaced morpheme in a semantically correct word and finally (d) spelling errors that refer to semantically correct word, however incorrectly spelled. For the purpose of this study, the analysis primarily focuses on morpho-syntactic errors, listed in Table 1.

Table 1. Error types considered

category	subcategory	error type
morpho-syntactic	agreement	determinant/noun
		noun/adjective
		pronoun/antecedent
		past participle
		subject/verb
	formation	plural
		conjugation
		partitive
		determinant

Only one correction per word, or group of words, was carried out. Therefore, a level of precedence over the different error categories was defined; from high to low: selection, syntactic, morpho-syntactic and spelling.

Error tags were inserted using an application whose utilisation is targeted to help teachers correct texts submitted electronically, namely Markin, see Fig. 3 for a screenshot.

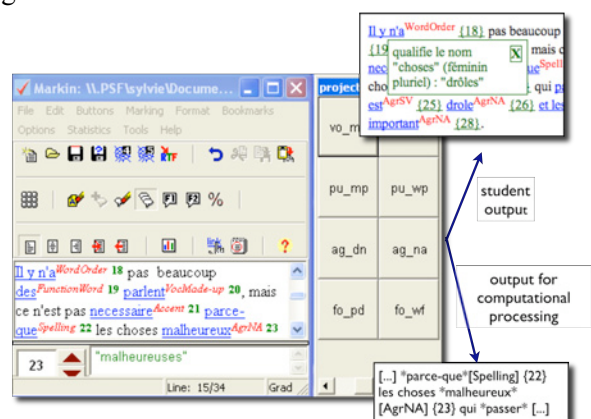


Fig. 3. Error tag insertion and output

After tagging all students' texts with the appropriate error tags, the corrected versions were exported as (a) HTML pages, as a mean to provide participants with immediate feedback, and (b) as unformatted texts in order to computationally process the information on error types.

### 3.2 Part-of-speech encoding

TreeTagger was used as a tool to assign the most probable part-of-speech tag to each token in the input text.

Although TreeTagger achieved a tagging accuracy of 96.34% (Schmidt, 1994), a major problem with pos-tagging is that it depends on the input text correctness (Dickinson, 2006). For this reason, TreeTagger’s accuracy was evaluated when processing language learners’ ill-formed written productions. To do so, the system output and the hand-annotated output of the same corpus were compared by means of the Kappa’s coefficient (Cohen, 1960). This measure is accepted as being a more reliable measure than simple percentage as it takes into account the percentage of agreement that could have occurred by chance (Jurafski & Martin, 2000).

Kappa’s coefficient was increased with (a) an extended set of commonsense rules based on recurrent tagging errors, and (b) a cross-reference between the pos-tagged and error-tagged data, see Fig. 4.

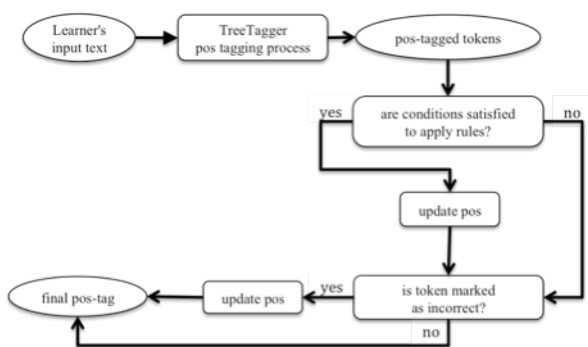


Fig. 4. Process to improve TreeTagger’s accuracy

The proportion of agreement between human and machine rose from 91.5% to 96.6% after improvements, i.e. after applying the set of rules and cross-referencing the pos-tagged and error-tagged corpus.

### 3.3 Self-editing encoding

All alternatives proposed by the students during first and second self-editing exercises were manually reviewed, marked either as acceptable or not, and stored in a database.

## 4. Preliminary Results

To represent the learner’s performance, the ratio of incorrect to probable correct observations in the learners’ essay-type question is computed by counting error types and part-of-speech tags.

For example, one student named “Jane” wrote 5 instances of noun adjective agreement incorrectly,

whereas 11 other adjectives, not marked as incorrect, occur in the same text. This student had, therefore, the possibility of writing 11 other occurrences of noun adjective agreement correctly. Consequently, the ratio of incorrect to correct forms is equivalent to 5:11, which means that the percentage of success in writing noun adjective agreements equals 68.75%. Jane’s score seems to indicate that she performed rather well in terms of noun adjective agreements. A representation of Jane’s performance is displayed in Fig. 5.

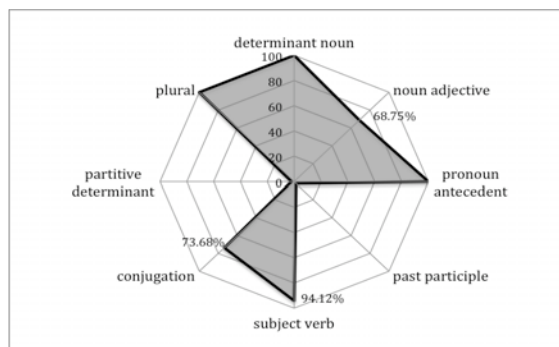


Fig. 5. Learner's performance

To determine whether the incorrect forms are to be deemed as errors or mistakes, one may interpret these results by investigating the amount of assistance students require to correct their ill-formed words.

For example, Jane was unable, neither during the first nor the second self-editing exercises, to correct the noun adjective agreement errors she wrote except one. Her self-editing corrections are listed in Fig. 6.

A cross beside the word indicates that the replacement proposed by the student was an unfruitful attempt, and the unique tick in this figure represents one correct alternative to the only agreement error she was able to notice and correct.

noun adjective agreements	first self-editing	second self-editing
1 l'eau *chaud	blank	chaude <input checked="" type="checkbox"/>
2 les choses *malheureux	*malheureux	malheur <input checked="" type="checkbox"/>
3 les choses *drole	drôle	drôle <input checked="" type="checkbox"/>
4 les choses *important	important	important <input checked="" type="checkbox"/>
5 le film n'est pas trop *longue	blank	blank <input checked="" type="checkbox"/>

Fig. 6. First and second self-editing exercises

As a result, Jane’s self corrections reveal that she probably requires more specific feedback from the teacher to be able to notice the error type and correct herself. Consequently, the incorrect forms she wrote are more likely to be considered as gaps in her knowledge rather than occasional lapses or slips of the pen.

Therefore, two students, “Louis” and “Marie”,

with almost identical performance representations may be interpreted differently in terms of competence, since incorrect forms for one student may be considered as errors, whereas for the other as mistakes.

Both students Louis and Marie achieved a relatively good score of over 90% success when conjugating verbs. However, both students were unable to correct themselves without assistance, which suggests a gap in their competence. Louis was able to correct his incorrect forms with assistance, Marie, on the other hand, was unable to correct herself even with assistance. Even with an honorable score of more than 90% success in one specific form-focused feature, the 10% of incorrect forms cannot be interpreted as mistakes.

Marie definitely requires overt feedback from the teacher to be able to correct her incorrect forms, which are more likely to be interpreted as a more serious gap in her knowledge than Louis', since he was capable of correcting himself with little assistance.

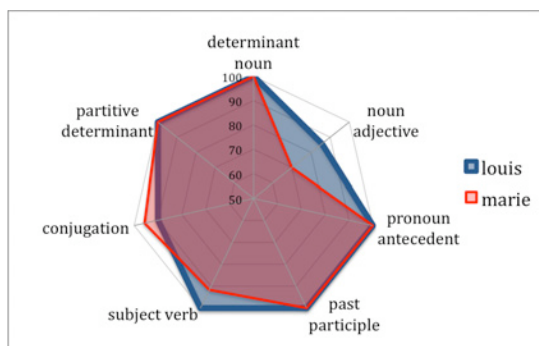


Fig. 7. Knowledge performance of two students

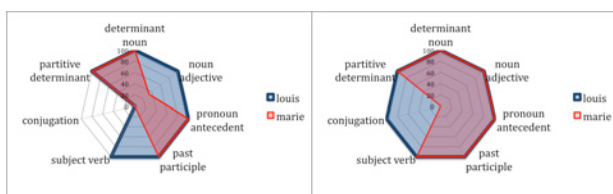


Fig. 8. First and second self-editing exercises

## 5. Conclusion and Further Research

The ratio of incorrect to correct forms was compared to the amount of assistance learners required when self-editing themselves. This helped determine whether this ratio was a valid indicator in differentiating error from mistake. We have demonstrated that errors from mistakes could not be discriminated with neither excellent nor poor scores. A low score does not necessarily mean that the incorrect forms are to be deemed as errors as opposed to mistakes when the score is high. As stated by Chapelle & Douglas (2006) when

critically reviewing the use of computer-assisted language testing, a low score does not demonstrate “with all certainty that the examinee’s [...] level is low” (p. 97).

However, as an attempt to model the learner’s knowledge in terms of competence, that is differentiating errors from mistakes, the amount of assistance learners require when correcting themselves is valuable information. If learners still rely on teachers to correct themselves, then the incorrect form is probably an error.

One limitation of this analysis is that it has been evaluated with only two different types of assistance. Specific focus in further investigations will be placed on level and types of feedback and how a learner model will integrate students’ level of development.

## References

- Aljaafreh, A., & Lantolf, J. P. (1994). Negative feedback as regulation and second language learning in the zone of proximal development. *The Modern Language Journal*, 78(4), 465-483.
- Beck, J. E., & Chang, K. (2007). Identifiability: a fundamental problem of student modeling. In C. Conati, K. McCoy, & G. Paliouras (Eds.), *User Modeling 2007: 11th international conference, UM 2007, Corfu, Greece, Proceedings* (pp. 137-146). Berlin: Springer Verlag.
- Chapelle, C. A., & Douglas, D. (2006). *Assessing language through computer technology*. Cambridge: Cambridge University Press.
- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20(1), 37-46.
- Dickinson, M. (2006). *An investigation into improving part-of-speech tagging*. In Proceedings of the Third Midwest Computational Linguistics Colloquium (MCLC-06). Urbana-Champaign, IL.
- Ellis, R. (1997). *Second language acquisition*. Oxford: Oxford University Press.
- Heift, T., & Schulze, M. (2007). *Errors and intelligence in computer-assisted language learning; parsers and pedagogues*. New York: Routledge.
- Jurafsky, D., & Martin, J. H. (2000). *Speech and language processing: an introduction to natural language processing, computational linguistics and speech recognition*. New Jersey: Prentice Hall.
- Michaud, L. N., & McCoy, K. F. (2003). Evaluating a model to disambiguate natural language parses on the basis of user language proficiency. In P. Brusilovsky, A. Corbett, & De Rosi, F. (Eds.), *User modeling 2003: 9th international conference, UM 2003 Johnstown, PA, USA, June 2003, Proceedings* (pp. 96-105). Berlin: Springer-Verlag.
- Schmidt, H. (1994). *Probabilistic part-of-speech tagging using decision trees*. Paper presented at the International Conference on New Methods in Language Processing, Manchester, UK.

## **Engaging Collaborative Writing through Social Networking**

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Becoming multiliterate requires changing attitudes *and* practices in education. Content management through aggregation and understanding of tags and RSS is key to collaboration and management of information resources online. This presentation explains these concepts in terms accessible to educators and then describes how the concepts were applied in a worldwide collaboration project involving bloggers in three separate locations in two countries in South America and one in Balkan Europe, who utilized tagging and social networking tools to enable them to locate each other's blogs and then interact with selected individuals thus identified as being of similar age and interests. Numerous sites are suggested for aggregation and mashup that can be used with students to exploit the concepts associated with the techniques demonstrated here.

### **1. Shift happens**

A recurring meme on YouTube graphically portrays education as undergoing radical changes brought about by new uses of technology. Two of the most viral of these are Michael Wesch's (2007) video entitled "The machine is us/ing us," and Fisch and McLeod's (2008) "Did You Know?" which turns such memorable phrases as "shift happens" and "we are currently preparing students for jobs that don't yet exist." In facing the challenges of restructuring educational environments to accommodate rapid change educators need to restructure the way they view learning and engage learners, and adapt learning environments to take best advantage of learning opportunities made possible by new technologies.

I identify several aspects of paradigm shift that educators must assimilate to even begin to address constructively the changes needed in order for their students to be able to cope with emerging developments in the way people will work and engage one another in the foreseeable future. First there needs to be a fundamental shift in approach to literacy from reliance on the print literacies of the 20<sup>th</sup> century to the more collaborative, eclectic, and media-rich 21<sup>st</sup> century multiliteracies (for example, accepting YouTube videos and wikis produced by highly-regarded educators as scholarly references in a proceedings such as this one). This implies a reversal of power in publishing when individuals can collectively determine what is disseminated over networks, so that power relationships between nodes in these networks become co-equal (peer to peer) rather than top down, as in traditionally authoritarian client-server relationships.

As student and teacher nodes in distributed learning networks tend toward peer to peer relationships, distinctions between them blur and teachers become more adept at learning along with their students. The teacher's role shifts from didactic models to more constructivist and connectionist ones where their outstanding contribution is their experience as successful life-long learners who can model the most productive heuristics for inculcating similarly productive behaviors in students.

Transfer is an important aspect of modeling. Transfer here refers to stakeholders in learning adapting what they do outside of the formal learning environment (using Facebook, Twitter, mobile devices etc.) to their teaching situations, rather than clinging to more traditional paradigms when working with students.

Sharing is another concept inherent to new paradigms for education. Creators of educational content often release it to creative commons rather than seeking proprietary copyright licenses, and tend to use open source products more and more, for example going with Moodle rather than a proprietary counterpart, to take better advantage of creativity and feedback within a wider community of altruistic users.

Two final aspects of paradigm shift for educators are retooling their concept of classification systems from taxonomies to folksonomies, and utilizing pull rather than push systems in disseminating and accessing information, thus helping everyone cope with information overload.

This paper discusses how a group of educators directed some of these paradigm shifts toward convergence in a project called Writingmatrix

where students blogged, tagged, and aggregated their way to forging partnerships with others they encountered in the distributed social networks formed through use of Web 2.0 and social media technology tools.

## **2. Taxonomies vs. folksonomies**

One of the most important concepts for understanding how the Writingmatrix project works is the distinction between taxonomies and folksonomies in categorizing and organizing content for retrieval after its creation. The Internet is chaotic to the extent that there is no control over where content is stored, so unlike a library where staff can place books systematically on shelves, Internet content could be anywhere online. David Weinberger (2007) makes the analogy of a taxonomy being like a tree. The user works up the trunk and out the branches to locate the leaves being sought. On the Internet, the leaves are all over the ground, yet the ones we want are still retrievable once they have been labeled, or tagged, with appropriate metadata.

In a taxonomy, labels are applied that determine placement in the stacks, and librarians label each item in the library according to the system. For Internet content, there are no librarian watchdogs but users are able to tag content as they use it and might wish to find it again. However the system is not prescribed. Rather it is evolved by the users of the system on the fly as they tag items when they stumble on them. Over time we find that these user-generated tags display commonality and evolve bottom-up into a system, termed a folksonomy. So when the leaves are on the ground, we can still find the ones we want through their user-assigned tags; whereas a taxonomy is unable to locate randomly filed items.

## **3. Information management vs. overload**

The Internet is a marvelous resource for information, for more information, and for even more information piled like leaves all over the ground. Learning how to manage this information is an important multiliteracies skill for both teachers and students.

### *3.1 RSS and aggregation*

One key technology for helping cope with the masses of information on the Internet is RSS (Really Simple Syndication). RSS is code that arranges for content in various formats to be delivered as a 'feed' to a computer or mobile device the moment it is published. This is done through an 'aggregator' such as Bloglines or Google Reader, or

via a podcatcher like Juice or iTunes. The user can not only select from a wide range of feeds to follow, but can configure the aggregator to organize the feeds in ways best suited to the user.

This is an example of 'pull' technology as opposed to 'push' where content is pushed to the user unsolicited. Email and its spam and malware attachments characterize the worst of push technology. Pull allows users to set their own filters on Internet content so that only requested material will be aggregated to the receiving tool or device.

A growing number of web sites provide feeds to their content, which is usually accessed through an orange icon somewhere on the website. Usually the user can right click on that icon, copy the link location, and paste that to an aggregator which will then 'listen' on the Internet for latest content from that web site, download it, and display it in such a way that the user can preview all items in one place and decide which to read or listen to or view in entirety. Users can in this way subscribe to content on blogs, podcasts, video sites, Diigo or Delicious, user groups, online journals, and so on. Almost any site which produces a feed or aggregates content from any other source can be subscribed to, and subscription results can be displayed and stored in any number of aggregators, including some which combine feed technologies in with other applications, creating interesting mashups.

### *3.2 Mashups*

Mashups are becoming more and more common these days. Typically they are applications that work off data provided by some hook into a database. That hook could be an API or application program interface, or simply an RSS feed.

Pageflakes and Netvibes are good examples of mashups which can be used effectively in classroom settings. Both allow users to create web pages that display content from widgets which can include RSS feeds. For example, a teacher could set up a class web page and display on it postings from each student's blog. The postings would appear in blocks which can be dragged and dropped around the page. Within each block, text or multimedia content is refreshed whenever the students create or embed new material in their blogs or podcasts.

In addition to working off specific feeds it is also possible to search content on a given topic at sites such as Technorati or Flickr and get an RSS feed of the search itself so that when new postings are made or photos uploaded and tagged with the search target, then any new content matching that search will appear in the RSS feed from the content

aggregator. It is furthermore possible to configure a 'newsreader' to follow results of a number of such searches so that the user doesn't have to repeat the searches each time in several aggregators, but can set a complex search up once and after that simply follow its updated results through a single RSS feed.

#### **4. Writingmatrix**

These concepts were put into play to engage students in collaborative writing by helping like-minded students locate one another (via tags in web artifacts left scattered on the Internet). The project was conceived as an effort to learn more about these tools and how they worked. With this method, students connect by developing social networks created through use of the tools and techniques already mentioned, not by pre-arrangement between teachers of classes.

The project was conducted by 4 teachers in 3 different countries: Venezuela, Argentina, and Slovenia. Each taught her students how to blog and in particular how to apply the tag 'writingmatrix' to their posts and other artifacts uploaded to the web (e.g. videos and pictures). Writingmatrix was a word we invented which, when first put into Technorati (which searches blogs for posts having the tags targeted), got zero hits. This meant that once our students started using these tags, if Technorati found posts with that tag, then it was likely that they would be posts from our students. It worked, and our searches eventually started turning up student blog posts from all three of the participating countries.

Using Technorati to find students' blogs by searching on the tag 'writingmatrix' avoids any need to be aware of or to make any pre-arrangement with other classes prior to making contact. The students were assigned to write about what interested them (and hence might attract peer readers; otherwise their posts would be repetitive to others and boring). They tagged their posts with any identifiers they thought appropriate, but one tag needed to be 'writingmatrix' in order for the post to appear in Technorati searches and identify that student as being a participant in the project.

I thought students would find posts they liked, tag them and tag their own posts in Delicious, and thus see who else was reading their posts and sharing their interests. In practice connections were made less through use of the tools in this way and more through teacher intervention. But students from different countries did come together, for example in synchronous chat sessions organized for students in all four locations by Nelba Quintana at a

distance from her location in Argentina.

There is evidence that the project worked in the way intended. Ronaldo Lima commented on one of my blog posts (Stevens, 2008) that he tried it with his students some time after the seminal project had ended: "I had my students tag their posts 'writingmatrix' and later they were amazed to see some comments from students from totally different countries and backgrounds. So, it surely works!" Saša Sirk said in her online contribution to our presentation that she blogged with two of her groups in a project that ended last October but she still sees her students' blog posts almost a year later, which she considers evidence of authentic life-long learning that resulted from her students' participation in the Writingmatrix project.

#### **5. Practical examples**

Participation in the Writingmatrix project is bottom up, driven peer to peer, with no need for teacher intervention except to explain the concepts and prompt learners to follow the steps. Therefore there are likely to be groups of students at any time tagging their web artifacts 'writingmatrix' without alerting others to what they are doing. Accordingly, the team members are thinking of where to go with the project in order for them, their students, and chance participants to continue learning about the relevant tools.

One interesting blogging tool to appear lately is Posterous. Posterous allows users to log onto the system and then send an email, the text of which is posted attractively to a blog, and if an attachment is included (image or document), that is posted too. These postings can be mirrored automatically to Blogger, where they can be tagged 'writingmatrix' along with other identifiers. Posterous is a very convenient way to have students get content quickly online conveniently by posting through email. Not only can this be published in a number of places at once, Posterous can furthermore direct an announcement of the post to Twitter.

Twitter is possibly the most popular of the microblogging tools to appear recently. Twitter has attracted a number of mashups which could be useful in classroom settings. For example, Crowdstatus is a tool which aggregates in one attractive page the most recent tweets (i.e. Twitter postings) of the people in your class or group.

Another useful mashup is Twemes. Twemes allows tweeters to include hash tags in their posts, such as #writingmatrix, and it aggregates all posts tagged that way on pages where they are displayed together. So whereas Crowdstatus aggregates

content for all the people in your group, Twemes allows individuals to 'tag' their tweets in such a way that they can be aggregated to one place together with other tweets bearing the same hash tag.

Friendfeed is another mashup site that pulls posts from many sources into one page where all your Web 2.0 meanderings can be aggregated. For example, I have my Friendfeed set up to aggregate whatever I post to Delicious, Diigo, Flickr, Slideshare, Pownce, Twitter, Stumbleupon, Tumblr, YouTube, and all my blogs, so that my friends who subscribe to my feed can see in this one place what content I am contributing online, and I can see as well what is being produced by others throughout my distributed learning network. This has obvious potential for having students create online portfolios, and if you're following the bouncing ball, you can see how you can get from an email to Posterous, to a blog, then to Pageflakes and/or to a post on Twitter, and on to Friendfeed; or how a class of students or a network tracking the tag 'writingmatrix' could use Delicious to see who was reading their blogs and tagging them in Delicious, and then use Friendfeed to see what else these like-minded e-pals in faraway places were reading and posting online as well. Of course Friendfeed produces an RSS feed so you can let your aggregator alert you when your friends' (or class, or network) feeds have been updated. Friendfeed serves as a handy archive of your own posts as well, in case you want to refer to them later in one convenient web location.

Dippity and Swurl take creation of personal portfolios via aggregation of content a step further. Whereas Friendfeed produces a backwards-chronological list of your most recent postings, Swurl places artifacts of what you produce in calendar squares in such a way that Flickr pictures appear, and media that you flag actually plays. Once set up, your content aggregates in principle forever. Dippity is similar in concept in that it links directly to your web artifacts hosted at certain popular Web 2.0 services, but it organizes what it aggregates on a timeline which can be zoomed in and out. In macro view events appear as bubbles bunched around years and months, but in micro view each bubble is seen to have icons representing underlying content which can be scrolled through a slide viewer. With tools such as these, in addition to Pageflakes and Netvibes, each user's content comes alive and can be displayed in attractive ways as the artifacts are aggregated. What neat tools to place within reach of our students (once teachers have modeled them)!

One other mashup that I touched on in my talk

was Weblides, by Diigo. Diigo is a social bookmarking tool similar to Delicious (whose bookmarks can be imported into Diigo) but Diigo has many features of further use to educators, such as its presentation feature, Weblides, that lets users organize their bookmarks into slide shows that can be viewed online. And they are interactive because others in the distributed learning network can highlight text, annotate (with sticky notes), and comment on them in such a way that all visitors to the Weblides show via Diigo will see the annotations..

## 6. Conclusion

In this paper I have attempted to introduce a new approach to pedagogy based on what I see as ten aspects of paradigm shift. I have introduced tools of content management characterized by RSS, aggregation, and mashup, and shown how the Writingmatrix project utilized these tools to encourage students to keep blogs, tag their posts, and find similarly tagged posts using Technorati, thus fostering collaboration in unique ways falling outside the usual teacher-directed models. I then sketched out how this project or others like it might make use of tools proliferating on the Internet which have profound educational potentials for collaboration among students, making it easy for them to aggregate their own content uploaded to blogs and Web 2.0 sites on the Internet as well as that of their peers, and display and tweak the aggregated results in compelling ways that might encourage further collaboration via social networking between peers, who might discover one another through imaginative use of tagging and aggregation.

## References

- Fisch, K. & McLeod, S. (2008). *Shifthappens*. Wiki, available: <http://shifthappens.wikispaces.com/>.
- Stevens, V. (2008). All I know about Blogging and Microblogging. *adVanceEducation* <http://advancededucation.blogspot.com/2008/02/all-i-know-about-blogging-and.html>.
- Stevens, V., Quintana, N., Zeinstejer, R., Sirk, S., Molero, D. & Arena, D. (2008). Writingmatrix: Connecting Students with Blogs, Tags, and Social Networking. In Stevens, V. & Hanson-Smith, E. (Eds.). *Proceedings of the Webheads in Action Online Convergence, 2007. TESL-EJ, 11*, Number 4: <http://tesl-ej.org/ej44/a7.html>
- Weinberger, D. (2007). Knowledge beyond authority. *Future of Education online conference*. [http://lrc.umanitoba.ca/foe-2007/David\\_Weinberger](http://lrc.umanitoba.ca/foe-2007/David_Weinberger).
- Wesch, M. (2007). The machine is us/ing us. <http://www.youtube.com/watch?v=6gmP4nk0EOE>.



## An Analysis of Japanese University Entrance Exams Using Corpus-Based Tools

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While many factors go into a valid and reliable test, the foundation for a test is the level of difficulty of the vocabulary used and the readability of the passages used for reading comprehension. In Japan, the majority of students enter universities through written exams which include an English section which primarily tests reading comprehension and knowledge of grammar and vocabulary. Individual universities write exams, and in addition, there is an exam offered throughout Japan by The National Center for University Admissions (Center Exam). In a previous study, we looked at vocabulary frequency and readability of the entrance exams of tests of four major private universities in the Kansai region of Japan as well as the Center Exam. We found that the difficulty of the university entrance exams may have been a problem, although the Center Exam was easier. In this paper, we compared the previous results with those for 2008 exams for the same universities, and found that this continues to be a problem.

### 1. Introduction

A great many factors go into making a valid and reliable exam, including an appropriate level of lexical difficulty and an appropriate level of readability for reading passages. While appropriate levels of lexical difficulty and readability are not sufficient for a valid and reliable test, they are the foundation for the exam. Therefore, it is useful to look at lexical difficulty and readability of reading passages to evaluate that aspect of their validity.

In a previous study (Kitao & Kitao, 2006) we looked at lexical difficulty and readability of reading passages in the 2005 entrance exams of four major private universities in the Kansai area as well as with a national exam over a period of 16 years from 1990 to 2005. In this study we will compare those results with the 2008 exams.

### 2. Background on the Japanese University Entrance Exam System

The majority of university students enter universities through written exams. There are two types of exams. One is a centralized exam given by The National Center for University Admissions ("Center Exam") on the same day throughout Japan. It includes an English exam and content-area exams and is used by national universities and some private universities, either alone or with interviews or another test. In addition, many universities give individual exams. In these exams, the English

section makes up a high percentage of the total exam score, though it varies from university to university and major to major. Most private universities make their own exams. There are different exams for different majors or given on different days. These exams are usually made by professors of the university, who may not have any background in testing.

English exams include reading comprehension items, which make up the largest part of most tests. In most cases, reading comprehension is tested with multiple choice items or multiple choice cloze-type questions. Cloze items may test grammatical or vocabulary knowledge or understanding of the relationship between pieces of information. There may also be grammar and vocabulary questions, translation questions, or questions to test students' knowledge of English pronunciation.

### 3. Previous studies

A number of studies have been done on the vocabulary frequency and readability of reading passages in the English sections of entrance exams. Hasegawa, Chujo, and Nishigaki (2006) looked at trends in exams and found that there has been an increase in the use of reading passages and dialogues for comprehension and also in the length of those passages. Their review of the literature indicated that there were problems with difficulty levels of vocabulary due to a low cover ratio

(percentage of vocabulary used in the tests covered in junior high and high schools).

In their own study, they evaluated the cover ratio of university exams and of the Center Exam from 1989 to 1998 and found a cover ratio of about 95% for the Center Exams and about 90% for the university exams.

Similarly, Chujo and Hasegawa (2004) examined Center Exams from 1993-2002 and 40 faculties at 26 universities from 2002 for cover ratio and readability and found the cover ratio and readability was appropriate for the Center Exams, but that only four faculties had a cover ratio of 95%, which they considered appropriate, and only 12 faculties had an appropriate level of readability.

#### 4. Research Questions

We considered two research questions.

1. What is the level of difficulty of words used in the English entrance exams of four major private universities in 2008, and how has this changed between the 2005 and 2008 exams?
2. What is the level of readability of reading passages used to test reading comprehension, and how has this changed between the 2005 and 2008 exams?

#### 5. Methodology

We used word frequency counters and measures of readability to analyze English sections of university entrance exams. In our analyses, we included exams from four major private universities. These universities are identified as University A (7 exams), University B (8 exams), University C (8 exams), and University D (8 exams).

In order to do vocabulary frequency analysis, we removed Japanese instructions, question numbers and letters, etc. For readability analysis, we separated out reading passages, excluding dialogues. For cloze passages, we filled in the blanks.

#### 6. Results

##### 6.1 Levels of Vocabulary Frequency

In order to analyze the vocabulary frequency of the exams, we used the Japan Association of College English Teachers 8000 (JACET) word list (<http://www01.tcp-ip.or.jp/~shin/j8web/j8web.cgi>). This list is based on the British National Corpus, but adjustments have been made to reflect the vocabulary knowledge of Japanese students. It is divided into 8 levels of 1000 words each. We used a program that calculated the percentage of total words and unique words at each level. It also counts contractions, proper nouns, and non-words. We

looked at the percentage of words at each of the eight levels, and words not included in the 8 levels but excluded contractions, proper nouns, and non-words from the analysis. We used the results to calculate the number percentage of words over the 4000-word level for total words and unique words. According to Barrow, Nakanishi, and Ishino (1999), the average Japanese college freshman has a vocabulary of 2304 words. Private university exams are probably taken by better-than-average students, so we used the 4000-word level for our evaluation.

The following tables show the percentages of total words (Table 1) and unique words (Table 2) over the 4000-word level at each university and for the Center Exam. They include the range of percentages of each university's tests, comparing the results of the 2005 exams with the 2008 exams.

Table 1. Percentage of words over 4000 (total words)

University	2005		2008	
	Range	mean	range	Mean
A	4.22-5.95	4.93	6.29-9.88	8.12
B	3.06-4.58	3.69	2.24-5.92	4.04
C	3.65-7.68	5.05	3.40-7.74	4.96
D	4.58-7.04	5.57	3.23-8.71	5.31
Center	1.84-5.12	3.08		

Table 2. Percentage of words over 4000 (unique words)

Uni.	2005		2008	
	Range	mean	range	mean
A	9.73-13.99	11.68	14.27-18.04	16.29
B	8.11-11.97	9.43	7.32-13.15	10.45
C	9.64-14.26	11.33	11.14-12.97	11.82
D	10.67-16.02	13.23	8.75-15.73	11.45
Center	5.89-10.68	7.28		

Research has shown that if there are 2-5% unknown words out of the total words in a reading passage, comprehension is difficult (Chujo, n.d.). While some words might be able to be guessed from the context, not all words can be, and with a relatively large number of unknown words, passages become incomprehensible.

The Center Exam uses an easier level of vocabulary than the four private universities, although the Center Exams with the highest level of lexical difficulty are a potential problem. Except for University B, the universities had exams where difficult vocabulary could be a problem, and University A showed an increase in 2008 over 2005.

We also looked at the number of words that were glossed in each of the test compared to the unique

words over the 4000-word level, shown in Table 3.

Table 3. Number of words glossed out of unique words over 4000 in reading passages

University	2005		2008	
	glossed	unique	glossed	unique
A	22	515	22	1064
B	24	393	19	723
C	6	428	*19	749
D	55	515	115	683
Center	4	404		

\*defined rather than translated

There is no standard we know of to indicate how many glossed words readers can easily handle. However, it seems that it would be difficult for readers to handle 8-10 glossed words in a reading 4-800 words long, as some of the reading passages have, in addition to other unknown words. At University A, the number of glossed words remained the same, even though the number of difficult unique words had doubled.

### 6.2 Readability

Next, we looked at readability of the reading passages in the exams. In Table 4, the mean percentages of the total number of words in reading passages in the exams are shown.

Table 4. Percentage of Total Words in Reading Passages (means)

Uni.	2005			2008		
	readings	total	%	readings	total	%
A	1,372	2,750	50	1,768	2,957	59
B	1,790	2,874	62	2,089	3,568	59
C	1,317	2,308	58	1,428	2,539	56
D	1,543	2,577	50	1,406	2,105	67
Ctr	1,092	2,889	38			

The percentages indicate the importance of reading comprehension in the exams, particularly in the exams of the private universities. In two universities, the percentages increased.

For readability, we used software to calculate three readability scales, the Flesch Reading Ease scale, the Flesch-Kincaid Grade Level, and the Fog Index. We also report the number of words and the number of words/sentence.

Readability scales make use of sentence length (as a measure of grammatical complexity) and either word length or the number of syllables in words (as a measure of lexical difficulty). To give an idea of the level of difficulty, American news

magazines *Time* and *Newsweek*, which are quite difficult for most Japanese university students to handle, are around 10 or 11 on the Fog Index. On the Flesch Reading Ease Scale, the higher the score, the easier the reading passage. For native English speakers, a FRE score between 30-49 indicates a very difficult reading, and 50-59 is fairly difficult. *Time* has a FRE score of about 52, and the *Harvard Law Review* has a score in the low 30s.

These readability scales were developed for native English speakers, and the grade levels reflect this. However, Greenfield (2004) found high correlations between the Flesch Reading Ease scale and the Flesch-Kincaid Grade Level and measures of results of cloze tests with Japanese university students. This indicates that while the grade levels are not the same as for native English speakers, these readability scales do reflect the relative difficulty of reading passages for Japanese readers.

Tables 5-9 show the range and the mean for the number of words in reading passages, the number of words/sentence, and the readability based on the Flesch Reading Ease scale, the Flesch-Kincaid Grade Level scale, and the Fog Index.

Table 5. University A

	2005		2008	
	range	mean	range	mean
# of wds	1,280-1,557	1,372	1,622-2,386	1,768
wds/sen	17.22-25.70	21.47	19.01-24.29	21.97
FRE	37.15-50.46	43.48	36.97-46.14	42.91
F-K GL	10.50-14.46	12.53	11.55-13.80	12.73
Fog	12.17-16.54	14.54	12.81-15.88	14.44

Table 6. University B

	2005		2008	
	range	mean	range	mean
# of wds	1,528-1,809	1,698	1,476-2,620	2,089
wds/sen	12.14-17.31	15.62	12.37-20.24	17.33
FRE	61.93-68.61	66.29	50.16-66.45	61.16
F-K GL	6.70-8.51	7.89	7.24-11.08	9.03
Fog	8.27-10.83	9.73	8.79-12.71	10.78

Table 7. University C

	2005		2008	
	range	mean	range	mean
# of wds	929-1,814	1,317	812-1,646	1,428
wds/sen	14.20-23.83	16.68	15.38-26.19	19.05
FRE	37.07-63.24	53.38	38.85-64.63	52.64
F-K GL	8.89-14.01	10.54	8.07-12.47	10.65
Fog	10.50-16.46	12.54	10.26-14.40	12.49

Table 8. University D

	2005		2008	
	range	mean	range	mean
# of wds	1,406-1,922	1,543	1320-1,473	1,406
wds/sen	14.67-19.80	17.21	17.86-27.50	21.14
FRE	57.37-68.68	61.68	26.00-66.92	56.86
F-K GL	7.51-10.18	8.93	8.86-16.46	11.02
Fog	9.66-12.13	10.88	10.45-18.61	12.91

Table 9. Center Exam

	2005	
	range	mean
# of wds	757-1,338	1,092.25
wds/sen	11.19-18.22	14.74
FRE	59.39-73.84	68.14
F-K GL	4.94-9.43	7.42
Fog	6.19-11.05	9.1

Many of the tests for the individual universities have reading passages that are comparable in difficulty to *Time* and *Newsweek*, publications that are very difficult reading for many Japanese students, and some that are considerably more difficult. In fact, some of the reading passages were comparable to difficult graduate-level reading for native English speakers. The situation did not improve between 2005 and 2008, and in fact, University B and University D showed an increase in the difficulty of the reading passages they used.

## 7. Conclusions and Recommendations

In some of the tests, particularly those of the private universities, the level of difficulty would be difficult for most students to handle, and this situation has not improved between 2005 and 2008. This calls into question the validity of these tests, since incomprehensible reading passages would lead students to guess and to use test-taking strategies rather than an understanding of the reading passages to choose their answers.

The JACET 8000 list is useful as a standard to check vocabulary. There are programs available online for making use of this frequency list. One (<http://www01.tcp-ip.or.jp/~shin/j8web/j8web.cgi>) shows the percentage of words at each level, both in terms of total words and unique words. It also provides a list of the words at each level, with the number of occurrences. In addition, the JACET 8000 Level Marker (<http://www01.tcp-ip.or.jp/~shin/J8LevelMarker/j8lm.cgi>), produces a text with words color coded according to their level of difficulty.

Some tests have readability ratings that indicate that they may be too difficult for most students. Online calculators of readability are available for the purpose of checking the readability of reading passages. For example, the one available at [http://www.online-utility.org/english/readability\\_test\\_and\\_improve.jsp](http://www.online-utility.org/english/readability_test_and_improve.jsp) calculates various statistics about a reading passage, such as the number of words per sentences, as well as several readability scales. It also lists sentences that might be problematic. This would make it easy for test makers to identify long sentences that would give test takers difficulty.

## References

- Barrow, J., Nakanishi, Y., & Ishino, H. (1999). Assessing Japanese college students' vocabulary knowledge with a self-checking familiarity survey. *System*, 27, 223-247.
- Chujo, K. (n.d.) Measuring vocabulary levels of English textbooks and tests using a BNC lemmatised high frequency word list. Retrieved on August 18, 2008 from <http://www5d.biglobe.ne.jp/~chujo/eng/data/rodopi.pdf>.
- Chujo, K., & Hasegawa, S. (2004). Goi no cover ritsu to readability kara mita daigaku eigo nyushi mondai no nanido [Assessing Japanese college qualification tests using JSH test coverage and readability indices]. *Nihon Daigaku Seisan Kogakubu Kenkyu Hokoku B*, 37, 45-55.
- Greenfield, J. (2004). Readability formulas for EFL. *JALT Journal*, 26(1). Retrieved on August 16, 2008 from <http://www.jalt-publications.org/jj/articles/2004/05/greenfield>.
- Hasegawa, S., Chujo, K., & Nishigaki, C. (2006). Daigaku nyushi eigo mondai goi no nanido to yuyosei no jidaiteki henka [A chronological study of the level of difficulty and the usability of the English vocabulary used in university entrance examination]. *JALT Journal*, 28, 115-134.
- Kitao, K., & Kitao, S.K. (2006, August 19). Corpus-based analysis of Japanese university entrance exams. Paper presented at The 2006 Asia TEFL International Conference, Hakata, Japan. Retrieved August 18, 2008, from <http://www.cis.doshisha.ac.jp/kkitao/library/handout/2006/ASIA/corpus-based.pdf>.

## Guiding the E-learner in Foreign Language and Communication Courses

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The starting point of this paper is the increasing need for guidance for e-learners in language education. We argue that the representatives of the “net generation” are not automatically efficient e-learners. In fact, they need a great deal of guidance for making them get the most out of their e-learning experience. For enhancing the learners’ e-study skills the Department of Languages and Communication at Helsinki School of Economics started a guidance project in 2007. Emerging from the first stage of the project, we present four main components of effective guidance, which include orientation for e-learning, e-learning skills and the roles of the e-learner, the roles of an e-tutor, and guidance for interaction, peer reviewing and utilizing feedback. We also introduce one of the department’s e-learning courses in which a great deal of effective guidance is needed.

### 1. E-learning and the Need for Guidance

The growth of e-learning in foreign language and communication courses has been considerable in higher education in recent years. In our presentation we use the term “e-learning” as an umbrella term for various ways of using computers and the internet for learning (cf. Littlejohn and Pegler, 2007). The two e-learning modes that our paper is mainly based on are those of blended learning and online learning. By blended learning we refer to courses that use a mix of approaches ranging from classroom teaching to a variety of uses of technology, whereas by online courses we refer to courses that take place fully online with no difference whether the students attending the course live at a distance or are campus-based.

As the e-learning options are becoming a regular part of the language curricula, it seems that the focus on the teacher and the teacher’s role is being shifted onto the role of the learner. Consequently, the role of guidance in e-learning has increased and its importance is being increasingly recognized. As a result of these developments, language teachers are facing the challenge of guiding their e-learners as effectively as possible in order to help them to get the most out of their learning experience. Although it seems that in many parts of the world the “net generation” (Oblinger & Oblinger, 2005) is competent in using the media and new technologies especially in connection with their outside school activities, such competencies do not automatically make the “digital natives” (Prensky,

2006) efficient e-learners. E-learners therefore need to be provided with sufficient and effective guidance and training (see also ODLAC, 2008).

In 2007 the Department of Languages and Communication at Helsinki School of Economics launched a research project on the guidance of e-learners (Peltonen, Puranen & Tammelin, 2007) for the purpose of enhancing language learners’ e-learning skills. The main aim of our paper is to present the components of effective guidance arising from our project and to give an example of how guidance is given in one of the department’s courses.

### 2. Components of Effective Guidance

When launching the Department’s guidance project we first defined what we meant by effective guidance and what we regarded as its aims. We consider good guidance to consist of the following three main points: giving time, attention, and respect to the learners. The main aims of guidance are to increase the learners’ motivation, to empower the learners and to reduce the number of possible course dropouts. We see that guidance given to e-learners includes four main components that center on the following issues: 1) orientation for e-learning, 2) e-learning skills and the roles of the e-learner, 3) the roles of the e-tutor, and 4) guidance for interaction, peer reviewing and utilizing feedback.

#### 2.1 Orientation for e-learning

Learners need to have a clear idea of what to expect from an e-learning course. Does the

course take place fully online or is the course format a blended one consisting of a mix of approaches, activities and use of e-tools. It is important to ensure that all course participants have the basic ICT skills needed for studying in an e-learning course. Some learners may need guidance in improving even their basic ICT skills. The course kick-off session is highly important for providing instructions for e-studying and for creating a sense of belonging to the group and a positive atmosphere.

### *2.2 E-learning skills and the roles of an e-learner*

E-learners need guidance in making them aware of what skills they need and how their roles as e-learners may differ from their traditional classroom roles.

#### **An e-learner**

- can communicate effectively in an online environment,
- is aware of his/her own e-learning skills: setting goals for oneself, ability to evaluate one's learning outcomes,
- can control his/her own self-motivation,
- is capable of working within a timetable without timetables,
- is able to work alone and in a group,
- can avoid superficial learning and aimless "surfing" on the Internet.

### *2.3 The roles of an e-tutor*

In order to be able to provide effective guidance, the e-tutor needs to be aware of his/her own role in the learner's learning and study process. Ideally, an e-tutor should be able to serve as a model of an exemplary e-learner. The tutor should be able to take on many different roles, including the roles of an advisor and a supporter of the learners' study goals, a motivator and coach, a "personal trainer", a producer of content when needed, and very importantly, a creator of a positive and supportive atmosphere.

### *2.4 Interaction, peer reviewing and feedback*

As interaction and e-communication can still be difficult to some learners, they may need guidance for coping with different forms and channels of interaction such as discussion forums, chat, group tasks, social media, etc. E-learners also need guidance for carrying out their peer review assignments as they play an important role in most online and blended learning courses. Furthermore, learners need guidance for utilizing the tutor and peer feedback.

## **3. Case Swedish for Business**

Many of the courses offered by the Department of Languages and Communication at HSE utilize blended or online course formats. One example of a blended course is a course called Swedish for Business. The starting level of the language proficiency of the students attending the course is B1 in accordance with the European Framework (CEFR, 2007). The course lasts 7 weeks. The contact hours in class are used for oral presentations and all written work is conducted in an online environment. The total amount of course work for the students is calculated as 80 hours.

In small groups the students set up their own companies for which they create their own websites. The students give oral company presentations in class. They also work in subject-specific theme groups in cooperation with another group of students studying at another Finnish university. The theme groups communicate with each other via videoconferencing and via an LMS platform. They produce final reports on their themes (e.g. related to finance, marketing, business law) in collaboration with their team members.

Because of the short duration of the course and the amount of intensive course work the course involves, the participants need a great deal of tutor guidance and feedback. The tutor gives guidance **before** the course regarding course information and practical instructions. Guidance **during** the course is related to technical support and the students' learning process. Guidance and feedback **after** the course focus on evaluating the learning outcomes and raising the students' awareness of their needs for lifelong learning. The Swedish for Business course has shown that students appreciate guidance that includes individual (especially) oral online feedback as well as regular, up-to-date and critical feedback.

## **4. Conclusions**

Many language and communication teachers involved with online and blended learning teaching environments feel that their workloads have increased. Therefore, they may not welcome any more pressures on increasing their availability in the capacity of an "omnipresent", "ubiquitous" guide. These pressures may have also been multiplied because of various institutional constraints such as insufficient institutional support, e.g. technical support (Tammelin, 2004). Therefore, teachers and tutors should be given all

possible institutional support in the use of versatile e-tools for giving guidance and feedback for their e-learners. Institutions should also realize that language learning – with or without the prefix “e”– also involves gaining competencies (Rychen & Salganik, 2003) that are required in society and are relevant to modern life such as using tools interactively, interacting in heterogeneous groups, and acting autonomously.

## **References**

- CEFR (Common European Framework of Reference for Languages. Retrieved October 3, 2007, from [http://www.coe.int/t/dg4/linguistic/CADRE\\_EN.asp](http://www.coe.int/t/dg4/linguistic/CADRE_EN.asp)
- Littlejohn, A. & Pegler, C. (2007). *Preparing for Blended Learning*. London: Routledge.
- Oblinger, D. & Oblinger, J. (2005). *Educating the Net Generation*. Retrieved July 23, 2007 from <http://www.educause.edu/educatingthenetgen>
- ODLAC (2008). (Open Development for Language Competencies). Learners' Guide. <http://www.elearningguides.net>
- Peltonen, B., Puranen, P. and Tammelin, M. (2007). Guiding through Aligning: Models and Practices for Online Teachers and Learners. Poster Presentation at EUROCALL 2007 Conference Mastering Multimedia: Teaching Languages Through Technology 5<sup>th</sup> – 8<sup>th</sup> September 2007, University of Ulster, Coleraine, Northern Ireland.
- Prensky, M. (2006). Listen to the natives. *Educational Leadership*, December 2005/January 2006, Volume 63, Number 4, 8-13. Retrieved September 19, 2007 from [http://www.ascd.org/authors/ed\\_lead/el200512\\_prensky.html](http://www.ascd.org/authors/ed_lead/el200512_prensky.html)
- Rychen D.S. & Salganik L.H. (Eds.). (2003). *Key Competencies for a Successful Life and a Well-Functioning Society*. Göttingen: Hogrefe & Huber Publishers. Summary. Retrieved September 1, 2007 from <http://www.deseco.admin.ch/>
- Tammelin, M. (2004). Introducing a Collaborative Network-based Learning Environment into Foreign Language and Business Communication Teaching: Action Research in Finnish Higher Education. Media Education Publications 11. Department of Applied Sciences of Education. University of Helsinki. Helsinki: Yliopistopaino. Available from <http://www.helsinki.fi/~tella/mep11.html>

## Roles of Quantifiers in Argumentative Writing and Classroom Activities in Corpus-Based Approaches

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This research identifies the high frequencies of quantifiers in argumentative writing, which is a popular mode in English proficiency tests, by keyword analyses and reveals their roles as rhetorical devices in argumentation by focusing on particular collocation in actual contexts. The results of small-scale discourse analyses show that different quantifiers carry different hidden messages under the surface, balancing degree of agreement or commitment. This study advocates a classroom activity of quantifiers by a concordancer, suggesting the importance of contextualization, and argues for different-level persuasive texts from TOEFL model essays and American LOCNESS, not only for test preparation but also for familiarity with argumentation through reading.

### 1. Backgrounds

Quantifiers, which occur in such common phrases as *not all*, have not received proper attention in teaching. My survey of six authorized high school writing textbooks in Japan showed that quantifiers were not taught categorically. Instead they were considered separately in argumentation as partial negation (*not everyone*) or pronominal idioms (*some people like this, others don't like*) and frequently included in entrance examinations for high schools and universities. This situation also implies that learners tend to memorize them based on context in gap-filling exercises.

Learning the hidden messages of these phrases out of context is unreasonable; in argumentation when the writer employs such a partial negation as *not all*, alternative expression (i.e., *some*) should be available because they want to make a statement, using the negation. Quantifiers might bear rhetorical importance, but their actual use in a particular genre like persuasive prose has not been clarified.

Persuasive writing is a more difficult register than explanatory or descriptive writing, according to Schultz (1991). Despite the difficulty of argumentative prose, such English proficiency tests as TOEFL and IELTS require test-takers to write argumentative essays. Universities that offer programs for studying abroad rely on such scores to evaluate applicants. For such students, it is beneficial to become familiar with argumentation by learning such rhetorical techniques as quantifiers.

This research will first describe the actual use of quantifiers in argumentative writing by focusing on one of the most frequent collocations in a corpus-based approach and conducting a small-scale discourse analysis. Then I will suggest a classroom activity with quantifiers that exploits a concordancer for contextualization.

### 2. Research questions

This research will answer the following questions.

- (1) What roles do quantifiers play in argumentative prose?
- (2) What are the pedagogical implications and suggestions?

### 3. Corpus methodology and data

As datasets of argumentative essays, TOEFL model essays (henceforth, TOEFL, 313 texts, 97,329 words) and American LOCNESS (208 texts, 168,343 words) were used. Keyword analysis identified statistically frequent words in argumentative prose; two word lists from a target corpus of interest and a reference corpus, mostly a various English registers or genres were used to furnish keywords with significantly higher or lower log-likelihood ratios (LL, henceforth) in a target corpus than in a reference corpus, which was FROWN, a collection of American written English (1,239,686 words).

The keywords were classified into word classes, and adjectival keywords were chosen to observe the quantifiers. The collocations were investigated



using G-scores to see the strength of the word combinations and analyzed from concordance lines into actual contexts.

#### 4. Results

##### 4.1 Frequent adjectival keywords in argumentation

The results of keyword analyses showed that quantifiers and comparatives were dominant in adjectival keywords, as seen in Table 1.

Table 1. Top 10 adjectival keywords from TOEFL

N	Keywords	Freq.	RC Freq.	LL
1	Important	294	426	631.99
2	Many	312	1,000	347.37
3	Good	269	788	330.13
4	Better	161	349	260.61
5	Different	168	388	257.95
6	Easier	67	47	203.75
7	Other	331	1,648	197.03
8	Convenient	44	12	174.23
9	Able	100	229	154.61
10	Enjoyable	26	4	113.31

$p < .001$

The top 10 included quantifiers (*many*, *other*), comparatives (*better*, *easier*), and quasi-comparatives—adjectives that resemble comparatives (*different*). As TOEFL, quantifiers, comparatives, and quasi-comparatives are characteristic of argumentation in American LOCNESS, as seen in Table 2.

Table 2. Top 10 adjectival keywords from American LOCNESS

N	Keywords	Freq.	RC Freq.	LL
1	Many	552	1,000	515.63
2	Ethnic	115	53	292.61
3	More	629	2,284	214.67
4	Criminal	57	43	116.44
5	Homeless	39	13	110.51
6	Equal	69	82	105.8
7	Able	113	229	104.4
8	Violent	52	43	101.01
9	Other	404	1,648	100.24
10	Adoptive	27	4	91.88

$p < .001$

In particular, *many* in both lists displayed strikingly higher frequencies than the rest and much higher LL ratios (347.37 in TOEFL, 515.63 in American LOCNESS) than *other* (197.03 in TOEFL, 100.24 in American LOCNESS). Overall, quantifiers as well as comparatives are important in argumentative writing.

##### 4.2 Quantifiers as a rhetorical device

Different quantifiers have different connotations when they modify nouns in actual contexts. I would like to consider a collocation of quantifiers and *people* or *person*, for example, which occurred as a collocate with most quantifiers, as in *many people* with higher G-scores of 189.130 than *many ways* (86.300).

*Many people* was used for temporary generalization, which was denied later by the writer.

(1) Many people have dreams of becoming self-employed or starting their own business, but I don't understand this. (Lougheed 2004)

Their likely occurring positions are in the subject position, *to/for* phrases as experiencers, or in *there* constructions. They favor private verbs—*feel*, *argue*, for example. *More people* did not have this connotation but implied changes:

(2) In the past, many people lived far from hospitals or clinics. Now hospitals, clinics, and health centers have been built in many parts of the world. More people have the opportunity to visit a doctor or nurse before they become very sick. (Lougheed 2004)

*Most people* made an interesting contrast with *many people*, which the writer used for genuine generalization. It was often followed by supporting evidence:

(3) Most people use TV as a way to pursue their interests. People who play sports usually like to watch sports on TV. People who like to cook watch cooking shows. (Lougheed 2004)

*Some people* is neutral in this respect. The statement including *some people* served as an example with a neutral stance:

(4) Some people believe that television has destroyed communication among friends and family. In my opinion, however, the opposite is true. (Lougheed 2004)

This presupposes the opposing case expressed by *other people* or *other*. There were possibilities of denial as well as affirmation. Universal quantifiers in *every person* and *all people* supported writer assertions rather than just quantification:

(5) Lastly, I want to mention that every person should have the opportunity to acquire higher education. (Lougheed 2004)

Each person emphasized individuality:

(6) I have a lot of different people to learn from. Each person has different experiences and a different point of view. (Lougheed 2004)

In fact, one of the most frequent collocates with *each* was *individual*. Partial negation worked as a controller of the writer's commitments. Probably, the writer uses this, where she/he can use another expression such as *some* to emphasize the negation:

(7) While not all people need every new product or service that is advertised, they are wise enough to make decisions for themselves about what they need. (Lougheed, 2004)

Quantifiers, which are a statistically frequent category in argumentation, implicitly convey rhetorical meanings that teachers and learners might not know. Since argumentative writing is required in popular English proficiency tests, test-takers should become familiar with persuasive kinds of rhetoric and raise their awareness of the key features in actual contexts.

**5. Suggestion for computer-assisted classroom activities**

To raise learners' awareness of quantifiers, I suggest a computer-assisted classroom activity for upper-intermediate or advanced students in CALL or in reading classes (For Data-Driven Learning, see Johns 1991, 1997; Gavioli & Aston 2001; Fligelstone 1993; Flowerdew 1996). A necessary tool is *AntConc*, a free software tool downloadable from <http://www.antlab.sci.waseda.ac.jp/software.html>.

Before class, students must install *AntConc* in their PCs and get a dataset of TOEFL model essays that must be deleted after class due to copyright concerns. In class, students choose a text file by clicking on the down-drop menu and entering a target phrase, *many people*, for example. Then they will have concordance lines, as shown in Figure 2, where target items are in the center of each line. Then the students find *many people* in the subject position and specify a verb like *believe*. They click on and widen a specific concordance line into the whole text.



Figure 1. Concordance lines by *AntConc*



Figure 2. Widened concordance lines by *AntConc*

Students can learn how these quantifiers are used in actual contexts.

**6. Benefits from using different-level texts**

Due to their different readability, it is good to use TOEFL first to introduce argumentation, followed by American LOCNESS. The STTR (Standardized Type/Token Ratios) was 50.58 in TOEFL with 56.81 words in American LOCNESS; there were more recurrent words in TOEFL, but a greater variety of words in American LOCNESS. The average length of the TOEFL texts was 311 words and paragraphs of 67.82 words. The average length of the American LOCNESS texts was 813 words and paragraphs of 95.92 words. Thus, TOEFL had shorter texts with shorter paragraphs than American LOCNESS.

Moreover, TOEFL had typical textual patterns, as in the high school textbooks, which usually start with a thesis statement, followed by reasoning paragraphs, and counter arguments, if any. The concluding paragraph comes in the end. American LOCNESS, on the other hand, had more difficult vocabulary in longer paragraphs. It is suitable to use American LOCNESS as a follow-up assignment, as in (8), or for advanced students to confirm the knowledge from TOEFL.

(8) Access the American LOCNESS by *AntConc* and enter *most people* in the Search Term Box, and press the Start Key. Find a concordance line which begins with *most people are opposed to...* and click on it for wider texts. Read the whole paragraph including it and write specific, supporting examples to the statement expressed by *most people*.

Since neither require background or special knowledge, as other argumentative writing such as editorials and academic writing, learning persuasive prose for the first time is easy in these data sets.

## 7. Conclusion

There seems to be a cluster of quantifiers about degree of agreement in argumentation. See Figure 3.

*many people—some people—most people*  
Low            degree of agreement            High

Figure 3. A clan of degree of agreement

Although quantifiers are such basic words, but learners might well not notice connotation or semantic prosody (for semantic prosody, see Hoey, 1991; Leech 1974; Sinclair, 1991; Patrington, 1998). Corpus-driven learning gives students the chance to find patterns and meanings and to learn subtle usages in actual contexts, since they can switch concordance lines into the whole text.

TOEFL offers teaching material with clear, concise, and logical development and plain vocabulary in compact paragraphs. It should be used not only for test preparation but also for the initial learning of argumentation.

## 8. Limitations and further studies

TOEFL model essays are not freely available; there are not so many and few texts from TOEFL textbooks. Permission must be obtained from the copyright owners to use them. We must also examine in more detail the readability of TOEFL and American LOCNESS to recognize quantifier behavior in other registers and to research such a corpus-based approach to quantifiers.

## Acknowledgments

I would like to express my gratitude to the authors of TOEFL textbooks who gave me the permission to use their model essays: David Trevil,

Hiroko Tina Tajima, Ihiro Matsutani, Kyoko Ooi, Kazuhiro Miyamae, Lin Lougheed, Paul Wadden, Pamela J. Sharpe, Robert A. Hilke, Tadashi Shiozawa, Shin Ando, Takashi Kanbe. My special thanks go to teachers at Osaka University: Tomoji Tabata, Hino Nobuyuki, Junko Takefuta, Yoshihiko Hayashi, Kazuaki Goto, and Ichiro Koguchi.

## References

- Aston, G. (2000). Corpora and language teaching. In L. Burnard & T. McEnery (Eds.) *Rethinking language pedagogy from a corpus perspective* (pp. 7-17). Frankfurt am Main: Peter Lang.
- Fligelstone, S. (1993). Some reflections on the question of teaching from a corpus linguistics perspective. *ICAME Journal*, 17, 97-109.
- Flowerdew, J. (1996). Concordancing in language learning. In M. Pennington (Ed.) *The power of CALL* (pp. 87-113). Houston, TX: Athelstan.
- Gavioli, L. & Aston, G. (2001). Enriching reality: language corpora in language pedagogy. *ELT Journal*, 55(3), 238-246. Oxford: Oxford University Press.
- Hoey, M. (2000). The hidden lexical clues of textual organization: a preliminary investigation into an unusual text from a corpus perspective. In L. Burnard & T. McEnery (Eds.) *Rethinking language pedagogy from a corpus perspective* (pp. 31-41). Frankfurt am Main: Peter Lang.
- Johns, T. (1991). Should you be persuaded—Two samples of data-driven learning materials. In T. Johns & P. King (Eds.) *Classroom concordancing* (pp. 1-16). Birmingham University.
- Leech, G. (1997). Teaching and language corpora: A convergence. In A. Wichmann, S. Fligelstone, A. M. McEnery, & G. Knowles (Eds.) *Teaching and language corpora* (pp. 1-23). London: Longman.
- Lougheed, L. (2004). *Barron's How to Prepare for the TOEFL Essay* (2nd Edition). New York: Barron's Educational Series, Inc.
- Partington, A. (1998). *Patterns and meanings: Using corpora for English language research and teaching*. Amsterdam, Philadelphia: John Benjamins Publishing Company.
- Schultz, M. (1991). Writing mode in the articulation of language and literature classes: Theory and practice. *The Modern Language Journal*, 75, 411-417.
- Sinclair, J. Sinclair, J. (1991). *Corpus, Concordance, Collocations*. Oxford University Press.

# Pervasive CALL Learner Training for Improving Listening Proficiency

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As the amount of freely available online media increases, the need for preparing students to use such material effectively similarly grows. We report here on a study for developing a pervasive learner training component for an advanced ESL listening comprehension course to help course participants work effectively both during and after the course. The training includes technical, strategic, and pedagogical components informed by a set of learner training principles. We determine what students have internalized from the training, what we can learn from students' attempts to become more independent learners, and whether the benefit to students appears to be worth the cost, using data from pre and post surveys, student reports, student meetings, and an interview. We conclude that although there is considerable room for refinement of the process, the overall benefit to students is clear and does indeed outweigh the cost. Further exploration of learner training is therefore warranted.

## 1. Introduction

The Web has made an incredibly rich collection of often free dedicated and authentic audio and video materials available to language teachers and learners. However, even those who are fairly sophisticated at using digital technology for other purposes may be uncertain of how to exploit these resources effectively for language learning. The present work is based on learner training for an advanced ESL listening course (EFS 693B) taught to international graduate students at Stanford University. The objective was to explore student responses toward a pervasive learner training approach that sought to make their work with online materials more effective during the course and prepare them for continuing to work on their own after the course ended. This paper offers preliminary results of the study.

## 2. Learner Training Overview

Strategy training for language learners has been broadly implemented since the 1980s. However, the technology environment offers a number of additional opportunities and challenges to learners that require adjustment of established models (e.g., Oxford, 1990). In recognition of this, Hubbard (2004) introduced a set of learner training principles as follows:

- Experience CALL yourself
- Give learners teacher training
- Use a cyclical approach
- Use collaborative debriefings
- Teach general exploitation strategies

For the present study, these principles were embedded within a conceptual framework recognizing three distinct domains of learner training:

- Technical training, *how* to use the options and controls of both general and specific applications on the computer for language learning purposes
- Strategic training, *what* to do to support certain learning objectives, including how to link sequences of strategies (or techniques) into learning procedures
- Pedagogical training, determining specific learning objectives and understanding *why* to use certain techniques and procedures to achieve those objectives.

While the first is unique to the computer environment, the last two can be connected with traditional notions of cognitive and metacognitive strategy training (Oxford, 1990). The main difference is that the notion of pedagogical training here emphasizes the value, at least for advanced learners, of understanding the basis for specific techniques and procedures so that informed choices can be made.

## 3. Pilot Study

In preparation for the present research, we conducted a pilot study in winter 2008. Over the course of six weeks, subjects adopted and used new techniques over the course of the study and enthusiastically adopted many of the pedagogical concepts introduced. They reported an increased awareness of the listening process and an understanding of effective uses of resources. One sur-

prising result of this study was a realization that subjects' goals for listening were quite diverse, and not always focused on anything more than simple exposure. Many were already engaged in good listening practices, but some reported rather interesting tendencies, such as a reliance on text subtitles in their native language. The results of the study emphasized the importance of characterizing learner training so that it could be accommodate changes both in students and technology.

#### 4. Main Study: Method

The main study took place during the 10-week spring quarter of 2008 (April-June). The subjects were 14 students in two sections of EFS 693B divided into a morning section (3 students) and an afternoon section (11 students: a 12<sup>th</sup> student in this section chose not to participate in the research). Students were from Korea, China, Taiwan, Japan, and the Philippines. Most had come to the US the previous September.

There were three parts to the course: in class listening practice, discussion and learning training; class homework; and individual projects. The projects were negotiated with the student at the first individual meeting, allowing them to pick objectives and material types in line with their needs and interests. They were required to do a minimum of three 40-minute sessions per week and submit weekly reports specifying the objective, materials, time spent, procedures, and comments.

We used a primarily qualitative approach embedded in an action research perspective. Specifically, we sought to answer the following questions

- 1) What evidence is there that students are using materials reflectively?
- 2) What have we learned about our students as learners?
- 3) What evidence is there that students have learned enough to continue on their own?
- 4) What changes could be made next time?
- 5) Is the benefit worth the cost?

Data were collected using a number of different instruments and procedures:

- Pre/post surveys
- Pre/post listening test
- Individual meeting notes and videos (5/student)
- Weekly student reports
- Notes for each class  
([www.stanford.edu/~efs/693b](http://www.stanford.edu/~efs/693b))
- End of course interview

#### 5. Results and Discussion

*Pre-survey.* Based on the pre-survey students in the study had the following characteristics. Subjects were very comfortable with computers in general, with most selecting the highest level of “I use computers for almost everything I can.” Besides lectures and presentations, most of their exposure to English was through authentic media, much of which was accompanied by text resources such as subtitles. Further, for online audio or video, more than half of the students reported manually adjusting the size of the player, indicating that one of our “best practices” was already being implemented by these digital natives. Finally, the most common motivation for taking the course was by far a “personal desire to improve listening”.

*Student reports and individual meetings.* Evidence of reflective learning came directly from the weekly reports, which had prompts for stating objectives, procedures and comments on their individual projects. This was corroborated in the notes taken during individual meetings (the videos of those meetings have not yet been reviewed). There was widespread evidence of experimentation by students, shifts to shorter spans when doing dictations, and recognition that material on familiar topics is better for language learning.

Here are a few examples of the many specific reflections (student names are pseudonyms).

- Harry (on dictations): “When people speak slowly, my failure rate drops (Yeah!)”
- Nathan—kept to old techniques but refined them (e.g., read transcript prior to shadowing)
- Sam—hid subtitles on YouTube videos by dropping the player window
- Will—recognized dictation is not useful if the material is too difficult
- Joe—began questioning shadowing and dropped it in favor of oral summarizing

*Exit interview and post-survey.* In a post-survey, subjects were asked to rank six factors according to the roles that they played in helping them to understand media. The standard deviations of these rank orders showed that speed and number of times listening had the least variation and tended toward the highest end of the range. However, media type (news / movie / lecture), medium (computer / TV / live), and familiarity with content, had a much higher variation among subjects. These results indicate that the only factors subjects agreed on were speed and number of times

listening, indicating that there are large individual differences for other factors.

In order to get a better idea of how the students reacted to the goals of the course, exit interviews were conducted. Perhaps the most notable result of this interview was the extent to which the subjects gave insightful responses on their own learning processes. Of the 12 subjects interviewed, 10 gave responses that indicated that one of the most valuable things they learned in the course was a way to approach listening. Several subjects reported that they suddenly realized that what they had done in the past was simply listening for entertainment, and could not really be categorized as an effort to improve their skills, but that, with a small amount of awareness and effort, they could transform those experiences into learning opportunities.

*Cost vs. benefit.* As to costs, there is class time lost to training and collaborative debriefings, and student and instructor time in creating and responding to reports. These seem to be outweighed by the benefits. Students were tested at the beginning and end of the course with a 50-item picture identification instrument. The mean score on the pretest was 59% and on the posttest, 70%, suggesting that substantial progress had been made (though the source of that progress cannot be confirmed in the absence of a control group). Most telling are the positive student impressions of their own progress and the reported desire from many to continue working independently using techniques and procedures learned during the course.

## **5. Conclusion**

It is not clear how well this approach would work with a skill other than listening, with less advanced students, or with students lacking the level of technical proficiency. Nevertheless, for this group at least the value of learner training appears to be supported. Following additional review of the data, this pervasive learner training approach will be further refined when the class is taught again next spring.

## **References**

- Freeman, D. (1998). *Doing teacher research: From inquiry to understanding*. Pacific Grove: Heinle & Heinle.
- Hubbard, P. (2004). "Learner Training for Effective Use of CALL" in S. Fotos & C. Browne, (eds.), *New Perspectives on CALL for Second Language Classrooms* (pp. 45-67), Mahwah, NJ: Lawrence Erlbaum.

- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. New York: Newbury.

## Construction of Gender in Intercultural Online Language Learning Environments

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This study examines the intersection of gender and language learning in an intercultural online environment, specifically questioning if and how gendered identities are constructed in online voice and text discussions, and how a gendered identity might affect a student's ability and opportunity to negotiate meaning successfully online. Results indicate that while gendered effects are evident, other identity-related factors also affect the nature of the online exchange.

### 1. Introduction

This study was undertaken at the University of British Columbia Okanagan in an intermediate content-based Japanese language class. One of the class activities involved a computer-mediated oral self-introduction, followed by a text-based discussion with a group of student volunteers at a university in Japan. The discussion revolved around a manga, or graphic novel, that told a story of the aftermath of the bombing of Hiroshima. The class, consisting of 3 native speaking females and 4 non-native speaking males from diverse backgrounds, was conducted from September to December of 2007. The students interacted with the Japanese volunteers using a Wimba Voiceboard and a text-based discussion board on a WebCT site. The study addresses the question of if and how gendered identities are created in the context of online communication for the purposes of language learning, and if and how a gendered identity enhances or limits a student's ability to negotiate meaning successfully with other language learners and native speakers in an online intercultural context.

### 2. Social Construction of Identity and Gender

The construction of an identity is a public process that involves both the "identity announcement" made by the individual claiming an identity, and the "identity placement" made by others who endorse the claimed identity (Stone, in Zhao et al.). Identity is fluid, context-based and interactively constructed, for the most part through language. While there is of course considerable diversity within female and male groups, not to mention overlap in acceptable behaviour between female and male groups,

individuals are still constrained by societal norms for acceptable behaviour for women and men.

Patterns for female and male communicative styles have been well established in the literature. A "feminine" communication style encouraged for women is characterized by an orientation towards relationship maintenance, collaboration, cooperation, politeness and supportiveness. A "masculine" style encouraged or acceptable for men is more competitive, assertive, information-focused, and hierarchical. The online manifestation of the feminine style has been called an "aligned" orientation, and the masculine style an "adversarial" orientation (Herring, 2003). Although these styles are culturally conditioned and not innate, they represent the norms considered appropriate for masculine or feminine behaviour in Western culture, and an individual's performance conforming to or resisting these styles has consequences for their identity placement.

Computer technology has been traditionally coded as a male domain, but recent studies show that women have caught up in terms of comfort level for Internet use (Sussman & Tyson). Cyberspace, especially in anonymous environments like chatrooms and MUDS, can be potentially regarded as a gender-free zone because of the lack of physical embodiment. However, studies that have looked into gender patterns on the Internet conclude that in mixed-sex groups that are not anonymous, the rhetoric of online communication conforms to the norms established for face to face interaction, where discourse is dominated by men (Herring; Sussman & Tyson; Paasonen).

#### 4. Voiceboard self-introduction and text-based discussion

In the Voiceboard self-introduction activity, the participants make formal decisions about how they construct the identity by which they wish to be known to the students in Japan by means of pitch, intonation, greetings, register and content. However, at the same time, their identity must be consistent with their face-to-face self-presentation in class, although they may see this as an opportunity to present aspects of themselves that they have not made public to their face-to-face classmates.

The female native speakers do not exhibit the stereotypically high pitch that is associated with femininity for Japanese women (Ohara). Sentence-final rising intonation, a characteristic that has been associated with young female speech, is evident among some of the female native speakers. However, upspeak patterns are also evident in the speech of one male non-native speaker, who may not realize its gendered implication. This intonation pattern may have had an effect on how his introduction was received by the Japan side.

Salutations indicate an orientation to the other party and an effort towards relationship building. One native speaking female on the Canada side does not use an opening greeting, and when judged against normative expectations for females to be more relationally oriented, this opening may be interpreted as distancing the speaker because of lack of reference to the other. Another NS female includes an emoticon, associated in Japan with cuteness and women (Yano and Katsuno). The effort taken to include the emoticon is indicative of the more relationally based discourse associated with a “feminine” orientation.

Other-orientation is also indexed through register. One of the non-native speaking males is the only participant to use the informal form of the copula in what can be interpreted as an effort to sound casual and friendly. However, the use of the plain form of the copula, without a softening sentence-ending particle, is generally thought to index male speech patterns, and could potentially come off as sounding presumptuous of higher status or male entitlement. However, he also asks for help with his Japanese, and this positioning of himself as a learner in a teacher-learner relationship may have a mitigating effect on his choice of plain form.

In Japanese, the choice of pronoun can index gender. The speaker can choose to use the standard pronoun *watashi*, or the gendered and

less formal pronoun *atashi* for females or *boku* for males. The zero pronoun is also possible, as the subject can be elided. While most participants use *watashi*, one NS female uses no pronoun. In a post-class interview she reports her pronoun of choice is *jibun*, a reflexive pronoun that has come into use, especially by people conscious of or opposed to gendered pronouns. Her choice to omit the pronoun enables her to resist a gendered identity announcement and yet not offend or distance her audience by using a less normative self-reference. One of the men uses *atashi* once, probably unintentionally, but this may have a strong effect on how his online identity is received by the Japan side. Another uses *watashi* initially, but subsequently changes to *boku*, because, as he reports, he had been told by peers to use it for informal conversation. Although this student is the least proficient Japanese speaker in the class, he is the most conscious of constructing what he sees as a proper masculine identity in the Japanese language in order to fulfill what he has learned to be the socially acceptable norm.

An identity statement listing hobbies is one of the ways participants make implicit identity announcements by listing their socially acceptable or desirable cultural preferences (Zhao et al.). While most of the participants list conventional hobbies such as sports and music, one NS female lists less conventionally desirable hobbies, and these, in combination with her short and to-the-point introduction containing no salutation, could result in an identity placement that is not as favourable or conducive to interaction.

The only participant who does not mention hobbies highlights a different aspect of his identity, that of his Korean nationality, and some of his text-based discussion questions revolve around the military history between Japan and Korea. At least one of his posts regarding the history of the war can be considered adversarial. The post received no response. The same student's earlier and less controversial post concerning the tragedy of the war did elicit a response from the Japan side, indicating that the opportunity for an exchange of ideas and authentic discussion is enhanced when less aggressive language was used.

The female native speakers tended to keep text messages short and focused on information. There were no phatic expressions or salutations from two of the participants, and these postings received no responses. While the native speaking female who posted the longest and most frequently somewhat conforms to a “feminine”



style, writing in a polite register and including greetings, expressions of thanks, and emoticons, some of her postings are assertive and in at least two instances she takes a position of power and leadership by speaking for the group. There are no responses to these more assertive postings, so her more powerful language may have had the effect of limiting her opportunities for exchange.

Most of the interaction between the Japan and Canada side occurred with the non-native speakers. Whether this occurred because the Japan side had more interest in the language aspect of the exchange as opposed to the actual discussion of the war-related topic, or because the Japan side was positioned as the teacher in a teacher-learner dyad with the non-native speakers, or because the non-natives were perceived as being more exotic and interesting will be the subject of further study. It is interesting to speculate whether the Japan side resisted the power moves and less-conventionally feminine style of the native speakers on the Canada side by choosing not to answer them but to focus their attention on the male non-native speakers. Here, the intersection of relatively less powerful learner status may mitigate the more male-normative, aggressive language used to discuss content, and make the non-native speakers more attractive language exchange partners. This would work to the non-native speakers' advantage in terms of opportunities to use Japanese for authentic discussion online.

## **References**

- Herring, S. C. (2003), Gender and power in on-line communication. In J. Holmes & M. Meyerhoff (Eds.) *The handbook of language and gender* (pp. 202 – 228). Oxford: Blackwell Publishing Ltd.
- Katsuno, H. & Yano, C. (2007). *Kaomoji* and expressivity in a Japanese housewives' chat room. In B. Danet & S.C. Herring (Eds.) *The multilingual Internet: Language, culture, and communication online*. New York: Oxford University Press.
- Ohara, Y. (2001). Finding one's voice in Japanese: A study of the pitch levels of L2 users. In A. Pavlenko, A. Blackledge, I. Piller & M. Teutsh-Dwyer (Eds.) *Multilingualism, second language learning, and gender*. (pp. 231 – 254). Berlin: Mouton de Gruyter.
- Paasonen, S. (2002) Gender, identity, and (the limits of) play on the Internet. In M. Consalva, & S. Paasonen, (Eds.) *Women and everyday uses of the Internet: Agency & identity* (pp. 21 – 43). New York: Peter Lang Publishing.
- Sussman, N. M. & Tyson, D.H. (2000). Sex and power: gender differences in computer-mediated interactions. *Computers in Human Behavior*, 16, 381- 394.
- Zhao, S., Grasmuck, S. & Martin, J. (2008). Identity construction on Facebook: Digital empowerment in anchored relationships. *Computers in Human Behavior*, 24, 1816 – 1836.

## **Collaborative Corpus Research**

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The present research aims at examining Japanese EFL (NNS) learner preferences in compiling and consulting corpora as a collaborative activity. For a presentation task, each group compiled a native speaker (NS) corpus and compared it to a Japanese L2 learner corpus (LC) that included their own writing in a narrative topic type. The result displayed most groups being less conscious of genre-based corpus compilation and their research focusing on limited functional words, i.e., prepositions, pronouns, and infinitives. Their findings are simply based on difference in frequency rate in terms of over/underuse and there is no investigation into the reasons for the results that learners found. It is noted, however, that some groups notably compiled the same learner corpus format (genre) as that of the NS corpus. Others conducted intense analysis of modal verbs, infinitive usage, or lexical research into intra-genre comparison (e.g., NNS vs. spoken NS vs. written NS).

### **1. Introduction**

In previous studies, the following usages of corpus are reported:

- (1) for teaching grammatical rules, inductive and deductive approaches (Sun, Y & Wang, L, 2003)
- (2) for collocation learning (Kita, K & Ogata, H, 1997)
- (3) for fostering writing ability (Todd, R, W, 2001; Nesselhauf, N, 2004)
- (4) for focusing on lexico-grammatical features and increasing “contextual and linguistic awareness” of L2 learners (Tribble, 2002, p. 133)
- (5) for correcting grammatical errors (Gaskell & Cobb, 2004; O’Sullivan & Chambers, 2006; Hegelheimer, 2006)

Yoon & Hirvela (2004) employed a similar research framework to the present study and focused on the perspective of corpus use in ESL academic writing courses. They concluded that the student’s perception of the corpus approach contributed to development and confidence in regard to L2 writing skills.

O’Sullivan & Chambers (2006) also supported corpus consultation for enhancing learner’s writing skills. They recommended corpus consultation by stating, “corpora can provide students with target language input in the form of authentic texts of

naturally occurring examples of real language use,” (p. 52) and can, therefore, foster writing ability. They added the notion that corpus consultation “enhances learner autonomy” (p. 53) by encouraging learners to uncover the forms and patterns of language use in the targeted corpus.

The present study aims at investigating learner ability (autonomy) to discover differences between focused features of EFL learners and those of native speakers. The theoretical framework of this research is founded upon corpus use for developing the writing ability of L2 learners and creating the autonomy required to discover differences in focused forms and patterns between learner corpus and learner-compiled corpus(es). The following research questions arise next in the study:

1. Do L2 learners employ genre-based perspectives to learner corpus in compiling corpus?
2. On what lexical and grammatical features do they focus?

### **2. Method**

In order to build learner corpus, learners wrote narrative essays titled “self-introduction”. The essays of the 48 participants were, then, assembled into one corpus to function as one NNS comparative corpus. When building NS (native speaker) contrastive corpora, LC was deemed as required.

The other corpus(es) for comparison with LC, was/were allowed to be chosen by the learner group. Each group discussed the size, genre/register, age, and source of contrastive corpus to compile. If two corpus sizes are different, frequency rate of occurrence should be estimated according to each corpus. The instructor served as a facilitator to avoid problems and offered advice to encourage each group to reach the required destination.

Each group composed of 3-5 self-selected members and the 48 participants were thus divided into 13 groups. Six continuous lessons were allotted, including a presentation period.

To analyze a corpus compiled in text format, Antconc is adopted. Antconc is free software that enables users to conduct corpus analysis by offering the following functions: concordancer, wordlist, keyword list, and clustering.

### 3. Result

As in Table 1, with regard to genre/register perspectives in compiling corpora to make contrastive research, almost half the groups (6/13) compiled corpuses of different language types and mixed spoken and written languages. Only two groups attempted to establish a corpus of the same

Table 1. Corpus Features of 13 Groups

Group No	LC(NNS)	1	2	3	4	5	6	7	8	9	10	11	12	13	
Spoken/ Written	W	W+S	W+S	S	W+S	W	S	W	W	W	S	S	S	W	S:spoken, W:written
Period	21st	21st	90s	21st	21st	90s/ 50s	21st	19th	21st	19th	21st/ 18th	21st	21st	21st	18th, 19th, 21st: Century; 90s: 1990s,
Corpus size	11457	S/S	S/S	M	S/S	M	L	M	M	L	S	M	M	M	S: less than 10000, M: 10001-50000, L: more than 50000
Features (main)	Titled "Self-introduction"	Pron, Conj	Infinitive	Verb	Conj	Conj	Verb	Modal	Prep	Prep	Pron	Adverb (Intensifier)	Pron	Pron, Conj	Pron: pronoun; Conj: conjunction; Prep: preposition

genre in the format of written self-introduction. Moreover, in terms of genres, 3 groups chose written fictions from the 18<sup>th</sup> and 19<sup>th</sup> centuries. Considering these results, Japanese EFL learners seem to pay little attention to differences in genre and register. With regard to the first research question, therefore, L2 learners exercise insufficient genre-based perspective when compiling and analyzing comparative corpus.

With regard to the second research question,

lexical and grammatical features that learners employed are: pronouns (4 groups), conjunctions (4 groups), verbal features including infinitives (3 groups), prepositions (2 groups), modals (1 group), adverbs including intensifiers (1 group) (Note that three groups addressed multiple research questions). Main findings in learner research are as follows (G + numeral: group number).

#### 3.1 Nouns and pronouns

- (1) Fictional prose has more proper nouns and less pronouns than the movie script. (G1)
- (2) The current US president offered high frequency of *we* as a subject in his speech, whilst the first president used many *I*'s. (G10)
- (3) LC contains twice as many *I*'s as the NS corpus even though both corpuses belong to the same genre of self-introduction. (G13)

#### 3.2 Conjunctions

- (1) *And, so, and because* have a high frequency rate in LC. (G1)
- (2) *And/but* + pronoun occurring in the initial position of a sentence appears more than 5 times as frequently in LC as it does in NS corpus. (G4)
- (3) The relative pronoun *that* has a lower frequency

in LC than it has in NS corpus. (G1)

- (4) In NS corpus, *and* is frequently used for connecting sentence/clause and sentence/clause, but in LC, it is mainly used to connect single-standing words. (G5, G13)

#### 3.3 Prepositions

- (1) In LC, *at* and *on* are mainly used for expressing time, while *in* is used with spatial meaning. In NS corpus, *by* is often used to note means of

action and *as* is used following an adjective or as a conjunction. (G8)

- (2) In NS corpus, *like* shows high frequency of prepositional usage in exemplary description with a similar meaning to *as if* and *for example*, but in LC such usage is found less frequently. (G6)

### 3.4 Verbs and modals

- (1) In LC, 70% of infinitives are used in a collocation of *want to*, while in NS corpus 50% of infinitives employed adverbial usage to show aims and results. Movie scripts include infinitives to modify preceding nouns in 28% of cases, which is the highest of all usages. (G2)
- (2) With regard to the usage of causative verbs such as *make*, *get*, *have*, and *let*, *let* in NS corpus shows more than 5 times the frequency rate of that in LC. Verb forms accompanying bare infinitives (*make*, *have*, *let*) and to-infinitives (*get*) are less common than those found in NS corpus, and in particular, *make* is often used in containing a single object form. (G3)
- (3) NS corpus includes many examples of shifting from verb to noun, whilst in LC the lexical variation of verbs is limited in number and usage. *Play*, for example, is found to be used exclusively as in “having fun” without any wider meanings such as in *play a role*, *play on words*, or *play truant*. (G6)
- (4) NS corpus contains high usage of modal verbs such as *could* (11 times as frequent as in LC), *should* (3 times as frequent), *would* (27 times as frequent), and *must* (3 times as frequent). *Might* appears 14 times and *shall* appears 15 times in NS corpus but frequency cannot be compared with that in LC, because LC contains neither of them. It should be noted that this group concludes that NS corpus includes a wide range of affirmative degree and NNSs have limited knowledge regarding modals and that difference of genre of corpus (narrative LC vs. fictional NS) might influence the features of each corpus. (G7)

### 3.5 Others

- (1) *Very much* in LC appears 23 times more frequently than in NS corpus. Only one group pays attention to the usage of negation and notes that NNSs often use “negation + many/much” form. (G4)
- (2) The NS corpus has a wide variation of adverbs such as *just*, *never*, and *no*. All of them show more than 100 times the frequency than that found in LC. In contrast, in the case of *so*, Japanese learners use twice as many *so*'s as NNSs. (G11)

## 4. Discussion

In order to guide learners to proper goals, a plausible research design should be established. Focusing on similar genre, size, and ages of production along with authenticity of the corpus compiled might aid in this.

Regrettably, most of their research discusses over/under use of several usages of a functional word such as a popular preposition (*of*, *in*, *on*, *at*) or a prevalent verb(s) (*have*, *make*, *play*). Deeper investigation into the reasons for the discoveries is required.

In short, research stays at the surface level, reflecting a lack in collocational research and semantic contrast in rhetorical influence.

However, analysis in learner needs will shed some light on the effective contribution of native speaker corpus on language learning. For example, G1 successfully notices what modal means in text construction by studying functional features of auxiliary verbs. This is one of the areas in which Japanese EFL learners in my research have been less conscious (Kashiwagi, 2006). Another group (G2) conducts comparative research into infinitive usage in three phases: spoken, written, and LC. They found clear contrast in functional difference in those three phases.

Several groups propose that Japanese learners show excessive preference for: *in* referring to time sequence rather than spatiality, *on* referring to spatiality, *want to* referring to writer expectation, and *and* as a word connector instead of a sentence connector.

Most of the groups agree that wider variation of

the researched features occurs in NS corpus and limited number of usages is found among Japanese learners. Japanese learners also maintain the importance of analysis of authentic usage of native speakers. Sharing research results with other learners also contributes to developments in distinguishing quasi-English from authentic English.

The contrast found in the study of pronoun as subject used in two president's speeches provides some suggestions in the socio-linguistic field and offers historical perspectives on a leader of a country and its people (*I* vs. *We*: G10).

The corpus of a poetic genre seems unusual to the author, but most L2 learners are interested in popular song lyrics to a great extent. Research into lyrics of The Beatles (British, 1960s, Males) and Mariah Carey (American, 1990s, Females) leads to the selection of words such as *no*, *never*, *let*, *know* to contrast with LC and between the artists themselves in key-wordlists. To the author, gender should be the main reason for contrast rather than nationality or age.

A summary of the contributions to EFL learners is:

1. Noticing differences in lexical, grammatical features, function and meaning, overuse and underuse in targeted corpuses
  2. Confirming unclear matters in the learning process with regard to cognitive stimulus to EFL learners through discussing and determining research items
  3. Activating consciousness to monitor differences between learners' L2 output and authentic English
- In other words, finding grammatical and lexical gaps between rhetorically influenced corpuses and authentic corpuses will be useful as an activator of second language learning. Hopefully, most learners find the activity to be helpful in learning authentic English and discover that they need more knowledge regarding L2 grammar and lexis.

## References

- Gaskell, D., & Cobb, T. (2004). Can learners use concordance feedback for writing errors? *System*, 32, 301-319.
- Hegelheimer, V. (2006). Helping ESL writers through a multimodal, corpus-based, online grammar resource. *CALICO Journal*, 24(1), 5-32.
- Kashiwagi, T. (2006). Corpus analysis of argumentative essays: NNS English Teachers, NNS Learners and NS College Students. *KASELLE BULLETIN*, 34, 1-10.
- Kita, K. & Ogata, H. (1997) Collocations in language learning: Corpus-based automatic compilation of collocations and bilingual collocation concordancer. *Computer Assisted Language Learning*, 10(3), 229-238.
- Nesselhauf, N. (2004). Learner corpora and their potential for language teaching. In J. M. Sinclair (Ed.), *How to Use Corpora in Language Teaching* (pp.125-152). Amsterdam: Benjamins.
- O'Sullivan, I. & Chambers, A. (2006). Learner's writing skills in French: Corpus consultation and learner evaluation. *Journal of Second Language Writing*, 15, 49-68.
- Sun, Y. & Wang, L. (2003) Concordancers in the EFL Classroom: Cognitive Approaches and Collocation Difficulty. *Computer Assisted Language Learning*, 16/1. 83-94.
- Todd, R. W. (2001). Induction from self-selected concordances and self-correction, *System*, 29(1), 91-102.
- Tribble, C. (2002). Corpora and corpus analysis: New windows on academic writing. In J. Flowerdew (ed.), *Academic discourse* (pp.131-149). Harlow, UK: Longman.
- Yoon, H. & Hirvela, A. (2004). ESL student attitudes toward corpus use in L2 writing. *Journal of Second Language Writing*, 13. 257-283.

## Development and practice of an Electronic Phrasal Verb Wordbook with GIF animations

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ESL/EFL learners tend to have difficulty in having clear images of phrasal verbs since both basic verbs and adverbs have various functions and meanings. Consequently, they have to memorize each expression by rote. To solve this problem it would be effective to develop and practice digital teaching materials based on “Prototype Theory” with graphic schematization (i.e. visualized moving images with GIF animations). The author developed an “Electronic Phrasal Verb Wordbook with GIF animations” and investigated its effects on Japanese EFL learners in acquiring phrasal verbs. The result shows GIF animations tend to work as graphic schematization devices effectively for Group-A phrasal verbs (e.g. take down, give off, take in, etc.) but not for Group-B (e.g. go over, go down, come off, etc.), which suggests graphic schematization works effectively in acquiring phrasal verbs to a certain extent.

### 1. Introduction

For many ESL/EFL learners, it seems to be difficult to have clear images of phrasal verbs due to the fact that both basic verbs and adverbs (or prepositions) can have various functions and meanings (i.e. idiomaticity). In many cases ESL/EFL learners use single-word equivalents (e.g. confuse), on the other hand native speakers use a phrasal verb in its place (e.g. mix up) (Dagut & Laufer, 1985). Accordingly, ESL/EFL learners have to memorize each expression by rote.

### 2. Background

One solution for this problem would be to develop and practice digital teaching materials based on “Prototype Theory” (Geeraerts, 1989) with graphic schematization (i.e. visualized moving images with GIF animations). This theory has caught the attention of linguists because the insights can be used to develop a model for dealing with such semantic phenomena as the fuzzy boundaries of lexical categories, the flexible and dynamic nature of word meaning, and so on.

Obtaining knowledge through this theory, students will probably acquire prototypical sense of phrasal verbs so that they can infer new phrasal verbs’ meanings by analogy, which is similar to the

way of guessing the meanings of unknown words using etymological knowledge that is prefixes, roots, and suffixes.

### 3. Purpose

The purpose of this paper is to develop an “Electronic Phrasal Verb Wordbook with GIF animations” for ESL/EFL students and investigate its effectiveness in acquiring phrasal verbs.

### 4. Electronic Phrasal Verb Wordbook

First, both basic verbs such as “come, go, get, give, take” and adverbs (prepositions) such as “about, after, away, by, down, for, in, off, on, out, over, through, up” are selected. Second, GIF animations of verbs (e.g. get) (see Figures 1a, b, c; 2a, b, c; 3a, b, c) and adverbs (prepositions) (e.g. through) (see Figures 4a, b, c) to show their prototypes with movements are made. Third, both verbs and adverbs (prepositions) hyperlinked to animations are listed in a table. Fourth, GIF animations of phrasal verbs to show their prototypes with movements are made (e.g. get through) (see Figures 5a, b, c). Finally, phrasal verbs hyperlinked to animations are listed in an Excel table (see Tables 1a, b).

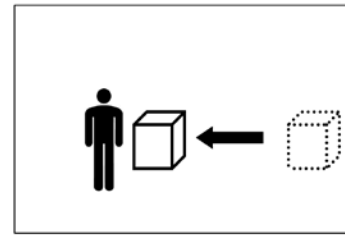
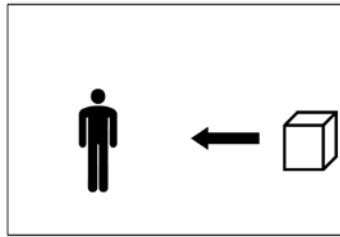
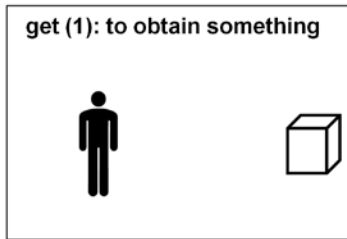


Fig. 1.a-c: get (1) [animation]

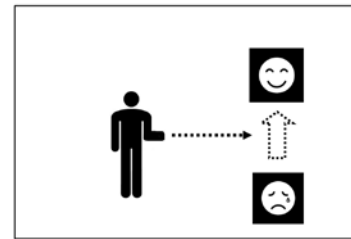
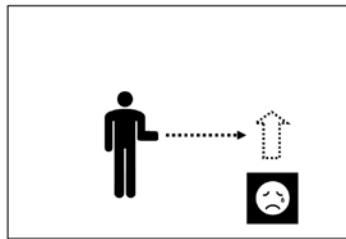


Fig. 2.a-c: get (2) [animation]

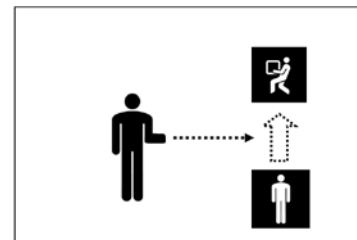
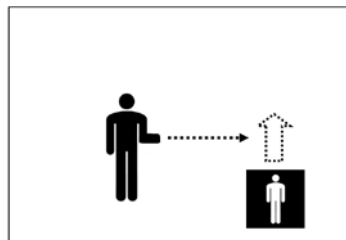
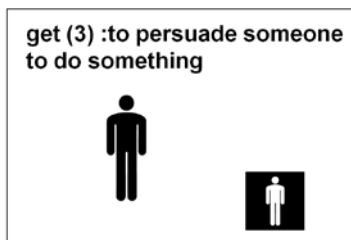


Fig. 3.a-c: get (3) [animation]

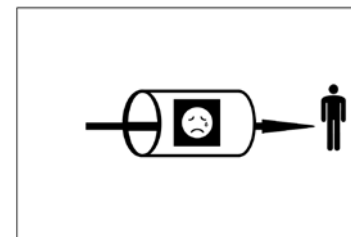
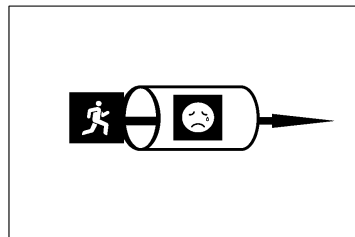
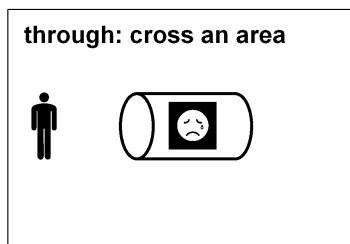


Fig. 4.a-c: through [animation]

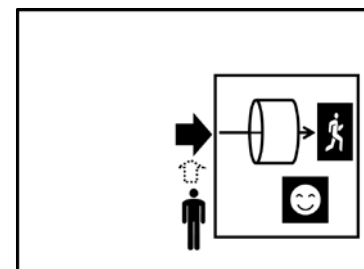
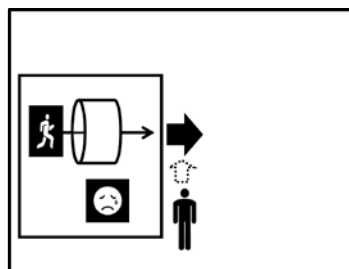
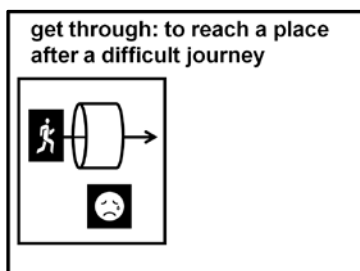


Fig. 5.a-c: get through [animation]

Table 1a. Electronic Phrasal Verb Workbook

	phrasal verb	pronunciation	animation	example	pronunciation	Japanese	
1	come down	—	—	Bill came down to my country house to see me.	—	—	—
2	go down	—	—	Prices usually go down during a recession.	—	—	—
3	come off	—	—	The performance came off better than expected.	—	—	—
4	come out	—	—	Sooner or later, the truth is going to come out.	—	—	—
5	go over	—	—	I went over my test paper once more, checking my answers.	—	—	—
6	come away	—	—	Come away! It's dangerous here.	—	—	—
7	come up	—	—	An important matter has come up.	—	—	—
8	take down	—	—	I took down everything he said.	—	—	—
9	come through	—	—	He came through in spite of all the troubles he had.	—	—	—
10	take in	—	—	Sportsmen need to take in a lot of exercise.	—	—	—
11	come about	—	—	How did that come about?	—	—	—
12	get through	—	—	If I can get through the interview...	—	—	—
13	go off	—	—	A bomb went off on a bus.	—	—	—
14	take after	—	—	She takes after her grandmother.	—	—	—
15	come for	—	—	What time shall I come for you tonight?	—	—	—
16	come by	—	—	She came by his office on the way here.	—	—	—
17	give away	—	—	She gave away all her property to the poor.	—	—	—
18	give over	—	—	He gave his property over to his son.	—	—	—
19	go by	—	—	As the years went by, people gradually forgot about the...	—	—	—
20	take on	—	—	They used to take on fuel in Hawaii.	—	—	—
21	take up	—	—	He took up the piano at the age of 45.	—	—	—
22	give in	—	—	He isn't the type that gives in easily.	—	—	—
23	give off	—	—	She is giving off an atmosphere of...	—	—	—
24	give out	—	—	His volunteer group gives out food...	—	—	—
25	take over	—	—	I'll take over from here.	—	—	—
26	come over	—	—	Why don't you come over for a cup of coffee?	—	—	—
27	get by	—	—	I don't think I could get by without my cell-phone.	—	—	—
28	go about	—	—	He went about cleaning his messy room.	—	—	—

click here for pronunciation

click here for sentence pronunciation

click here for animation

click here to view Japanese translation

Table 1b. Electronic Phrasal Verb Workbook (Japanese translation)

	基本動詞	前置詞 (副詞)	句動詞の意味	訳
1	来る	離れて(地方へ)	(大都市から地方へ)やってくる	ビルが田舎の別荘へ会いに来てくれた。
2	状態になる	下がる	価格が下がる	不景気には物価はたいてい下がる。
3	状態になる	離れて	結果が...となる	公演は予想以上にうまくいった。
4	状態になる	外に	公表される	遅かれ早かれ真相が明らかになるだろう。
5	進行する	全般にわたって	綿密に調べ、見直す	解答を確かめながら再度答案を見直した。
6	来る	離れて	去る	逃げろ！ここは危険だ。
7	来る	出現	話題に上がる	重要案件が議題に上がった。
8	取り込む	固定	書きとめる	彼の言ったことを全て記録した。
9	来る	通り抜けて	生き延びる	さまざまな問題を乗り越えて、彼は成功しました。
10	取る	中に	吸収する	スポーツマンは水分を大量に取る必要がある。
11	来る	周辺に	起こる	どうしてそうなったのですか。
12	ある状態	ある状態	(問題を)切り抜ける	もし面接に受かれば、就職できるかもしれない。
13	ある	ある	目撃ましが鳴る	バスで爆弾が爆発しました。
14	来る	現れている	現れている	彼女は、おばあさんに似ている。
15	来る	かえり来る	かえり来る	今夜何時に向かえに来てほしい？
16	来る	立ち寄る	立ち寄る	彼女はここに来る途中、彼のオフィスに立ち寄った。
17	与える	離れて	無償で配る	彼女は貧しい人々に無償で財産を与えた。
18	与える	向こうに	譲り渡す	彼は財産を息子に譲り渡した。
19	進行する	そばを通り過ぎる	[時が]過ぎる	時がたつにつれて人々は次第にその出来事を忘れた。
20	取り込む	乗り物の中へ	積み込む	かつてはハワイで給油した。
21	取り込む	出現	[仕事・留め事]始める	彼は45歳でピアノを始めた。
22	生じさせる	中へ	届する	彼は容易に従うような男じゃない。
23	出す・放つ	離れて	[光・気体・熱・雰囲気]出す、発する	彼女はここにいたくないというそぶりを見せている。
24	無償で与える	広がる	配布する、分配する	彼のボランティア団体は、ホームレスに食料を配っている。
25	取り込む	支配下に置く	[仕事・責任・家]引き継ぐ	ここからは私が引き受けます。
26	移動する	越えて	会いに来る	うちに来てコーヒーでも飲みませんか？
27	状態にする	通り過ぎる	なんとかやっていく	携帯電話なしでは、もう生きていけないと思う。
28	進行する	周辺から	[仕事などに]取り掛かる	彼は取らなかつた自分の部署の掃除に取り掛かった。

click here to go back to Table 1a

### 5. Computer Programs for Development

The following programs are used to develop the Electronic Phrasal Verb Workbook:

- Accessible Design
  - ... to create illustrations (public domain)
- Animation Gif Maker Ver.0.71
  - ...to create animated GIF images and animations (freeware)
- Microsoft Excel
  - ... to create a workbook
- Microsoft PowerPoint
  - ...to create GIF graphics conversion format files
- Text to Speech
  - ... to create sound files (demonstration site)

### 6. Method

#### Participants

37 college sophomores majoring in English participated in this experiment.

#### Materials

- Test 1: 28 phrasal verbs (written in letters only)
- Test 2: 28 phrasal verbs (same as Test 1) with GIF animations.
- Test 3: 28 phrasal verbs (same as Test 1) in example sentences.

#### Procedure

All three tests were conducted consecutively on July 14, 2008. First, participants took Test 1 on paper. Then, they took Test 2 with GIF animations on the computer screen. Finally, they took Test 3 on paper. In all tests they were to put English phrasal



verbs into Japanese.

**7. Results and Discussion**

The average scores (percentages) of correct answers in Test 1, 2, and 3 are 4.1 (1.5%), 9.3 (3.4%), and 17.4 (6.4%) respectively (see Fig.6).

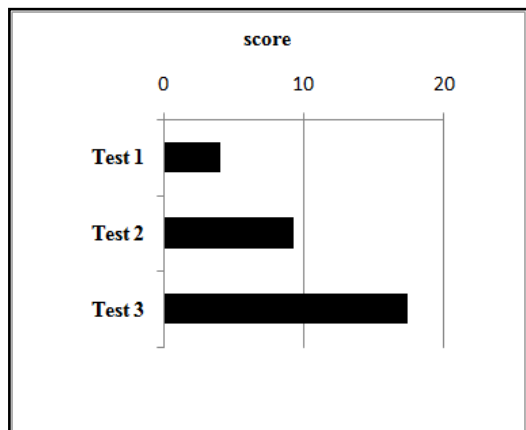


Fig.6. Average scores of three tests

Comparing the results of Test 1 and 2, participants marked higher scores in Test 2 on the following phrasal verbs (i.e. score= [Test2] – [Test1]):

“take down, give off, take in, give away, come through, come up, come by” ...Group-A, which is probably suitable for graphic schematization.

(see Table 2)

Table 2. Group-A phrasal verbs

phrasal verb	score
take down	30
give off	20
take in	15
give away	14
come through	13
come up	13
come by	12

n= -37~+37

On the other hand, they marked lower scores in Test 2 on the following phrasal verbs (i.e. score= [Test2] – [Test1]):

“go over, go down, come off, get by, come about, come away, go off” ...Group-B, which is not probably suitable for graphic schematization.

(see Table 3).

Table 3. Group-B phrasal verbs

phrasal verb	score
go over	-10
go down	-9
come off	-4
get by	-4
come about	-3
come away	-2
go off	-2

n= -37~+37

As a result, GIF animations tend to work as graphic schematization devices effectively for Group-A phrasal verbs but not for Group-B, which probably suggests either some phrasal verbs are not suitable for graphic schematization, or we need to provide more proper animations to activate graphic schematization.

**References**

Dagut, M., & Laufer, B. (1985). Avoidance of phrasal verbs – a case for contrastive analysis. *Studies in Second Language Acquisition* 7, 73-80.

Geeraets, D. (1989). Introduction: Prospects and problems of prototype theory. *Linguistics*, 27, 587-612.

McCaleb, J. et al. (2006). *All-purpose dictionary of English phrasal verbs*, Tokyo: Asahi Publishing Company.

Tanaka, S. (1987). *Semantics of basic verbs: Core and prototype*, Tokyo: Sanyu-sha Publishing Company.

Tanaka, S. et al. (2003). *E-gate English-Japanese dictionary*, Tokyo: Benesse Corporation.

**Appendix**

<Programs used for development>

*Accessible Design* (by The Accessible Design Foundation of Japan)

[<http://www.kyoyohin.org/index.php>]

*Animation Gif Maker Ver.0.71*

[<http://www.asahi-net.or.jp/~zb8n-htr/>]

*Microsoft Excel* [<http://office.microsoft.com/>]

*Microsoft PowerPoint* [<http://office.microsoft.com/>]

*Text to Speech* (by AT&T)

[<http://www.research.att.com/~ttsweb/tts/demo.php>]

## EFL students' language awareness in an e-mail tandem activity

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E-mail tandem is a reciprocal language learning method, in which two learners of a different native language (L1) have e-mail communication in the target language (L2, the partner's L1), and assist each other's L2 learning by giving and receiving feedback. Appel (1999) suggested that correction of the partner's errors enhances the development of learners' metalinguistic awareness (MA) of L1, which is thought to facilitate L2 learning. Therefore, this study attempted to investigate 1) what L1 features do Japanese tandem learners notice in the partner's language use, and analyze to explain linguistic rules to the partner, 2) how does their L1 MA affect L2 knowledge, and 3) whether L1 MA correlates L2 ability. The results showed that tandem learners of this study were aware of "linguistic" aspects of L1, and their L1 MA seemed to affect L2 knowledge by contrasting the two languages, trying to find similarities or differences of the linguistic system between L1 and L2. Also, learners with a high level of L1 MA appeared to possess high L2 proficiency. The study concludes by enumerating e-mail tandem's advantages in MA development.

### 1. Introduction

#### 1.1 E-mail tandem language learning

E-mail tandem is a reciprocal language learning method, in which two learners of a different native language (L1) communicate by e-mail, using the target language (L2, the partner's L1). The primary purpose of this method is to improve L2 communicative/linguistic ability. Each partner is required to judge the correctness of the partner's language and provide linguistic feedback with each other. Among the past studies that suggested advantages of this method, Appel (1999) reported that her students raised their metalinguistic awareness of L1 when they corrected their partner's language in order to provide feedback.

#### 1.2 Metalinguistic awareness

According to van Lier (1995), metalinguistic awareness (MA) is a person's ability to objectify language. More specifically, it is a person's sensitivity or conscious awareness of certain linguistic patterns, such as parts of speech, word order, and so on. Traditionally, MA has been operationalized as a learner's ability to correct, describe and explain errors of the language (Renou, 2000).

The significance of MA in language learning has been discussed in many studies, and it is now considered that MA has an influence on learners' L1 proficiency as well as L2 development. Some

researchers suggested that L1 MA promotes L2 learning (Cummins, 2000; Lasagabaster, 2001). Otsu (2008) found that there was a positive correlation between Japanese students' L1 MA and their L2 (English) proficiency.

Keeping these past findings in mind, this study attempted to investigate more about Japanese tandem learners' MA with the following questions:

- 1) What L1 features do Japanese tandem learners notice in the partner's language use, and analyze to explain linguistic rules to the partner?
- 2) How does their L1 MA affect L2 (English) knowledge?
- 3) Do Japanese learners with a high level of L1 MA possess higher English proficiency?

### 2. Method

This study was conducted in the 2006 and 2007 e-mail tandem projects implemented between Japanese and American secondary school students.

#### 2.1 Participants

On the Japanese side, 10 and 7 students participated in each year. They were all 9<sup>th</sup> grade male students (L1 Japanese, L2 English). The results of an English proficiency test showed that their English ability was quite high for their age. On the American side, 35 and 27 students participated.

They were 9<sup>th</sup> to 11<sup>th</sup> grade male and female students (L1 English, L2 Japanese, inter-mediate low).

Since American students outnumbered Japanese students in both years, the authors assigned 3-4 American students to one Japanese student, and had them to correspond with each of the American partners.

## 2.2 Procedures

The students were told to discuss each other's culture such as school lives and holidays. Their e-mails consisted of 4 parts: 1) small talk, 2) linguistic feedback, 3) answers to partners' question, and 4) questions to partner. They were instructed to use L2 in the 1<sup>st</sup> and 4<sup>th</sup> parts, and L1 in the 2<sup>nd</sup> and 3<sup>rd</sup> parts, considering the level of their cognitive and linguistic development. The students made 6.2 and 5.7 exchanges on average during the 8-week period.

## 2.3 Data analysis

Three kinds of data were collected from Japanese students and analyzed in this study: Post-project questionnaire, oral interview, and e-mail logs. The questionnaire required them to write a) any linguistic features of the partners' Japanese use which they noticed and analyzed in the feedback phase, and b) any thoughts they obtained from their L1 analysis that they could apply to their English learning. After this, the authors had oral interviews with each student in order to collect more detailed information about their comments. All of these comments were backed up by the analysis of their e-mail logs.

## 3. Results & Discussion

The results of the questionnaire and interview sessions showed that not every student reported MA comments. There were, however, episodes of seven students which clearly showed their L1 MA (i.e., correcting, describing, and explaining L1 errors) and its application to English knowledge.

### 3.1 Students' MA comments

Student A noticed that his female partner always placed causal adverbial clauses after the main clause. He pointed out her L1 transfer and explained to her that, in Japanese, causal clauses usually come sentence-initially. He then contrasted positional differences of causal clauses between English and Japanese, and realized that, in English writing, he himself had placed causal clauses sentence-initially because of his L1 transfer.

Student B was aware of his female partner's continuous errors in using Japanese particles “は

(-wa)” and “が(-ga).” After long consideration, he finally explained to her that “が(-ga)” is attached to new information and “は(-wa)” is used for old one. He then connected this L1 explicit knowledge to the English articles “a” and “the,” each of which marks first and subsequent mention, respectively.

Student C described his male partner's misuse of postpositional particles. He explained that Japanese postpositional particles mark subject and objects of various kinds, and advised him to use them correctly. Then, he noticed that English, which has no particle system, relies on word order instead, in order to signal grammatical relations within a sentence.

Students D and E thought that their partners' Japanese was understandable but sounded unnatural. They both explained that it was because the partners' verb choice was inappropriate. They then recalled some English phrasal verbs (e.g., make an effort), and inferred that every language may have such conventional patterns of word combination (i.e., collocation).

Student F noticed that his female partner overused “の(-no)” to every adnominal. While he pointed out her overuse of a basic rule, he realized that he had also made similar types of errors (e.g., *longly*). He concluded that L2 learners should be careful to avoid overgeneralization.

Student G found that his partner spelled “む(mu)” in place of “ん(n),” and explained that, in Japanese, all the nasal sounds are spelled with “ん(n).” Later, he discovered that nasal sounds before “p” and “b” are produced with two lips closed, which made him notice that English orthography distinguishes the two types of nasal sounds, that is, “n” and “m.”

### 3.2 Analysis

In response to the first research question, the L1 linguistic features that each student analyzed are categorized into the knowledge of Grammatical Competence (i.e., syntax, morphology, vocabulary, phonology and graphology), which is one of the components of Bachman's (1990) Language Competence. According to this, tandem learners of this study focused on “linguistic” aspects of language, rather than “pragmatic” ones.

An intriguing cognitive process was found in analyzing the second research question. The students developed L1 explicit knowledge by analyzing specific L1 features appeared in their partner's e-mail, and provided linguistic explanations. Then, they contrasted L1 and L2, looking for similarities or differences of the

linguistic systems between the two languages. Some researchers insisted that this cognitive effort, that is, contrasts between L1 and L2, enhances the development of MA and L2 proficiency. For example, Little (2003) acknowledged that tandem learners could benefit from contrasts between L1 and L2. Jessner (1999) stated that MA can be enhanced by perceiving similarities or differences between L1 and L2, which can activate prior linguistic knowledge and guide them in the development of L2 system. According to these arguments, learner's contrasts between the two languages might be the key for e-mail tandem to be successful in terms of MA development.

In order to answer the third research question, the authors plotted out all the students' scores of the English proficiency test, and identified the scores of Students A-G, who reported their MA comments (Fig. 1). The figure shows that there seems to be an overall tendency between students' MA and English proficiency. In other words, Japanese learners with a high level of MA are likely to be successful in English learning.

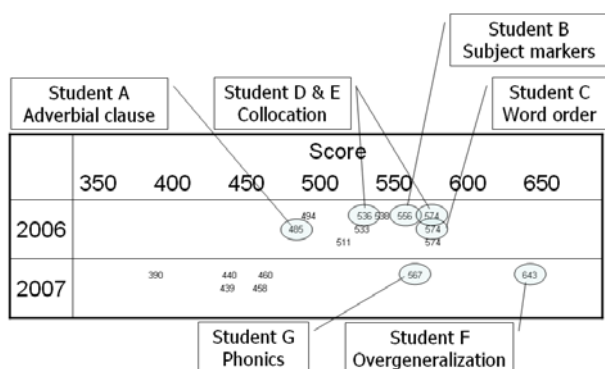


Fig.1. Plotted scores of an English proficiency test.

#### 4. Conclusion

The fact that not every student reported MA comments seems to suggest that it was too demanding for junior high school students to make such a linguistic analysis by themselves. On the other hand, another finding of the study was that those who reported MA comments were successful English learners. This result supports the past studies, that is, L1 MA and L2 proficiency positively correlate with each other.

It is not certain, however, if high L2 proficiency enhances MA, or if high MA promotes L2. This needs further investigation.

If MA is proved to precede L2, then MA raising activities should be employed in language education, and e-mail tandem could be utilized for this purpose because it has a feedback phase which triggers students' noticing and analyzing L1 features that appeared in the partner's e-mail. Also, their noticing is promoted by the written nature of the e-mail discourse. Moreover, its asynchronous mode of communication allows them more time to analyze the language. It is expected that these advantages will lead students to contrast linguistic systems between L1 and L2, and examine similarities and differences between the two languages.

#### Acknowledgments

We would like to thank Kumi Kobayashi and Jeremy Kitchen for their greater cooperation on the project.

#### References

- Appel, C. (1999). *Tandem language learning by e-mail: Some basic principles and a case study (CLCS Occasional Paper No. 54)*. Dublin: Trinity College, Centre for Language and Communication Studies.
- Bachman, L. (1990). *Fundamental considerations in language testing*. Oxford: Oxford University Press.
- Cummins, J. (2000). Putting language proficiency in its place: Responding to critiques of the conversational/academic language distinction. In J. Cenoz & U. Jessner (Eds.), *English in Europe: The acquisition of a third language* (pp. 54-83). Clevedon: Multilingual Matters.
- Jessner, U. (1999). Metalinguistic awareness in multilinguals: Cognitive aspects of third language learning. *Language Awareness*, 8, 201-209.
- Lasagabaster, D. (2001). The effect of knowledge about the L1 on foreign language skills and grammar. *International Journal of Bilingual Education and Bilingualism*, 4, 310-331.
- Little, D. (2003). Tandem language learning and learner autonomy. In L. Walker & T. Lewis (Eds.), *Autonomous language learning in Tandem* (pp. 37-44). Sheffield: Academy Electronic Publications.
- Otsu, Y. (2008, May). *Gaikokugo gakushu: Futatsu no nazo [Foreign language learning: Two mysterious issues]*. Plenary Address at the 2008 Regional Conference of the Kansai Chapter, the Association of Language Education & Technology, Kobe, Japan.
- Renou, M. (2000). Learner accuracy and learner performance: The quest for a link. *Foreign Language Annals*, 33, 168-180.
- van Lier, L. (1995). *Introducing Language Awareness*. London: Penguin Books.

## The marriage between corpus-based linguistics and lexico-grammar instruction: Using *advise*, *recommend*, and *suggest* as an example

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This paper talks about the integration of corpus-based data and lexico-grammar instruction. The paper first gives an overview of corpora in terms of accessibility. Next, the relations between corpus-based linguistics and lexico-grammar instruction are introduced. Then, pedagogical issues of the use of corpora in a classroom setting are fully discussed. Finally, by using *advise*, *recommend*, and *suggest* as sample lesson material, the linguistic and pedagogical challenges that English practitioners face are brought up. These challenges include: (1) technical and statistical challenges (2) theoretical foundation (3) intuition vs. competence (4) absence or rare instances of target examples (5) real language.

### 1. A general overview of corpora

A corpus is always designed for a particular purpose, and the type of corpus will depend on its purpose. According to the functions and purposes given by Hunston (2002), commonly used corpus types include: specialized corpus, general corpus, comparable corpora, parallel corpora, learner corpus, pedagogic corpus, historical or diachronic corpus, and monitor corpus (p. 14-17). However, in terms of corpus accessibility, three types of web-based corpus can be categorized: *closed corpora*, *paid corpora*, and *free online corpora*.

#### 1.1 Closed Corpora

*Longman Corpus Network*, *Cambridge International Corpus* (CIC), and *World English Corpus* are three typical closed corpora. Only a few researchers, editors, lexicographers and textbook writers affiliated with *Longman*, *Cambridge*, and *Macmillan* publishers have access to these corpora. Rest of us can only use corpus-based printed products of these publishers.

#### 1.2 Paid Corpora

Many well-known corpora can be bought in a CD-ROM format; price varies from one corpus to another. Most creators of corpus also offer special discount to non-commercial users or educational institutes. ICAME, COLT, and CSPA are some examples of paid corpora.

#### 1.3 Free Online Corpora

With the growing popularity and outstanding performance of wired computers, corpus linguists have created more and more online corpora which

are open to the public. Some free corpora are listed below:

1. BNC Sampler (<http://www.natcorp.ox.ac.uk/>)
2. Cobuild Concordance and Collocations Sampler (<http://www.collins.co.uk/Corpus/CorpusSearch.aspx>)
3. JustTheWord (<http://193.133.140.102/JustTheWord/>)
4. MICASE (Michigan Corpus of Academic Spoken English) (<http://quod.lib.umich.edu/m/micase/>)

If language teachers would like to integrate corpora into their English teaching but won't use free online corpora, they can only buy corpus data (usually in CD-ROM format) and sometimes also concordancing software. However, to English teachers who are not computer literate, to design and maintain a fast, reliable, large, powerful and quality corpus without the support of a team of engineers and programmers is a formidable, if not impossible, task. Therefore, it is more practical to use free online corpora that are readily available to teachers as well as students.

### 2. Corpus-based linguistics and lexico-grammar instruction

Using corpora in a language class is not beneficial to students only; it also benefits language instructors. English teachers of non-native speaker now can reply not on intuition of native speakers but on principled corpora to solve some grammatical and usage problems. In addition, because a particular grammatical feature may occur only once or twice in a textbook, additional corpus material may be useful to expose the learner to a

recurrent patten rather than a single occurrence.

Viewing the incorporation of corpus research into language teaching from a register-specific and lexico-grammatical perspective, Conrad (2000) further argued that three major influences of corpus-based linguistics on the teaching of grammar can be seen in the 21st century. These three significant impacts she mentioned are (p. 549):

1. Detailed descriptions of grammar rules will be replaced by register-specific descriptions.
2. The grammar instruction will be closely integrated with the teaching of vocabulary. Lexico-grammar patterns will be central to language description and language learning.
3. Emphasis on structural accuracy will be shifted to the appropriate use of alternative grammatical constructions.

### 3. Pedagogical issues of the use of corpora in a classroom setting

One practical issue about using corpora in the classroom is whether teachers should use 'raw', unedited corpus search or specially-compiled, teacher-edited presentation of corpus data (Hunston, 2002, chap. 7). The former one is feasible if the school can provide teachers with enough computer facilities so that students and the teacher in a class have their own computer to look at the corpus together. The advantage of this kind of study is to maximum student motivation: the student has a question which needs to be dealt with (e.g., to complete a piece of written work) and is therefore highly motivated to discover the answer from the corpus data consulted. Of course, the disadvantage is that teachers have little control over what happens. For example, if the corpus is consulted and no answer is apparent to student or teacher, or some unacceptable answers are found, the teacher has to depend on his/her language intuition (for native speakers) or linguistic competence (for non-native speakers) to solve the problem.

On the contrary, the latter pedagogy – specially-compiled, teacher-edited presentation of corpus data – is realistic when a school is not equipped with enough computer facilities for the students. Materials then can be printed on to paper to be used with a whole class. At the same time, teacher has more control over the prepared data. However, the disadvantage is that, as the teacher selects the topic for study, the students will probably be less motivated to look for or remember the target information.

Corpus-based, pattern-recognition, self-directed learning is an inductive approach, which has many

advantages. However, applying the corpus-based inductive approach to language pedagogy, we should pay more attention to its potential disadvantages so that they can be minimized by all means. There are at least four disadvantages of inductive approach:

1. It's time-consuming for both students and the teacher (if the teacher would like to check the corpus before she/he asks students to do so). The time taken to work out a rule may be optimally used to integrate the rule directly into some productive activities.
2. Students may reach a wrong conclusion about some grammatical features, or their interpretation of these rules is either too broad or too narrow.
3. Some students just do not like this kind of learning style and some kinds of language items are better 'given' than 'discovered'. Personal learning preferences will definitely influence one's learning results.
4. Using corpus-based data search in a classroom setting, a teacher has to make a couple of digressions from the main topics of a lesson, which definitely will interrupt the flow of the lecture or discussion. Whether this kind of digression will distract students' attention or has negative impact on learning results should be further investigated.

### 4. Sample lesson: use *advise*, *recommend*, and *suggest* as an example

A sample lesson of using corpora was designed to see whether students can discern patterns and regularities in naturally occurring input. An inductive pattern-discovering exercise was given. Before that a couple of online dictionaries and corpus websites had been introduced.

**Instruction:** Use the online dictionary and corpus-based websites that I recommend in the introduction to find out whether the following sentence patterns are grammatically acceptable to these three words (*advise*, *suggest*, and *recommend*).

**Example:**

**V + to N + that-clause:**

**advise:** No such usage

**suggest:** I **suggest** to Miss Johnson **that** she sit down on the chair and wait.

**recommend:** No such usage

1. V + N + **to-V** or V + N + **not to-V**
2. V + **wh-clause/phrase**
3. V + **that-clause**
4. V + **-ing**

5. V + for/to someone + to-V

6. What is the commonest modal (e.g. would, should, might, can, could, etc.) that is used in the that-clause of the third sentence pattern (i.e., V +that-clause)? Which adverbs are usually used with these three words?

modal:

adverbs:

**5. Challenges of the integration of corpora and grammar instruction in language pedagogy**

Since the use of corpus-based, inductive, DDL approach requires highly motivated and autonomous learners with the ability to analyze and interpret linguistic data, this discovery learning is more suitable for advanced students. Even if a teacher has advanced and active students, she/he still has to give careful consideration to the following issues.

1. *technical and statistical challenges*

Applying corpora to the language instruction, a teacher has to be familiar with some basic terms of corpus linguistics such as *node*, *token*, *lemma*, *tag*, *parse*, *annotate*, and *n-gram*, to name just a few. If a teacher would like to give a more detailed explanation to students about the frequency and distribution of corpus data, she/he had better also know something about mutual information (MI) score, t-score, and z-score, which is pretty difficult to most English teachers.

2. *theoretical foundation*

Whether grammar should be taught implicitly or explicitly is still debatable (Ellis, 2006). Similarly, whether inductive approach is more effective than deductive one or the other way around is not conclusive. A string of words and a series of examples from corpora may show language learners some frequently occurring lexical and syntactic phenomena, but corpus linguistics needs more solid theoretical foundation to support its pedagogical effectiveness.

3. *intuition vs. competence*

To native speaker English teachers, consulting corpus data may help them confirm their language intuition and explanation of grammatical features can be based on statistical evidence rather than just anecdotal evidence. However, it can also happen that native speakers find collocations or grammatical features contrary to their intuition.

4. *absence or rare instances of target examples*

The data obtained through concordancing is

closely connected to the corpus examined. The absence of target examples or specific collocations in a certain corpus does not mean they do not exist or are grammatically unacceptable. Thorough search of other reference materials such as dictionaries, grammars or other corpora is needed. Alternative solution is the language intuition of an educated native speaker of English. The sample lesson of *advise*, *suggest*, and *recommend* is a prime example to illustrate the judgment dilemma of the absence or rare instances of target information. Pattern 1 in the following was one of the patterns that students were asked to check while Pattern 2 was not included in the sample lesson.

**Pattern 1: V + N + to-V**

To my knowledge, *advise* and *recommend* can be used in this kind of sentence pattern, but *suggest* is not acceptable in this pattern. For instance:

I *advise* you to *consult* a doctor, Mrs. Johnson.

Although they have eight children, they do not *recommend* other couples to *have* family of this size.

\*Her uncle *suggested* her to *get* a job in a bank.

However, one example from *Collins Cobuild Advanced Learner's English Dictionary* (4th edition, 2003, p.1449) seems to 'break' this rule:

Could you *suggest* someone to *advise* me how to do this?

Furthermore, examples of this pattern are also found from BNCWeb, although the frequency is pretty low: only 8 out of 8778 matches have this kind of pattern.

It's a challenge to non-native speaker English teachers to give satisfactory answer to students if they also find these examples from the corpus.

5. *real language*

Whether corpus data are real language is the last but not the least challenge to the use of corpus in the classroom. Some researchers express weak reservations about the real language issue of corpus data (e.g., Owen, 1996; Gavioli, 1997) while others have strong reservations about it (e.g., Widdowson, 2000).

The issue whether language in a corpus is 'de-contextualized' is controversial. On the one hand, language in a corpus, in a sense, is real because it is naturally occurring language recorded in written or spoken form. On the other hand, the

'de-contextualized' language from a corpus is often sentence-based data and the corpus analysis usually does not take account of what makes a sequence of clauses a text.

## **6. Conclusion**

The quantitative analysis of text by computer reveals facts about actual language use that are not obvious to our language intuition, which shows tremendous possibilities for language learning and teaching. However, concordance lines just present information; they do not interpret it. The interpretation of corpus data requires the insight and competence of the observer.

Using corpus-based materials in language teaching, non-native speaker English teachers, who do not have language intuition, face more pedagogical challenges than native speaker English teachers. If non-native speaker English teachers find corpus evidence which is beyond their comprehension or contrary to their expectation, or the concordance findings are too rare to be statistically significant, they should be more cautious about their interpretation and explanation.

Corpus-based grammar instruction is a potential option, but language teachers should use it with

care. The marriage between corpus-based linguistics and grammar instruction can have a happy ending if competent English teachers are fully prepared and find adequate methods to integrate corpus-based materials into relevant grammar learning.

## **References**

- Conrad, S. M. (2000). Will corpus linguistics revolutionize grammar teaching in the 21st century? *TESOL Quarterly*, 34, 548-559.
- Ellis, R. (2006). Current issues in the teaching of grammar: An SLA perspective. *TESOL Quarterly*, 40, 83-107.
- Hunston, S. (2002). *Corpora in applied linguistics*. Cambridge: Cambridge University Press.
- Gavioli, L. (1997). Exploring texts through the concordancer: Guiding the learner. In A. Wichmann, S. Fligelstone, T. McEnery, & G. Knowles (Eds.), *Teaching and language corpora* (pp. 83-99). London: Longman.
- Owen, C. (1996). Do concordances require to be consulted? *ELT Journal*, 50, 219-224.
- Widdowson, H. G. (2000). On the limitations of linguistics applied. *Applied Linguistics*, 21, 3-25.



## **A Principle-based Approach to Teach Listening in a CALL-integrated Classroom**

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Listening is assuming greater and greater importance in the foreign language classroom. In Teaching Chinese as a Foreign Language (CFL), however, most exercises or tasks of a listening class still tend to apply drills to test listening rather than teach it. Our multimedia program is specially designed to help CFL teachers of beginning level classes more efficiently teach students how to listen. This paper will focus on the instructional design of the program. Additionally, the current study drew from surveys and interviews conducted to elicit students' perceptions on the CALL-integrated listening courseware, which will allow us to better integrate multimedia tools into listening classes.

### **1. Introduction**

Beginning Chinese Listening Courseware (BCLC) is specially designed for CFL teachers of beginning level classes to conduct efficient instruction for teaching listening in order to enhance the quality of their class's listening skills. To make the teacher's role crucial in the teaching of listening, the goals of the program are to actively guide learners through the process of listening, to monitor their listening difficulties, to develop a better awareness of how to listen, and to reshape classroom tasks for better learner involvement. The program also aims to reinforce vocabulary/grammar introduced from direct instruction, fostering listening interests, developing good listening behaviors, and broadening language and culture knowledge via CALL-integrated listening tasks. In order to achieve these goals, the program is constructed based on a number of pedagogical principles while the lesson structure follows the instructional design specific to teaching listening. The second part of the paper addresses the research from the perspectives of learners with the intention to ferret out the essential components or criteria of an effective listening courseware so as to better update the program or to provide insight for relevant courseware of this kind.

### **2. Literature Review**

Studies on teaching and researching listening have been explored, especially the instructional methods and design of listening activities (Rost, 2002, chap. 10). In the area of multimedia

application in listening instruction, studies have consistently demonstrated the benefits of interacting with computer-based activities to support aural language learning and teaching (Jones, 2006; 2003). There is a great deal of listening software for learners. However, very few of them consolidate with instructional design; thus, the listening exercises tend to "test" learners' listening ability, instead of teaching how to listen. According to Rost's study in 2005, listening comprehension encompasses the following phases: attention, perception, word recognition, syntactic parsing, comprehension and interpretation. Guided, meaningful practice with items that will help learners reach goals in each phase and become more automatic in their processing of listening material should be provided (Fang, 2006; Buck, 1995). From instructors' point of view, one of the most essential aspects of applying technology in teaching listening is to understand how to adapt multimedia tools to appropriately aid human cognition. The current design of the program emphasizes the connection between instructional principles and multimedia application with the purpose of conducting an efficient CALL-integrated listening class.

Although studies show that multimedia-delivered listening comprehension tasks can cause better performance, as well as

increase language recall abilities (Brett, 1995, 1997; Jones, 2006), specific research on applying a multimedia program in a listening classroom is still rare. In order to better integrate technology into classroom teaching, the current study also investigates learners' perceptions about the essential criteria for effective multimedia tools used in a classroom setting.

### 3. Program Design

BCLC consists of 18 lessons, adopts a principle-based approach to design individual listening activities and applies the suitable pedagogical principles based on the nature of the lesson topic and the activity type. Above that, each lesson organizes all the listening activities following the instructional design in 3.2.

#### 3.1 Pedagogical principles

**Cognitive flexibility.** Presentation of input is likely to be processed more thoroughly and be retained in a more meaningful way if it is multimodal and features multiple perspectives. The exercises and activities in BCLC provide multiple representations of content, if appropriate, to keep learning flexible and enjoyable.

**Coordination of teaching and learning.** Teaching coordinating with learning events will benefit long-term retention of materials, thereby making learning more efficient and satisfying for students (Gagne et al., 1992). When applicable, the activities focus on improving communication between the course instructor and the learners or among learners.

**Modes of learning.** Learning takes place by adding new knowledge to existing schema in memory. Rost in his 2002 study also points out that metacognition needs to be built into the instructional process in order to allow for restructuring. BCLC includes listening strategies training for each topic to develop learners' metacognitive strategies.

**Anchored instruction.** The exercises and tasks of the problem focus on problem-solving skills and integrate listening skills with other areas of learning, such as reading and speaking.

#### 3.2 Instructional design

The lesson structure is comprised of three components—vocabulary review, grammar review, and listening tasks, which, in order, include global listening, selective listening, intensive listening, real life tasks, and cultural differences. Figure 1

illustrates the program design along with the pedagogical principles.

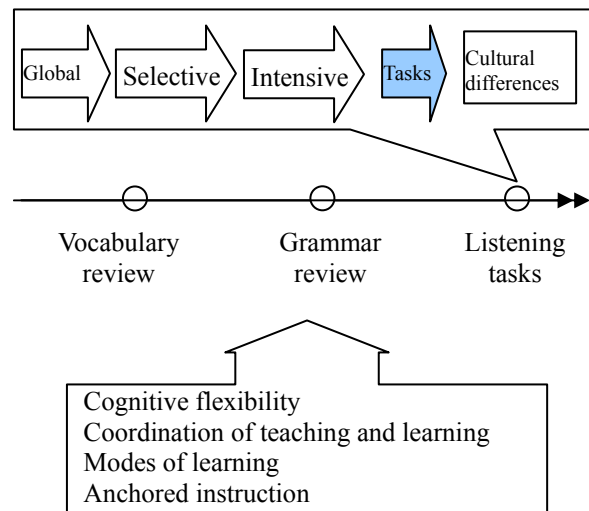


Fig.1. Program design structure

In the BCLC, global listening refers to the listening for a general or approximate idea of input; selective listening indicates the listening ability to catch relevant information and ignore the unrelated part in input, while intensive listening focuses on the listening for precise words, sounds, grammatical units, etc. Following these three stages of listening is the real life tasks which emphasize utilizing listening skills to solve problems and integrating with other areas of learning. According to the nature of the lesson, the program presents cultural differences through listening if valid. The structure of the program provides teachers not only with instructional design but also the flexibility to reshape classroom activities based on students' performance.

### 4. The Current Study

The present study investigates students' perceptions of CALL-integrated listening class. The analysis conducted in this study adopts the instruments of questionnaire and interview. The objectives are understanding students' preferred learning styles in the listening class, and their opinions toward an effective multimedia program. The investigation looks into the components and criteria of an efficient multimedia listening program in a beginning level Chinese listening classroom. The operational definition of the "effective multimedia program" in this part of the research refers to the program which meets

students' expectations to help them achieve learning goals.

#### 4.1 Research questions

Three research questions are investigated in the current study: 1) What are the learners' preferred learning styles in a listening class? 2) What are the components and essential criteria for an efficient listening courseware? 3) What are the important pedagogical considerations for integrating the courseware in a Chinese listening class from the learners' perspective?

#### 4.2 Method and procedure

The subjects are fifty-two participants recruited from the first-year Chinese program at the University of Iowa. Among the fifty-two students, eight are heritage students, and the remaining forty-four are Americans, Filipinos, and Koreans whose 1<sup>st</sup> languages (L1) are English. Since the aim of this study is to understand students' perceptions of an efficient multimedia program used in a listening classroom, the language background of the subjects is not emphasized in this study. Rather, it is expected that the perceptions from students of different language backgrounds assist the designing of a multimedia program for general use. The subjects of the interview were ten students from the first-year Chinese program at the University of Iowa. These ten students were selected and divided into two groups, a lower-performance group and a higher-performance group, based on the result of a monthly listening test, which was conducted on April 4<sup>th</sup>, 2008. Ten students in total were randomly selected from the two groups, five students from each group, which constitutes a representative sample.

#### 4.3 Data collection procedure

The survey included two parts: part I was composed of 11 statements and one open-ended question; part II consisted of 23 statements. The first part of the survey intended to investigate students' learning styles in a Chinese listening classroom. The second part was designed to understand students' experiences with and opinions about a multimedia program, as well as to elicit responses about the components and criteria that a multimedia program should have. At the time of survey data collection, participants had completed approximately 100 classroom hours of Mandarin Chinese. A "semi-open" one-on-one voice recorded interview was also conducted, based on the questionnaire. The entire interview was constructed with nine questions. The purpose was to probe

in-depth for personal perceptions regarding the components and criteria of an effective courseware. At the time of the interviews, participants had completed approximately 100 classroom hours of Mandarin Chinese.

#### 4.4 Data analysis and results

Survey part I: Table 1 shows the major learning styles for listening that learners prefer to use (the "major" styles refer to the styles that more than 50% of participants prefer to use).

Table 1: Preferred learning styles

Learning styles	Percentage
Learning with a program	93%
Learning step by step	62%
Learning with activities in the classroom	60%
Listening to authentic material input	55%
Combining listening with speaking	50%

Survey part II: Students showed a positive attitude toward the 23 statements regarding the components of an effective courseware. The following is a list of the top five statements which received a scale above 5 ("moderately agree") and indicates the major components that students expected to have in an effective courseware:

1. Using interesting listening materials is helpful for keeping my attention. (5.3)
2. Pictures help me understand materials. (5.2)
3. Listening to clips from real life situations keeps my attention and interest. (5.2)
4. Vocabulary and grammar review prepare me to process listening tasks. (5.1)
5. Pre-listening activities, such as learning new vocabulary and understanding background, are helpful for comprehending related listening materials. (5)

The interview: the analysis is based on transcripts of the original recordings. The responses from students are divided into five aspects which suggest the criteria of designing an effective courseware for first year Chinese listening. The five aspects are as followed:

1. The program can provide the activities which integrate listening with speaking and reading.
2. The program can help learners to learn step by step.
3. The visual and verbal annotations are necessary for an effective multimedia program.
4. The video and audio materials are clear and the input reflects use in the real world.
5. Feedback is informative and meaningful.

## 5. Discussion

The students' opinions about the multimedia program provide a reliable resource to understand whether or not it really does efficiently assist the instructor in guiding the students to foster their listening awareness and interests, develop good listening behaviors, enhance listening comprehension ability, and broaden language and cultural knowledge through listening tasks. When cross examining the survey and interview data, learners signify the following components which they consider necessary in an efficient listening courseware:

1. Vocabulary and grammar review
2. New vocabulary list
3. Cross-cultural communication
4. Class handout
5. Global, selective, intensive, and interactive listening activities
6. Pre-listening, listening, and post-listening activities
7. Listening strategy training
8. Summary, predication, and collaborative conversation exercises

The instructional design is another emphasis in the study. Based on the findings and on other studies, we can induce pedagogical considerations for integrating the multimedia program into the beginning level Chinese listening classroom. First of all, instructional design needs to take learners' learning styles into consideration. Second, the listening materials should include those which are interesting, authentic, simplified or comprehensive ones based on the goal of the skill training. Third, maintaining cognitive flexibility is an important consideration. Fourth, developing listening strategies is essential in the instructional design. Sixth, the progressive structure of courseware helps learners to better focus on specific learning skills. Seventh, integrating listening with other areas of learning enhances the opportunities to practice real life situations. The last one considers cross-cultural communication as one of the important elements if applicable.

## 7. Pedagogical Implication

Using technology in class does not quarantine the effectiveness and the quality of the learning and teaching of listening. In the current study, effective multimedia application in the teaching of listening is expected to design instructional tools in order to help learners reach learning goals, to provide comprehension aids in the process of decoding utterances, to enhance learner involvement along with the interaction between the teacher and students, as well as incorporate various listening materials in a sequence to guide students through the process of listening. The current study suggests that, while designing a CALL-integrated listening class courseware, both teaching and learning perspectives should be taken into consideration to construct appropriate instructional design so as to bring out the best in the integration of class teaching and multimedia application.

## Selected References

- Brett, Paul. (1997). A Comparative Study of the Effects of the Use of Multimedia on Listening. *System*, 25(1), 39-53.
- Brown, Douglas H. (1994). Teaching by Principles: an Interactive Approach to Language Pedagogy. Prentice Hall Regents.
- Jones, Linda C. (2003). Supporting Listening Comprehension and Vocabulary Acquisition with Multimedia Acquisition: the Students' Voice. *CALICO Journal*, 21(1), 41-65.
- Jones, Linda C. (2006). Listening Comprehension in Multimedia Environment. *Review of Calling on Call: from Theory and Research to New Directions in Foreign Language Teaching*. CALICO, 99-125.
- Fang, Yew-Jin. (2005). Designing Online Listening Comprehension Tasks for Learners of Mandarin Chinese as a Second/Foreign Language. *16<sup>th</sup> Biennial Conference of the Asian Studies Association of Australia*.
- Michael, Rost. (2002). Teaching and Researching Listening. *Pearson Educational Limited*. Great Britain.
- Michael, Rost. (2007). "Commentary: I'm only Trying to Help: a Role for Interventions in Teaching Listening". *Language Learning & Technology*, 11(1), 102-108.

## Enhancing Cooperative Language Learning and Intercultural Experience through the Use of Technology

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This paper will present a practical example conducted in my BBS-based cross-cultural exchange since 2002 with a focus on a pedagogical framework underlying Computer Supported Collaborative Learning (CSCL). The theoretical framework of Collaborative Learning was originally outlined by Lev Vygotsky, who stressed the importance of interactive and social nature of language learning. Also a conversational nature will be highlighted in the BBS activities, the argument of which will be drawing on a theory of a dialogical nature in conversation by Mikhail Bakhtin. Several BBS sequences will be shown to demonstrate how their language development went along with the lines delineated by these thinkers and will finally be argued that a general development in an acquisition of language will be mirrored in some sense in the second language acquisition and that their models could be duly appropriated in a classroom situation.

### 1. Collaborative Learning and CALL

As the effectiveness of Collaborative Learning is summed up that it “helps students learn better—more thoroughly, more deeply, more efficiently—than learning alone...[and it] teaches students to work together effectively later on when the stakes are high” (Bruffee vii-viii), it is currently agreed that CL is playing a crucial role in a language acquisition process. As the Internet and its related interactive infrastructures have advanced, it soon was realized that CALL was most effective environment for the students to share ideas with each other. Thus, it is no accident that these two were comfortably combined into CSCL: computer supported collaborative learning. For example we can employ various Internet-based interactive tasks such as email, BBS, Shared-Document Computer Conferencing Systems (Roberts 190).

Accordingly with the emphasis falling on a student’s initiative rather than the teacher’s, the role of the teacher has been changed into “a chair, host, lecturer, tutor, facilitator, mediator of team debates, mentor, provocateur, observer, participant, co-learner, assistant, community organizer, or some combination of these!” (Roberts 5)

### 2. Learning as Conversation

What, among all, is crucial to Bruffee's concept of CL is "conversation." Quoted by Bruffee, Michael Oakshott defines education as follows: "an initiation into the skill and partnership of this conversation in which we learn to recognize the voices, to distinguish the proper occasions of utterance, and in which we acquire the intellectual and moral habits of appropriate to conversation"

(Bruffee 133). Only a short leap from here will bring us to the Vygotskian definition of thought, that is, internalized speech. As will be show later, BBS is one of the most efficient ways to make students interact and negotiate with its patent nature of making conversations. It gives more space to participants than in chatting, and can be time- and topic-focused in a classroom like I have done by assigning an instantly impromptu topic.

Along with CL, some ordinary terms start to have a new tint: for example, knowledge is not an object with clear-cut substance and boundaries, but something to be constructed through interaction and negotiation between peers or teacher-students relations. It is emphasized in Bruffee's work that the students are to be reacculturated at college as they were not before. They may be given a new authority to be exercised on their peers, although it is reported in his book that this new culture was not quite pleasing to some students at the initial stage, as they did not know what to do with the authority conferred to them.

### 3. Vygotsky and Bakhtin

As was suggested above, in the CL, especially in its socio-cultural aspect, we cannot pass the contributions by Vygotsky and Bakhtin, about which I owe very much to Marysia Johnson’s discussion.

Vygotsky is noted for his propounding the socio-cultural theory, ZPD, internalization, potentiality and so on. Of an acute relevance here is the emphasis on learning as a social activity and the breakdown of human development into four domains: phylogenesis, socio-cultural history,

ontogenesis and microgenesis. A focus on the last of which enables us to project everyday activities in the classroom in a background of collective human development in general. The idea such as other, partial, and self regulation, also can give us a new perspective to analyze the classroom activities in language learning, for language tasks should aim at the students' acquisition of self-regulated language usage. Peer and teacher scaffoldings can be spotted in many places if one can analyze their microgenetic sequences of the BBS messages.

Of no less vital significance is Bakhtin's notion of dialogic heteroglossia. So argues Marysia Johnson, suggesting we can apply their pedagogical discussions SLA. It is, according to her, high time that we moved from a behaviorist, and cognitive-computational to dialogical paradigm, by which "qualitative research methods are given higher status than statistically driven quantitative methods." Also considered important are "longitudinal case studies, diaries, journals, and personal narratives", for they provide "important insights into the individual's cognitive development" (Johnson 16).

If as Bakhtin maintains, a monologue is dialogic with the addressee expected, we can make a new approach to the apparently monological messages in the BBS because "[the writer] does not expect passive understanding which, so to speak, only duplicates his own idea in someone else's mind. Rather he expects response, agreement, sympathy, objection, execution and so forth" (Morson 92).

#### 4. Implications to Pedagogy

In the context of SLA, we may have to adapt their concepts of development to suit our pedagogical environment.

First, the acquisition of the new language would happen in a classroom where the first models the subjects have to initially interact are teachers and classmates. They would be exposed to a strange language, which comes to them as an external other. They will develop first from this intra-personal relationship into the intra-personal stage where they can internalize their voice, which, in the SLA context, would be an acquisition of a new language.

The dialogical nature of conversation can also be in a parallel way translated into the dialogical interaction between peers or with teachers, in which the addressing and being addressed is paramount in making a meaningful development.

#### 5. BBS Activities: Overview

Most BBS activities were conducted between

Kobe U and UGA students, whose respective L2 languages are English and Japanese. It started in 2002 and was kept going with different classes till 2007 and still going. The participants and class types are as follows (Tables 1 and 2). The session was held in the fall semester, but due to the difference of the period of the semester, the active period has been from October to early December every year. The BBS system is a cgi-generated thread based one with the interface of Figure 1. Except in 2007 where postings were also partly done in the classroom, the task was conducted outside classes. Some incentives were given in terms of partial points to their grades.

Table 1. Participating Classes

UGA	From 2002 through 2007: PNS 4110 (Advanced Japanese III)—4th year and returned exchange students
Kobe	Fall 2002: Basic Seminar Fall 2003: Four way BBS among, Kobe, UGA, Pusan (South Korea) and Melbourne. Fall 2004: It was not that active. I have assigned it as an optional work in English language classes Fall 2005: English Writing Fall 2006: Intercultural Communication Seminar 1 Fall 2007: Intercultural Communication Seminar 1

Table 2. Participant and Message #

	# of UGA students	# of Kobe students	# of messages
2002	10	19	123
2003	18	80	1061
2004	13	N/A	N/A
2005	18	22	485
2006	18	15	714
2007	N/A	50	1086

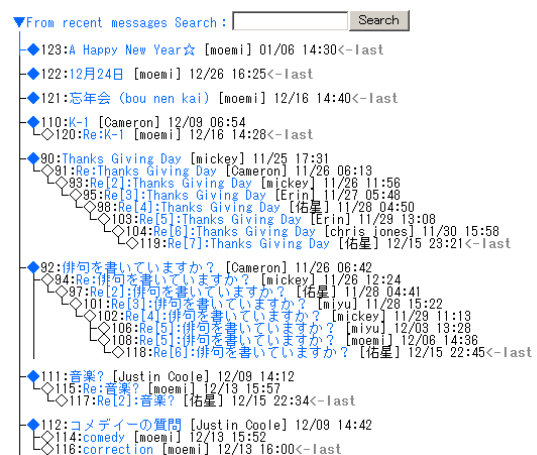


Figure 1. BBS Interface

It started modestly at first in 2002. There was not much, if any, control from the teachers. Topics were self assigned and conversations developed on their own pace.

A typically successful interaction occurred in this type of sequence of messages.

**A(Kobe): Raises a topic**

Please teach me your Thanks Giving Day!

**B(UGA): Offers a general explanation with a view from the minority**

About 400 years ago those from England settled down in America. One Autumn, they cooked and shared dishes with Indians. From then it became customary for them to have a big meal together. But many Indians today think this holiday in a negative stance for it does not represent their past in a fair sense. [Originally in Japanese]

**A: Personal information requested**

When I was high school student, My English teacher who was American said, "Now I am in Japan, so I cannot spend time with my family on Thanks Giving Day. I miss." Did you enjoy your Thanks Giving Day with your Family this year?(1)

**B: Personal information about a traditional TG food**

I always spend Thanksgiving with my family, so I was very lonely in Japan last year. But I'm looking forward to going home this year. We always have a big meal with turkey, dressing, cranberry sauce, green beans, and pumpkin pie--for most people this is the traditional Thanksgiving meal.

**C(Kobe, exchange student): Singaporean perspective. Wonders if it has a religious origin**

We hardly celebrate Thanksgiving in Singapore. In fact, I've always thought that it was part of Western, rather than Asian, culture. Also, I had the impression that it's more related to the Christian religion - is this true? Could someone tell me the date for Thanksgiving?(2)

Thanks! :)

**B: TG date**

Thanksgiving is always the last Thursday in November--this year it's on the 28th. This holiday celebrates the fact that Europeans were able to survive the first year in America, so it is not affiliated with any particular religion. Other countries sometimes have Thanksgiving, too, but it is usually during a different time of the year.

**D(UGA): Another general information No mention about an Indian version of the history**

It is a holiday celebrated in the USA and Canada. Pilgrim Fathers, who escaped from England, landed in the American continent in 1621 to start a new life. They had a hard time to cope with the winter with no practical knowledge for food making. The Indians,

seeing their sufferings, extended a helping hand by teaching them how to crop corn. Pilgrims told them how to build houses in return. Thanksgiving is about celebrating their cooperation and has not religious background. But as Pilgrim Fathers were persecuted on the basis of their religion, it is sometimes mistakenly understood as something religious. Anyway I ate a very sumptuous dish. [Originally in Japanese]

**C: Wrap-up**

Thanks B and C for your detailed explanations. I got it now. So it is not to do with a religion and would be celebrated in the Western region. It makes sense we don't have one in Asia. [Originally in Japanese]

It started with a tiny (topical) question about Thanksgiving Day, which developed a sizable thread with several cross-cultural episodes with timely questions (1) and (2). The style is very friendly with a use of etimokon like :) without losing decorum.

It is helpful here to notice the distinction between centripetal and centrifugal forces in analyzing the BBS messages: "Centrifugal forces tend to move toward heterogeneity, opposition, and diversity. Bakhtin writes: "Alongside the centripetal forces, the centrifugal forces of language carry on their uninterrupted work; alongside verbal-ideological centralization and unification, the uninterrupted processes of decentralization and disunification, go forward."(Johnson 126) It is not within the scope of this paper, but it would be constructive to categorize the messages along with these two forces.

**6. BBS Activities: Pedagogical Point of View**

It was started with no special goals in mind at first beyond a mild expectation to enhance an interesting communication from a cross-cultural aspect. We were not quite sure what linguistic competence can develop. Possibly writing fluency and grammatical awareness, but beyond that, we had no idea.

Actually as they repeated their postings, it soon revealed a steady increase in the sophistication of writing. As an indicator, here is a chart of the Flesch reading ease scores sample. These Kobe U. students of Fall 2007 were asked to write on the following seven topics at home or in the classroom: Introduction, Technology, Japanese cultures, Whaling, English education, Emperor system, Winter Break. The irregular rises in figures seems to be attributed to a limited time they did the topic 4 and 6 in the classroom and a fair ease of the subject topic 7, which did not really required of them a deep thinking effort for them.

	Score
1	74.7
2	69.2
3	65.6
4	70.7
5	59.8
6	66.4
7	77.3

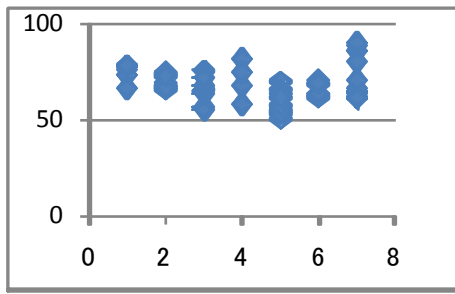


Table 3 and Figure 2. Flesch reading ease scores

### 7. Conclusion

Tentatively as Figure 3 shows, CSCL would be schematized as an integrated learning venue of technologically assisted collaborative learning built on a theory basis of socio-cultural environment, that is, classroom. Learners are to get a language performance skills (apart from a language competence that is knowledge-based) from social interaction with peers and teachers. This process would be analogous to the children’s internalization of their voices in a Vygotskian sense. Conversation activity in its broad sense would be set at the core of language acquisition for every speech, even when it is uttered alone, presupposes an imaginary listener.

The BBS activity, a very effective way to make them aware of this interactive function, can also be utilized as a means of language skill-enhancing tools by focusing on a speech tactics, rhetoric, pragmatic varieties of usages used in actual messages while the postings of the messages themselves have been proved to be helpful in advancing the writing skill.

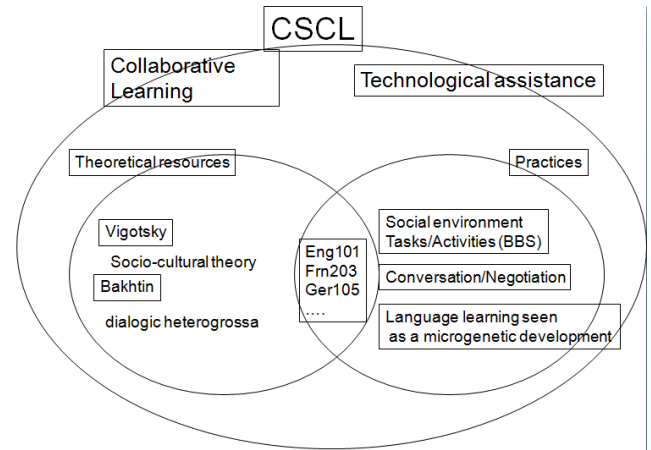


Figure 3.

### Acknowledgments

I would like to express my deepest gratitude to the co-facilitator of the BBS exchange project, Dr. Masaki Mori at the University of Georgia, USA, whose patient encouragement and cooperation made this activity both possible and entertaining.

### References

Bruffee, Kenneth A. (1997). *Collaborative learning*. (2nd Ed), Baltimore: Johns Hopkins.

Hoppe, H. Ulrich et al. (2007). *The Role of Technology in CSCL*. New York: Springer.

Johnson, Marysia. (2004). *A philosophy of second language acquisition*. New Haven: Yale University.

Morson, Gary Saul. Ed. (1986). *Bakhtin: Essays and Dialogues on His Work*. Chicago: The University of Chicago Press.

Roberts, Tim S., Ed. (2005). *Computer-supported collaborative learning in higher education*. London: Idea Group Publishing.



## Using Praat and Moodle for Teaching Segmental and Suprasegmental Pronunciation

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The use of Praat (open-source acoustic analysis software) to provide feedback for learning vowels and diphthongs was described by Brett (2004 - ReCALL 16:103-113). However, his conclusion, and that of Setter and Jenkins (2005 - Language Teaching 38:1-17), was that formant plot interpretation using Praat's interface is too complex for learners. In this paper, classroom data elucidates the use of Praat for measurements such as the duration, pitch, and intensity of sounds. It is shown that a combination of Praat and the Choice activity in Moodle (an open-source Learning Management System) provides a method of pinpointing the weaknesses of each student, thus helping the teacher to make efficient use of class time.

### 1. Introduction

The use of Praat (open-source acoustic analysis software) to provide feedback in pronunciation classes promotes autonomous learning in a field that has had to rely on native-listener judgements, traditionally, for evaluation. Its use for learning vowels and diphthongs was described by Brett (2004), who concluded that a better interface was needed for the pronunciation learner. Setter and Jenkins (2005) in their state-of-the-art review of pronunciation teaching, point out that being able to successfully interpret formant plots produced by Praat requires “a sophisticated level of understanding” on the part of both teacher and learner (p.10). However, Praat can be used for more than simply plotting formants. It is straightforward for students to measure the duration of speech sounds and to identify which words have higher pitch and intensity (loudness).

In Section 2 of this paper, I will demonstrate how to use Praat for teaching aspects of both segmental and suprasegmental pronunciation such as: (1) vowel length differences before voiced and voiceless stops (e.g., *code* versus *coat*), (2) voice onset time (VOT) of stops (e.g., *goat* versus *coat*), (3) spectrogram differences distinguishing /r/ from /l/ from /ʌ/ (e.g., *heating* versus *healing* versus *hearing*), and (4) intonation and stress. In Section 3 of this paper, I will show teachers how to set up a Choice activity (a method of polling students) within Moodle (an open-source course management system), enabling students to enter

their Praat measurements and allowing teachers to pinpoint student problems efficiently.

### 2. Using Praat to Measure Pronunciation

Praat is open-source software for the acoustic analysis of speech. It can be downloaded freely from <<http://www.praat.org>> for a range of operating systems, such as Mac, Windows, Linux, Solaris, etc. An in-progress Japanese user manual, including audio and video files, can be found at <[http://clrlab1.u-aizu.ac.jp/praat\\_j.html](http://clrlab1.u-aizu.ac.jp/praat_j.html)>.

Although Praat is used by many pronunciation teachers and students, its interface is designed more with the scientist/researcher in mind. Nonetheless, it is extremely useful in pronunciation classes and is currently being used as both a teaching tool and a pronunciation aid in Phonetics and Pronunciation courses at the University of Aizu. After being trained by the teacher on the use of Praat, students are able to record and analyse their own pronunciation. Although pronunciation is often judged and taught solely through the oral/aural medium, this use of Praat opens up analysis to the visual medium as well.

#### 2.1 Vowel length differences

It is straightforward for students to measure the duration of speech sounds, at the level of the segment, word, sentence, or above. Students first record speech by selecting “Record mono Sound...” (or stereo) from the “New” menu of the “Praat objects” window (see Fig. 1). After

recording something and saving it to the “Praat objects” window (by clicking on “Save to list” in the SoundRecorder window that pops up), the acoustic signal may be observed by clicking on the “Edit” button (visible when an object exists in the “Praat objects” window).

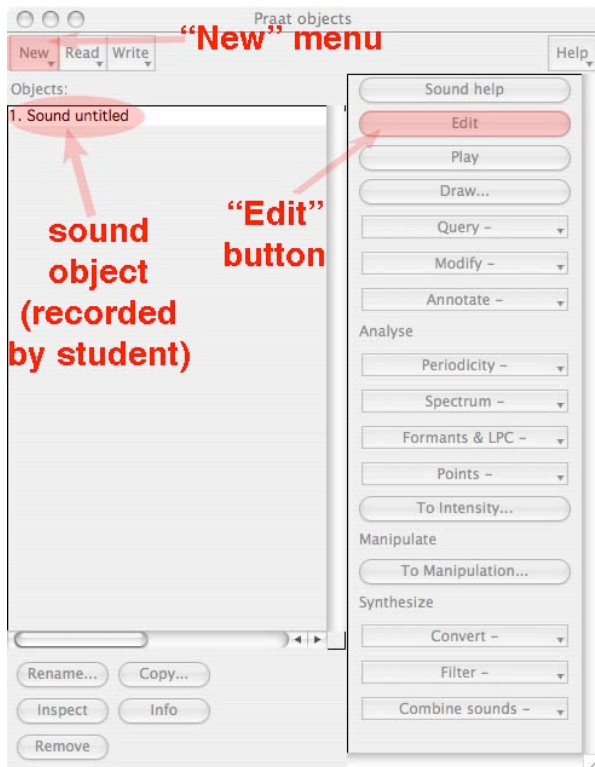


Figure 1. Praat objects window

Figure 2 shows an example of the Edit window after clicking on the “Edit” button. In this figure, the two words *code* and *coat* can be seen. The vowel part of the word *code* is selected and its duration (in seconds) is indicated by the arrow.

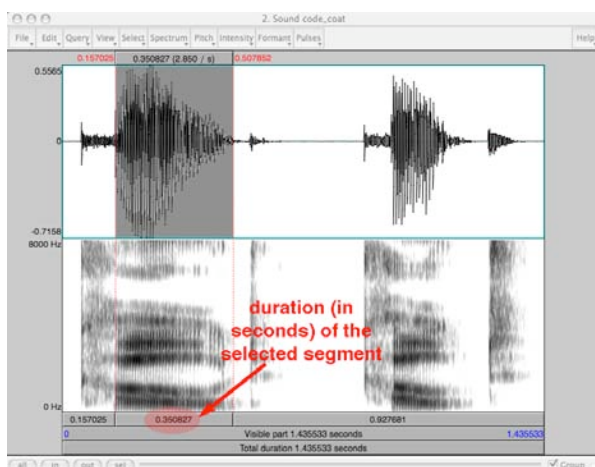


Figure 2. Code vowel selected in Praat edit window

In English, vowels that occur before voiced consonants are longer than those before voiceless

consonants and this can be measured easily by students.

### 2.2 Voice onset time (VOT)

VOT is the relative timing of the release of the air for a stop consonant and the onset of phonation (voicing) of a following vowel. Languages differ in how they use VOT to distinguish between voiceless (p, t, k) and voiced (b, d, g) stops. In English, voiceless stops have long VOT values and voiced stops have short (or even negative - i.e., voicing starting before the release of the air) VOT values. However, in Japanese, voiceless stops have medium or short VOT values while voiced stops have negative VOT values. Thus, when some native Japanese speakers pronounce English voiceless stops, they sound like English voiced stops.

Figure 3 shows the measurement of VOT for the /p/ in the word *peas* and the /b/ in the word *bees* for the author’s speech. After being given a table of average VOT ranges for English, students can compare them to their own VOT values and practice a more forceful release of air to lengthen their VOT. Teachers and students should be aware, though, that VOT varies from person to person, but that there are tendencies across languages that are important.

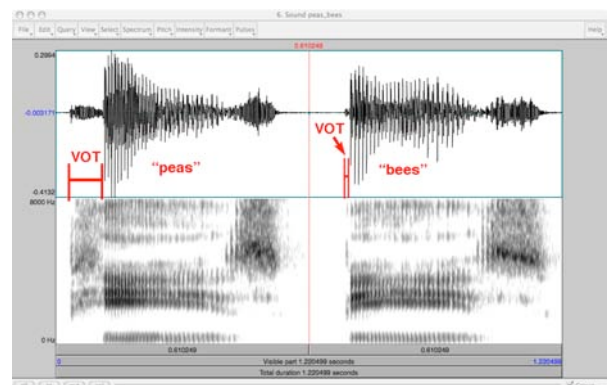


Figure 3. VOT for /p/ versus /b/

### 2.3 Spectrogram cues to “Japanese R”, L and R

The North American English liquids (“l” and “r”) present difficulty for many Japanese learners, who have neither of these in their native sound inventory, but instead have a “tap” or “flap” consonant identical to that produced in the North American English pronunciation of the word *heating*.

The articulation of these two consonants (“l” and “r”) is complex in that it involves more than one part of the tongue at a time. This is readily apparent when the tongue is viewed directly with ultrasound during speech (see Wilson & Gick,

2006), but Praat can also help visualize the differences here and point out to students when they are making errors.

Figure 4 shows the waveform and spectrogram for the words *heating*, *healing*, and *hearing*. The letter “t” in the word *heating* is pronounced as /r/ in North American English, and this corresponds to the pronunciation of “Japanese R” (i.e., the consonant sound in the Japanese syllables: ろ, り, る, れ, and り). In *heating*, notice the break where the tongue stops the airflow. In *healing*, the airflow continues around the sides of the tongue and in *hearing* it continues over the top of the tongue. The big difference between the /l/ in *healing* and the /ɹ/ in *heating* is the 3<sup>rd</sup> formant (F3). F3 remains high for /l/, whereas it is low (parallel to F2) for North American /ɹ/.

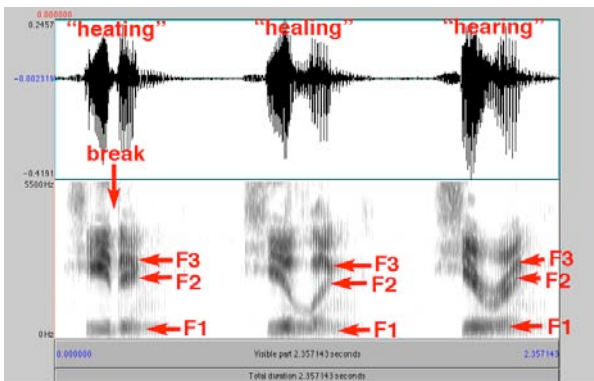


Figure 4. Formant differences in /r/, /l/, and /ɹ/

### 2.4 Intonation and stress

Praat can also be used to teach aspects of suprasegmental pronunciation such as intonation and word stress. English stress can be indicated by one or more of the following: high pitch, high intensity (loudness), longer vowel duration, and full vowel quality (no reduction to schwa). Pitch and intensity displays are turned on from the *Pitch* and *Intensity* menus of the Edit window. These are straightforward to interpret and are shown in Fig. 5.

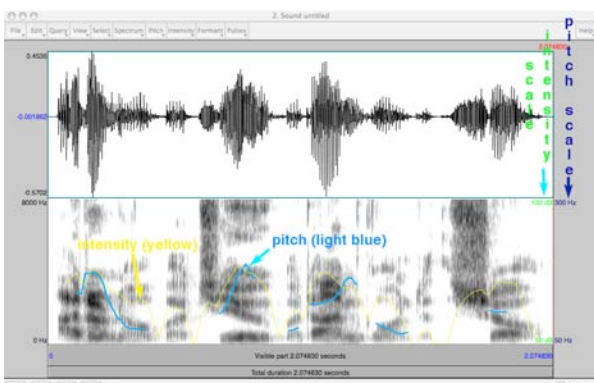


Figure 5. Pitch and intensity in the edit window

In Section 2, I have shown how to use Praat to make a variety of phonetic measurements. Once students are comfortable making those measurements, teachers can use Moodle to enable students to input their data for teachers to check.

### 3. Using Moodle’s Choice Activities with Praat

The *Choice* activity in Moodle is a method of quickly polling students to see which of a number of choices each student selects. In my pronunciation classes, I have set up *Choice* such that each possible selection is a different range of values on a phonetic continuum. Using Praat, students first measure those values for their own speech, and then they select the appropriate range in the *Choice* activity. An example of a Choice activity can be seen in Fig. 6. Students measure their VOT for /p/ in the word *peas* and then select the range that it falls in.

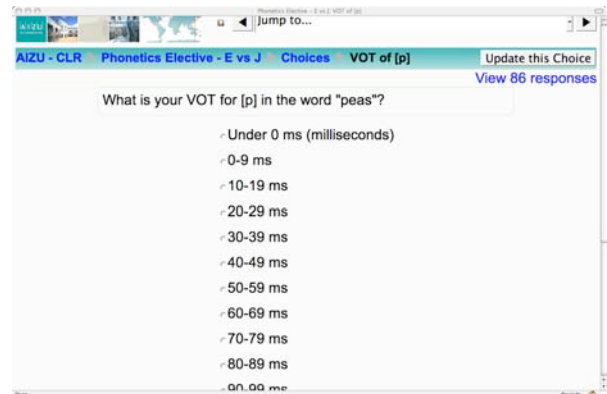


Figure 6. Choice activity: VOT of English /p/

The *Choice* results are instantly displayed to the teacher, and optionally to the students, as a table showing the students who have selected each choice (see Fig. 7). Thus, the teacher can determine quickly which students fall outside the normal range for a given phonetic measurement, and then efficiently give individual feedback. This saves valuable class time by helping teachers quickly choose which students need individual attention on which sounds.

Figure 7 shows the results of the VOT Choice for /p/ in the word “peas”. The leftmost column of students is those who have not answered the question yet. The other columns are for ranges of VOT values, from 0-9 ms, on the left (with 9 students), to 120-129 ms on the extreme right (with 1 student). The red vertical line on the left has been added to show the average VOT for *Japanese* /p/, spoken by a native Japanese speaker. The red vertical line on the right has been added to show the average VOT for *English* /p/.

spoken by a native English speaker. The VOT values contained in the two columns marked with red dots are so low that the word “peas” would typically be mistaken for “bees” by a native English listener. The 14 students in these two columns would be targeted first for extra help.

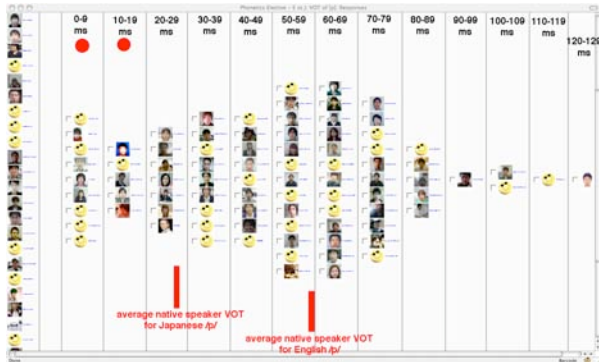


Figure 7. Choice results for VOT of English /p/

After asking the students to record the sentence *I use a computer every day*, I had them measure the duration of the vowel (i.e., schwa) in the first syllable of the word *computer*. For a native speaker of English, the schwa is extremely short - on the order of 5-20 ms. If one really drags out the pronunciation and says “come” + “pewter”, the duration of the vowel (no longer schwa) may reach 60-80 ms. A common mistake for Japanese learners of English is to pronounce schwa as a full vowel. By having students measure the duration of their schwa and entering it into a Moodle *Choice*, teachers can quickly determine who needs extra attention in this area. Figure 8 shows such results. Note that the majority of students have a schwa of duration 81-100 ms, far too long. It is possible that some students included the “m” of *computer* in their measurement of schwa. This would be something to go over with the class as a whole.

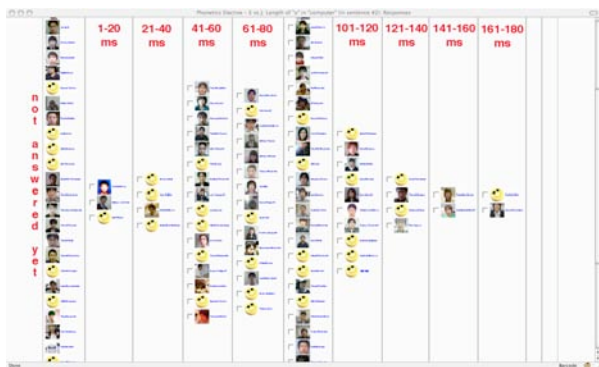


Figure 8. Choice results for schwa duration

Finally, Figure 9 shows the *Choice* results of the pitch difference between the “om” and the “u”

syllables of the word *computer*. All students falling on the left of the red line had a higher pitch on the first syllable than the second syllable.

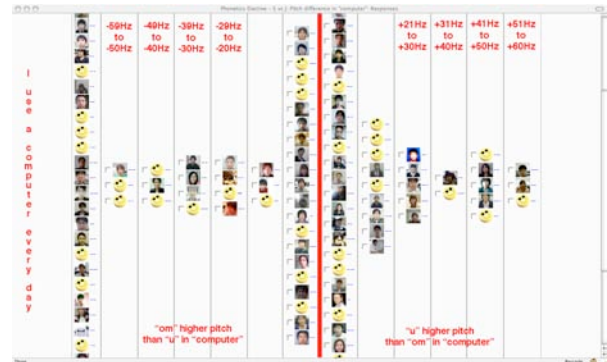


Figure 9. Choice results for pitch difference

#### 4. Conclusion and Future Steps

In this paper, I have demonstrated a method of setting up a *Choice* function within Moodle that has students enter measurements they have made of their pronunciation using Praat.

By using Praat to analyse their own pronunciation, learners are becoming more autonomous in a field that has had to rely on native listener judgements, traditionally, for evaluation. For a pronunciation teacher who is teaching large classes, the combination of Praat and Moodle provides a way of very quickly pinpointing which students need assistance in which areas.

In the near future, a website for teachers using Praat in pronunciation classes will be developed. The website will be located at <<http://clrlab1.u-aizu.ac.jp/praat.html>>.

#### Acknowledgments

Thanks to John Brine (U. of Aizu) for providing and maintaining the Moodle server that hosts my courses.

#### References

- Brett, D. (2004). Computer generated feedback on vowel production by learners of English as a second language. *ReCALL*, 16, 103-113.
- Setter, J., & Jenkins, J. (2005). State-of-the-art review article: Pronunciation. *Language Teaching*, 38, 1-17.
- Wilson, I., & Gick, B. (2006). Ultrasound technology and second language acquisition research. In M. G. O'Brien, C. Shea, & J. Archibald (Eds.), *Proceedings of the 8<sup>th</sup> Generative Approaches to Second Language Acquisition Conference - GASLA 2006* (pp. 148-152). Somerville, MA: Cascadilla Proceedings Project.

## Corpus-based Analysis of Modals in Consecutive Sentences

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This work presents a method that was developed for extracting examples that include modal auxiliaries in two consecutive sentences from an English corpus. The method uses a process where the sentences are extracted, parsed for simplification of complex sentences, analyzed for frequency of use and then made available for display to provide useful examples for the purpose of learning the use of modals in context. These example sentences can be useful tools for both teachers and students alike.

### 1. Introduction

Modal auxiliaries are among the most difficult structures to teach to students of English as a second language (Celce-Murcia & Larsen-Freeman, 1999). Other languages often use different structures to convey the ideas expressed in English by modals, learners frequently make mistakes with modals (Coelho, 2004). Although there are a large number of grammar books that explain the form and meaning of the English modals, it is difficult to understand the meaning of modals merely by explanation.

One solution is to learn the meaning/usage by applying corpus linguistics methods (Meyer, 2002) and show learners examples of authentic usage of modals. Research on the use of modality in the English language by using corpus linguistics has been reported by performing a simple concordance of modals for the benefit of learners using the World Wide Web for research on the use of epistemic modality and the Michigan Corpus of Academic Spoken English (MICASE) was used to research the use of deontic modality (Meyer, 2006).

In this paper, we aim to demonstrate a method to extract useful examples from two consecutive sentences using modals. We conducted our analysis by using the British National Corpus (BNC) due to the availability and affordability of obtaining a broad collection of English samples from a wide range of sources (Oxford, 2008).

### 2. Consecutive use of modals

In order to understand why two consecutive sentences using modals would be useful for learners of English, let us explore the usage of

modals. Modals have both semantic and formal properties, which do not readily make themselves understood with simple chunks of the language. Language teachers often have great difficulty in teaching the inherent complexity of modals. Thus, capturing this complexity by using different examples so that the learners can internalize the meaning into their minds remains an important objective. One common problem with modals, for example, occurs with the words, “would and should.” If the following modals were given without the sentences to provide context, the learner would have more difficulty in understanding the situation. Look at Example 1:

IT REALLY WOULD WORK AFTER ALL  
WE SHOULD KNOW SOON ENOUGH

Example 1. Consecutive extracted modals

The combination of the two sentences makes the flow of thought more intuitive and offers a greater chance of comprehension to the learner by using deductive reasoning. The use of context and vocabulary allow for the learner to relate these two modals consecutively and appropriately. A single sentence will not have as much intrinsic impact and will offer no suggestions as to how to employ another modal in the vicinity of the first modal.

### 3. Method of extracting example sentences

While the BNC contains a large number of useful sentences containing modals, the process of automatically extracting modals from sentences included in the BNC involves certain difficulties.

A simple string match was not sufficient for our purposes, therefore it was necessary to construct an elaborate method for extracting sentences from the corpus.

First, only the main clauses in sentences were taken into account. Some sentences in the BNC are complex sentences. Therefore, there could be a possibility of multiple modal auxiliaries occurring, and thus only the main clause of each sentence was selected and the subordinate clauses were deleted from the data. Moreover, we determined that by removing the subordinate clauses, this made the connotation of the sentence easier to understand for English language learners, and when presenting two consecutive sentences, the meaning becomes more evident. There is also a possibility that a single sentence from the BNC includes multiple main clauses. In this case, all main clauses are extracted as separate sentences. To achieve this task, it was necessary to parse the sentences automatically, thus we used the Charniak Parser (Charniak, 2000), (Charniak & Johnson, 2005). After parsing the sentences, we processed the output, i.e. parse trees, in order to recognize which parts were the main and the subordinate clauses.

Second, when extracting consecutive sentences containing modals, both paragraph boundaries and text source boundaries were taken into account. Because we wanted to extract a consecutive use of modals from an equivalent situation, the two sentences should be contained in the same paragraph of a given text in the corpus.

Third, after the sentences were modified to remove the unnecessary subordinate clauses, the t-scores were calculated to determine the most likely occurrence of the modals. In corpus linguistics, the t-score refers to how many instances of the co-occurring word are found in a designated span between of the node word (the first modal) and the co-occurring word (the second modal), and how many instances might be expected in that span, given the frequency of the co-occurring word in the corpus as a whole. In addition, the t-score uses a calculation of standard deviation which takes into account the probability of co-occurrence of the node and its collate and the number of tokens in the designated span in all lines. Therefore, it maybe assumed that high t-score results in some non-random association between the two modals, whereas low t-score results indicate low frequency use. Here, we have defined an equation to calculate the t-score for modals in consecutive sentences, as shown in equation (1), where;

$$t - score = (f(n, c) - (f(n) \times f(c) / N)) / \sqrt{f(n, c)} \quad (1)$$

$f(n)$  refers to the frequency of the sentences containing the node modal,

$f(c)$  refers to the frequency of the sentences containing the collate modal,

$f(n, c)$  refers to the frequency of the consecutive sentences containing the node and collate modals,

$N$  refers to the number of sentences in the corpus.

From the result of extracting the main clauses by parsing, we extracted modals in consecutive sentences and calculated the t-scores. We can thus use this information for selecting practical example sentences.

#### 4. T-score results

In this study, we analyzed the BNC for occurrence of modals in two consecutive sentences. We identify the first occurring modal (node word) as Modal 1 (M1), and the modal occurring in the second sentence (collate) as Modal 2 (M2). The results are shown in Table 1. The modals that were investigated are listed on the left side (M1), as well as on the top of the table (M2). The t-scores are listed in the corresponding cells. It can be seen, for example, that the pair combination “can-will” has a t-score of 9.4, which is a relatively high number. Similarly, the combination “may-should” has a t-score of 7.7, which is also high. Therefore, it can be said that these two pairs of combinations are respectively strongly associated modals that are found in the BNC, and correspondingly, occurring frequently in English. To verify the authenticity of these results, let’s look at Example 2 from the data extracted from the BNC

T-score = 9.4  
 $f(\text{can}) = 97686$ ,  $f(\text{will}) = 160434$ ,  $f(\text{can,will}) = 3427$ ,  
 $n = 5423057$ )

CAN YOU GIVE ME ONE MORE DAY TO COME UP WITH SOMETHING

I WILL SLEEP ON IT TONIGHT AND TOMORROW

Example 2 High occurrence example of “can, will”

As Table 1 demonstrates, some pair combinations of modals are more common than others, and as the t-score number is higher, so is

Table 1. T-scores of modals in consecutive sentences

M1/M2	can	must	will	may	shall	should	could	would	might
<b>can</b>	56	6.1	9.4	15.9	1.4	0.9	-22.8	-40	-1.4
<b>must</b>	6.6	36	-0.5	3.1	1.9	5.9	-9.3	-9.9	-5.1
<b>will</b>	11.8	-7.8	110.5	10.8	7.8	2.2	-41.8	-68.5	-13.4
<b>may</b>	11.3	3.4	12.9	62.2	2.9	7.7	-11.1	-22.8	3.1
<b>shall</b>	-0.6	1.4	7.9	3.1	25.2	-1.2	-19.1	-16.7	-2.8
<b>should</b>	3.8	5.4	1.1	5.8	-1.2	48.3	-3.2	0.4	2.3
<b>could</b>	-31.6	-9.7	-50.5	-24.2	-12.1	-9.8	37.6	25.8	11
<b>would</b>	-45.5	-14.2	-66.3	-37.1	-12.5	-10.7	22.3	95.1	14.1
<b>might</b>	-6.9	-6.8	-16.1	-1.9	-1.4	-0.3	10.4	17.1	24.6

the prospect of finding two modals in consecutive sentences that are prevalent. The high values along the diagonal represent the consecutive uses of the same modal in both sentences, such as “will, will” with a t-score of 110.5. The negative t-scores represent the modal combinations that are less frequent, it does not mean, however, that they are bad examples of English use.

## 5. Discussion

Learning by which concordances of specific language features can be analyzed by learners to infer and test their meanings, can be made up of two forms: inductive and deductive learning (Aston, 2001). The inductive form encourages learners to infer meaning from the output data by identifying patterns and making up some generalizations by observation. The deductive form encourages learners to apply previously acquired knowledge to classify the data according to the grammar rules they have already learned. Moreover, this type of data-driven learning (DDL) may involve both induction and deduction, since arriving at an understanding of the raw data may require not only inducing the information but also testing it deductively to verify that it makes sense (Murison-Bowie, 1996). Thus a learner may read useful examples of modals and induce the meaning, and consecutively use deductive reasoning of grammar rules to verify that the meaning is correct.

As noted earlier in the Introduction, modal auxiliaries are difficult to teach, and one of the most effective ways to learn how to use modals for English learners is to study examples of how they are used in practice. It is more efficient to teach modals by placing them in context. The best way to show this is to give examples (Harris & McLaughlin, 1997). Due to the nature and the

complexity of modals, rules simply cannot be memorized and applied for general cases (Celce-Murcia & Larsen-Freeman, 1999). Thus, a holistic approach to learning modals, by observing examples of modals in a specific situation, may be better than by memorizing rules of use. A holistic approach by concordancing can be developed by assembling a set of language data to form the basis of teaching and learning for EFL students, as learners need to engage actively in processing the meanings of the language (Willis, 2000). Recent studies in corpus linguistics have shown that having students access various corpora and drawing their attention to the concordance evidence provides them with a more objective view of the language (Hirata & Hirata, 2007). Moreover, students pay attention to the target language in context to gain an extensive knowledge of the vocabulary in more effective ways (Cobb, 1997).

## 6. Conclusion

When considering materials for teaching or learning, one of the most valuable tools is having definite concrete examples in context that facilitate the learner’s ability to process the language. It has been shown here that by using specific methods for retrieval of sentences in an English language corpus, along with parsing and analysis, one can obtain a large amount of useful data for learning purposes. This data can be used by a learner in a number of situations. Due to the large amount of data, a search can be conducted to find contextual information and useful examples can be retrieved for inclusion of learning tasks. The t-score information available in Table 1 can be used as a guide to teach the more useful combinations of modals.

Moreover, a learner could also study the use of modals by accessing a database with the

information presented in this paper, in order to become more familiar with expressions that are specific to the learner's needs. Such a user could identify certain verbs and degrees of complexity that would fit particular criteria. Diverse levels of users could have access to distinctive parts of a database. A student for example, would have different needs than a teacher, and thus would approach the use of the database in a different way. The use of the information presented here in a database is a work in progress and accessibility through the Internet of this database is an objective of further study and development.

The retrieval of information from a corpus and the processing of the result is important to find practical examples of modals in consecutive sentences. Therefore, a method of dealing with vast amounts of information is necessary to achieve this purpose. In summary our process can be described as follows:

- We identified a corpus to be the source of our text files. In this case we used the BNC due to its large size and XML functionality.
- We eliminated the spoken portion of the corpus because modals are not often used in concurrent sentences in natural speech.
- We ascertained that the consecutive sentences originated from the same paragraph of a story to establish the continuation of an idea.
- Parsing of sentences was performed.
- The main clause of each sentence was kept and the subordinate clause was deleted. This simplified the sentences for easy comprehension.
- We extracted sentences that contained modal auxiliaries in two consecutive sentences.
- The t-scores were calculated to determine the most likely occurrence of the modals.
- The t-scores were examined and useful examples were extracted from the data.

One of the problems with this method is the use of parsing software to break down complex sentences (Heift & Schulze, 2007) and identify the main clause and subordinate clause. The Charniak parser is well known, however, it is not flawless and there are some inaccurate results that could be output from the program (Charniak, 2000). Complex passive sentences are especially difficult to parse accurately and this could affect the subordinate clause determination.

Ultimately, it is our objective to develop a web-based solution to incorporate all aspects of this method to allow a user to set search

parameters in order to produce an output that would be useful as a learning tool. Such parameters could be the choice of the modals, the level of complexity, and length of the example sentences. Learners and educators could make use of these results to improve the quality of writing, a better understanding of modals and improving the process of learning a difficult aspect of the English language.

## References

- Aston, G. *Learning with corpora*. Houston: Athelstan. (2001).
- Celce-Murcia, M., & Larsen-Freeman, D. *The grammar book: An ESL/EFL teacher's course* (2nd edition). New York: Heinle and Heinle (1999).
- Charniak, E. A Maximum-entropy-inspired Parser. *Proceedings of NAACL*. 132-139 (2000).
- Charniak, E. & Johnson, M. Coarse-to-file n-best parsing and MaxEnt discriminative reranking, *Proceedings of ACL*. 173-180 (2005).
- Cobb, T. Is there any measurable learning from hands-on concordancing? *System*, 25(3), 301-315 (1997).
- Coelho, E. *Adding English: A guide to teaching in multilingual classrooms*. Don Mills: Pippin (2004).
- Harris, C., McLaughlin, B & Still, M. Modals: a balancing act. *Journal of English Grammar on the Web*, Issue I, <http://www2.gsu.edu/~wwwesl/issue1/modaltoc.htm/> (1997).
- Heift, T., & Schulze, M. *Errors and intelligence in computer-assisted language learning-Parsers and pedagogues*. New York: Routledge (2007).
- Hirata, Y., & Hirata, Y. Independent research project with web-derived corpora for language learning. *The JALT CALL Journal*, 3(3), 33-48 (2007).
- Meyer, C. F. *English Corpus Linguistics*. Cambridge: Cambridge University Press (2002).
- Meyer, C. F. Corpus linguistics, the World Wide Web and English language teaching. *IBERICA* 12, 9-21 (2006).
- Murison-Bowie, S. Linguistic corpora and language teaching. *Annual Review of Applied Linguistics*, 16, 182-199 (1996).
- Research Technologies Service at Oxford University Computing Services. <http://www.natcorp.ox.ac.uk/XMLedition/URG/> (2008)
- Willis, J. A holistic approach to task-based course design. *The Language Teacher*, 24(2), 7-11 (2000).



## **The effects of Skype-based video chats with volunteer Filipino English teachers (II): Discovering the superiority of video chat**

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This study examines how video chat activity between Japanese students and online Filipino English teachers through Skype in NBLT (network-based language teaching) CALL classrooms improves students' oral communication skills and motivation toward autonomous learning. The subjects were 55 university students who registered for elective Basic Conversation classes and English majors who voluntarily joined this study after class in 2007 and 2008. During classes, they engaged in 25-min video chats eight times; besides, questionnaires, pre-post tests, free comments, interviews, DVD recordings, and PAMELA recordings for Skype were conducted. The results revealed better performances than previous 40 students who engaged in voice chats in 2006. Japanese students, who are typically shy, can speak better in prearranged one-on-one conversations with real-time video images that allow them to view their partners and use nonverbal language. They also realized communicating in English was fun and were highly motivated to speak English fluently in future.

### **1. Introduction**

Recently, open-type computer assisted language learning (CALL) classrooms which are defined as classrooms with network-based language teaching (NBLT), high-speed Internet access, and free Internet telephone software such as Skype have enabled students to engage in authentic, student-centered, communicative activities such as voice and video chat via computer.

In Japan, the traditional teaching method is still teacher-centered even in EFL contexts, and it is difficult to bring about a change. In closed CALL, we can rarely create a communicative language teaching (CLT) environment. However, NBLT seems ideal for the practice of CLT because it offers a learning environment where students can interact and exchange information with various unknown people in the real world full of authentic English (Kern, & Warschauer, 2000; Nishihori, 2005).

Currently, Japanese students are not fulfilling their potential in English oral communication. There are some contributing factors such as the significant syntactic and phonetic differences, the Japanese traits of shyness, fear of losing face, and a monolingual environment. If students practice online every day or even as little as once a week one-on-one or in small groups, they will develop oral communication skills and improve their confidence.

### **2. Previous studies**

Noguchi (2004) requested online course students to participate in an international voice chat room. However, students' motivation gradually decreased, perhaps due in part to the fact that Japanese students' oral communication ability is significantly lower than not only NS but also L2 learners in other countries, thereby making turn taking difficult.

Nishihori (2005) conducted text chat discussion classes with video image and audio via the Japan Gigabit network between her students and those from Stanford University and Alaska University. The students agreed that the activity was useful and fun and the video image was interesting.

Yoshitake (2007) tested the use of Skype for elementary pupils with one Japanese student studying in NY as a substitute for ALT (Assistant Language Teacher). Although the result confirmed the effectiveness, the problem was how to secure proper human resources.

Based on these results, the researcher considered online Filipino English teachers (FETs) might prove to be more effective as voice and video chats partners for Japanese students to fully utilize their potential.

### **3. Methods**

#### *3.1. Voice and Video Chats Experiments*

Prior to this study, voice chats using the Linux version of Skype between forty non-majors

intermediate freshmen university students in Kyoto and FETs were conducted to investigate the effects on students' motivations (Gardner, 1985) and oral communication skills in fall 2006. The results showed poor performance; however, many students were highly motivated and strongly agreed with the enjoyment and usefulness of voice chats.

The researcher further investigated the effects of video chats with FETs using a Windows version of Skype in 2007 and in 2008.

Forty-five non-majors who attended three elective conversation classes taught by the researcher in the spring and fall semesters in 2007 and in spring 2008 participated in the present study. Additionally, ten English majors participated in this study voluntarily after class in spring 2008.

The levels of conversation class and English majors were elementary and intermediate respectively. Therefore, the total number of voice (N = 40) and video (N = 55) chat research subjects over two years was 95.

#### **4. Merits**

Skype is free software and shows text chat, voice chat, and video chat synchronously. It is easy to use and has good sound quality.

Filipino online English schools, which have developed with the advent of Skype, are cost-effective, with pricing from \$2.8 to \$5 for 25 min. If group chat is used, the cost is less than \$1 per student. Moreover, the time lag is only one hour and they speak fluent American English so that teachers can save time to arrange students' partners. Furthermore, they have cooperated with this study free of charge for these two years.

Most importantly, students can enjoy authentic communicative activities without worrying about other students' scrutiny and evaluation since all students engage in the task concurrently. In other words, their affective filters (Krashen, 1985) become lower.

#### **5. Data collection**

Students engaged in 25-min Skype video chat sessions with FETs around 8 times per semester. To collect data, pre- and post-tests (except English majors), a questionnaire which consisted of 5 Likert scales, 16 multiple-choice questions, and 3 open comments, and interviews were employed. Students also wrote free open comments about the activity at the end of each class and term in English and Japanese. To observe and analyze the class, DVD recordings have been employed since 2006.

PAMELA, which is free recording software for Skype, was installed in 2008 to obtain discourse

data. Students saved the MP3 files to their USB flash memories to transcribe conversations in class and as homework. Consequently, they were able to recognize their mistakes in pronunciation, grammar, and vocabulary themselves without teachers' explicit error corrections and listen to the discourse repeatedly. For weaker elementary level students, the first priority should be expressing themselves freely not accurately. Thus, the researcher requested FETs not to correct students' errors excessively.

#### **6. Procedure**

In the first class, the researcher explained how to use Skype and Pamela in English. The students then created their own Skype accounts and profiles, after which they added classmates on their Skype lists and practiced talking to each other in class. They also tried the Skype Me mode and text chatted with unknown people around the world. We then decided on a topic for the forthcoming Skype activity. At the end of each class, the students wrote comments about the activity in English or Japanese and submitted them to the researcher.

In the second class, the students practiced a model conversation created by the researcher using text to speech (TTS) model reading. Students then added their own information and opinions and role-played in pairs. The researcher also taught segmental and supra-segmental pronunciations to improve their listening and speaking skills in terms of blended teaching.

In the third class, we first reviewed the previous classes and then conducted Skype video chats. This was followed by a discussion of the activity. After that, the students who succeeded in recording their conversations on Pamela transcribed them, while the others wrote their conversations by memory. Thereafter, we set the next topic and repeated the same task cycle.

#### **7. Drawbacks**

One drawback to classroom use is that the sound quality through Skype is poorer in a university environment than that on a PC used at home. Moreover, sound and video image problems occurred frequently even if there was no defect on PC devices. In situations where these technical problems happened, both the researcher and students were discouraged from using English to fix the problems immediately (Debski, 2000). Furthermore, lower volume, noise and other students' talking voices hindered the smooth communication. To resolve these PC problems, hanging up and calling back or restarting the PC worked in many cases.

8. Results and Analysis

8.1 Questionnaire

The forty-five elementary level non-major conversation class students (NMCCS) who conducted video chats in 2007-08 showed much better performance than the forty non-major intermediate students who used voice chat in 2006. Ten English major students (EMS) found it as a cost-effective and interesting way to practice conversation.

Figure 1 indicates the differences in comprehension and self-expression between the 2 groups. As for comprehension of FET's utterances, EMS (N = 10) were much better than NMCCS (N= 34). 90% of the EMS strongly agreed and agreed; whereas, only 20.6% of the NMCCS agreed, however 44.1% disagreed. With regard to self expression, agreement rates decreased in both groups; even so, EMS agreed (40%) and disagree (30%), while NMCCS agreed (17.6%) and disagreed (58.8%).

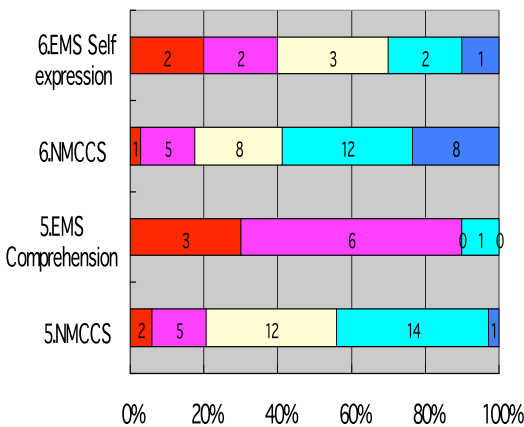


Fig.1. English majors (n = 10) vs. non-majors (n = 34) Self expression and comprehension

Nevertheless, Figure 2 clearly shows that both NMCCS and EMS were highly motivated to speak English more fluently and found speaking with FETs via SKYPE to be fun and realized English was a real life language not a subject to earn a credit.

Figure 3 illustrates more than half of the NMCCS experienced the improvement in listening and speaking and highly evaluated the FETs' English. With regard to the use of Skype at home after the semester, the agreement rate remained at 52.9% and 11.8% disagreed. These rates appear to be lower considering their high agreement rates in Fig. 2. Therefore, the researcher enquired about the reason and noticed they did not have a PC or Internet connection at home. Since many of them lived

alone in apartments, this was not surprising. Regarding faulty connections, the responses were split with almost half agreeing and half disagreeing, both with 41.2%. However, 29.4% strongly agreed and 11.8% strongly disagreed. This indicates students were rather frustrated with PC sounds and video image troubles.

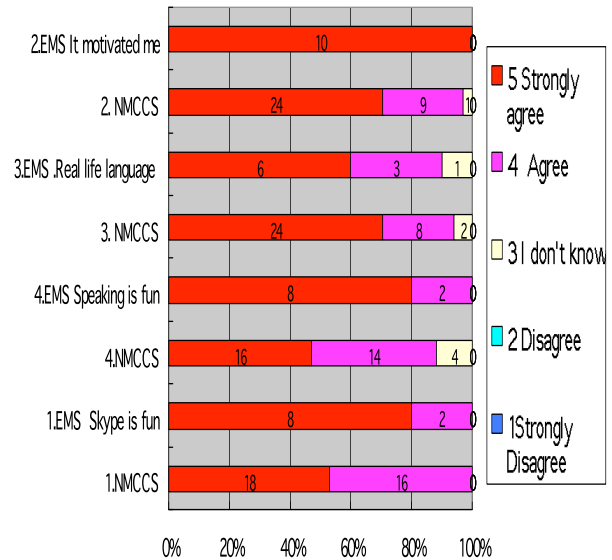


Fig.2. English majors vs. non-majors Motivation and enjoyment

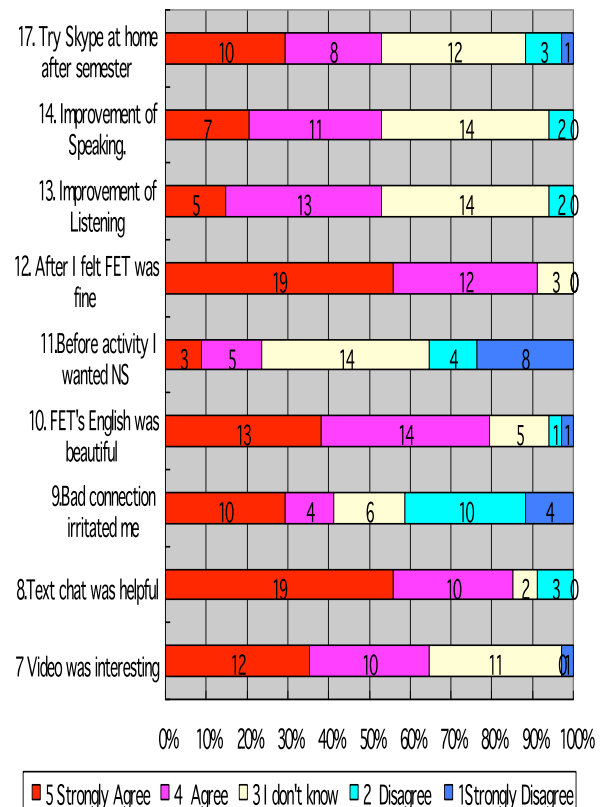


Fig.3. NMCCS other questionnaire items

## 8.2. Free Comments, Interviews, and DVD recordings

The major points extracted from the written free comments and interviews are summarized as follows (N = 55).

1. This Skype class was fun and useful even if it was often interrupted by faulty connections and sound problems (87.5%).
2. Talking with FETs via Skype is valuable amusing time and a great experience. (41.8%)
3. My English level is too low to communicate properly and it was regrettable. I don't know how to express myself in English. I'd like to be a better English speaker (85.5%).
4. I enjoyed one-on-one friendly and meaningful conversation with the FETs (14.5%).
5. Although I hated English earlier, this class made me like English and motivated me to learn it (27.3%).
6. I felt it was a real life English by hearing lots of different accents and realized that pronunciation and listening were important (25.5%).
7. Since it was a very happy class, I recommend it to my friends. I also suggest the university should incorporate this activity much more into the curriculum so that many students can benefit from this fantastic experience (18.2%).
8. It was more difficult than NT's conversation classes, because FETs could not understand Japanese at all (21.8%).
9. Although video image allowed me to see FET and it made me relaxed, body language on PC screen did not work as much as expected. However, it worked better for expressing themselves orally in English (21.8%).

The DVD recordings also clearly revealed their enjoyment and lively atmosphere while engaging in video chats.

## 9. Conclusion

In sum, 100% of the video chat students' free comments were positive in 2007/08 compared to 90% of voice chat groups in 2006. Almost all of the students felt frustrations about their insufficient English ability, they, however, commented they were satisfied that they had talked with FETs solely in English. It changed their perspective about English. Students were gradually interested in communicating in English and were able to see hold a better conversation than the previous one as the classes progressed. Many hoped to re-register for this Skype class next semester, which has been impossible thus far, assuring this class would improve their communication ability with

enjoyment. It seems worthy undertaking of long-term significance that Japanese learners could develop oral communicative competence by incorporating Skype video chats with FETs into the curriculum or daily use at home.

## References

- Brown, H. D. (2007). *Teaching by principles, An Interactive Approach to Language Pedagogy* (Third ed.). England: Pearson Longman
- Debski, R. (2000). Exploring the re-creation of a CALL innovation. *Computer Assisted Language Learning*, 13(4-5), 307-332. In Debski, R., Ellis, J.K., & Wigglesworth, G. (2005 September). Oral Interaction around computers in the project-oriented CALL classroom. *Language Learning & Technology*, 9 (3), 121-145 Retrieved August 14, 2008, from <http://llt.msu.edu/vol9num3/jeon/default.html>
- Dudeny, G., & Hockly, N. (2007). *How to teach... english with technology*. England: Pearson Longman
- Gardner, R. (1985). *Social psychology and second language learning: The role of attitude and motivation*. London: Edward Arnold.
- Kern, R., & Warschauer, M. (Eds.). (2000) *Network-based language teaching: Concepts and Practice*. Cambridge: Cambridge University Press.
- Krashen, S. (1985). *The Input Hypothesis: ISSUES AND IMPLICATIONS*. London, New York : Longman
- Nishihori, Y. (2005). *Internet to kokusai kosoku kaisen de musubu enkaku kyocho gakusyu no kyojuho kenkyu [Study of Teaching Methods of Distance Collaborative Learning on the Internet and International High-speed Networks]*. Graduate school of international media and communication and tourism studies, Hokkaido: Hokkaido University.
- Noguchi, T. (2004). The Possibility of Voice-Chat for Japanese English Learners. *Language communication studies*, 4, 22-29
- Yoshitake, Y. (2007). Nihongo kyoiku jugyo jisen kara no chicken o ikashita syogako eigo katsudo [English education activity in elementary school based on the findings of the practice of Japanese education class]. *Annals of educational research*, 53(2), 524-529

## Software

- PAMELA, <http://www.pamcorder.com/>  
 Skype, <http://www.skype.com/>  
 TTS, Naturalsoft, <http://www.naturalreaders.com/>

## Cooperating Online Filipino English School

Eigo de Sheberitai Club, <http://e-syaberitai.com/>

## Development of a Japanese Pronunciation Training System for Learners' Speech Recognition

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This study aims at developing a Japanese pronunciation training system, with special consideration to the learners' speech with errors. To give appropriate instructions for non-native speakers of Japanese, we, firstly analyzed the collected learners' speech and labeled all the errors into 39 categories. Secondly, to develop an original speech recognition system for learners' speech which contains various kinds of errors, we constructed a phoneme model based on both native and learners database. Using this model, we developed a Japanese pronunciation training system which can recognize and evaluate the speech of different L1 learners. We tentatively evaluated the system with Vietnamese learners to ensure the effectiveness and usability of the system.

### 1. Purpose

With the increasing number of learners of Japanese as a second language, a supporting system for self-learning of Japanese pronunciation has become vital. The system needs to be easily accessible via WWW and available for the personal computers with simple and standard specification. Given this background, the purpose of this study is to develop a Japanese pronunciation training system, especially focusing on the phonemic segments, using speech recognition techniques, and to evaluate the system with the cooperation of Vietnamese learners and to ensure the effectiveness of the system as an L1-Specified supporting tool<sup>1</sup>.

### 2. Methods & Procedures

As a course ware for Japanese pronunciation practice, the learning process of this system can be

described as Fig. 1. The learners' input is evaluated to give appropriate feedback to the learners automatically. The feedback is provided from both articulatory and acoustic points of view. A listening practice menu is also provided for learners to practice to distinguish the minimal pairs of phonemes.

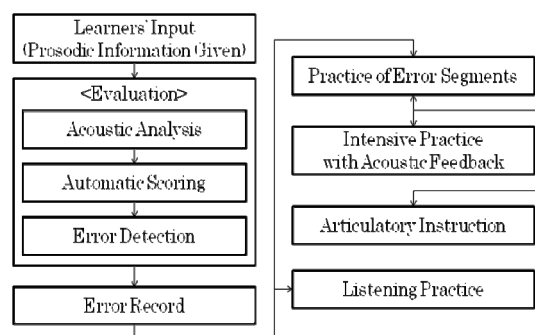


Fig. 1. Course design

<sup>1</sup> We have chosen the Vietnamese learners of Japanese as evaluators, firstly because the Vietnamese learner is often pointed out to be one of the most difficult learners with whom to correct the pronunciation, and secondly because the first author specializes in Vietnamese phonology and phonetics, so we have the background to make contrastive analysis of Japanese and Vietnamese phonological systems and phonetic features.

To make the system available for learners' practice, we need to construct a phoneme model that is available for the recognition of learners' speech. Firstly we have analyzed 956 speech data which contain the reading voices of the text book of Japanese by learners of Japanese with diverse L1, such as Chinese, Korean, Thai, Vietnamese, etc.

Secondly we categorized the segmental errors into 39 types and labeled all the segments in the data. And finally, we constructed the phoneme model, using both native and learners' data, available for the learners' speech recognition and error detection.

Concerning the acquisition of learners' data, we collected the speech data of phoneme-balanced 10 sets of sentences quoted from the reading textbook of preliminary level, read by 965 learners in all at Naganuma School. Those learners contain 187 learners from Taiwan, 180 from Korea, 123 from Thai, 114 from Vietnam, 75 from China, etc. To construct the error-tag set for data labeling, we surveyed the literature to make the preliminary version which contains 28 types. After carrying out the trial labeling, we have revised the tag set with 39 types as Table 1. Based on the learners' labeled data together with the native ones, we have constructed the phoneme model for learners' speech

Table 1. Error-tag set

01	long V → short V	21	/N/ + α
02	short V → long V	22	/β/ inserted
03	/Q/ (syllabic stops & fricatives) omitted	23	V sequence
04	/Q/ inserted	24	/N/, /Q/ → long V
05	voiced C → unvoiced C	25	/N/, long V → /Q/
06	unvoiced C → voiced C	26	/Q/, long V → /N/
07	[ʃi] → [si]	27	long V → V sequence
08	[ʃi] → [zi]	28	/u/ → /o/
09	[tsu] → [tʃu]	29	/o/ → /u/
10	[tsu] → [su]	30	/β/ omitted
11	V inserted	31	[j] → [ʒ]
12	[r] → [r]	32	[j] → [z]
13	[r] → [l]	33	/i/ → /e/
14	[r] → [n]	34	/e/ → /i/
15	/N/ (syllabic nasal) omitted	35	[n] → [r]
16	/N/ inserted	36	[k] → [h]
17	[ʃi/ʒi] → [tʃi]	37	C <sup>j</sup> V → C <sub>i</sub> + jV
18	[tʃi] → [ʃi/ʒi]	38	/t/ → [ts <sup>h</sup> ]
19	[d] → [r]	39	others (slips of the tongue or misreading)
20	/h/ omitted		

recognition, using the Japanese phoneme model for native speech already constructed by Advanced Media, Inc.

As an evaluation process of the proto-type, we have conducted a one-week trial program to be used by 16 Vietnamese learners with pre- and post-tests to evaluate the effectiveness of learning as well as questionnaire to see user friendliness. 16 Vietnamese learners contain 2 learners from Thai Binh province, 5 from Nam Dinh, 5 from Thanh Hoa, 3 from Da Nang, and 1 from Tien Giang. The results of pre- and post-tests were evaluated by 5 teachers at Naganuma School as for the segments (in 176 moras) contained in the test sentences. Questionnaires of 5-level rating were also used to see users' affective dimensions: Enjoyable? Usable? Easy to use? Like to use again? Useful?

### 3. Results

The proto type of the present system consists of the top page, input & evaluation portion, practice & instruction portion, intensive practice portion, and listening practice portion.

On the top page, learners can jump to any menu as they like. However, a recommended course is shown: pronunciation check (input & evaluation) → practice record → pronunciation practice (practice & instruction, intensive practice)/listening practice.

In the input & evaluation menu, learners are required to input their speech through reading the given sentences shown on the top line of the page together with a prosody graph so that they can concentrate on the practice of phonemic segments. After the input process, learners can check the sounds, pitch contours, intensity, waveforms of both model and their own speech with the error detection of 5-level evaluation as shown in Fig. 2.

In practice & instruction menu, pronunciation practice contents generated automatically based on the results of input & evaluation menu are given. Here, some articulation figures are used as feedback



Fig. 2. Input &amp; evaluation menu

for the errors concerning place and manner of articulation, such as error types of 05-14; 17-22; 28-29; 31-36 and 38 in the error-tag set. Prosody graphs are used for the error types of 01-04; 15-16; 27 and 37. Waveforms and prosody graphs are for 24-26.

In the intensive practice menu, learners can check the acoustic feedback for their own speech which will supplement the articulatory feedback given in the instruction menu. Here, waveforms are also used for error types of 01-04; spectrograms for 09-11; 17-18; 20; 31-32; 36 and 38; spectrograms & pitch contours for 05-06; vowel charts for 23; 27-29; 33-34; and vowel charts & spectrograms for 22 and 30 (see Fig. 3.).

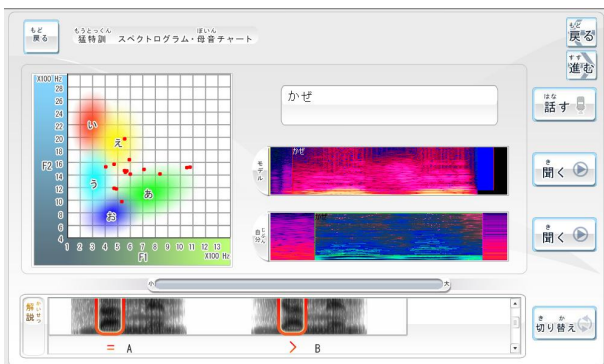


Fig.3. Intensive practice menu

Learners can also conduct the listening practice menu right after the input & evaluation menu. After the sample practice, learners are required to select the pronounced one from the minimal pair of words within limited time as shown in Fig.4.



Fig.4. Listening practice menu

**4. Evaluation**

The results of questionnaires about the users' affective dimensions in general are shown in Fig.5., while those of questionnaires asking about usefulness of the main functions of the system is shown in Fig.6.

In pre- and post-tests, the trial users read 8 test sentences and 5 teachers of Naganuma School

evaluated all the segments contained therein. We can see the rate of improvement and appearance of new errors. Table 2 shows the numbers of improved segments, remaining errors, and new errors in post-tests for every learner.

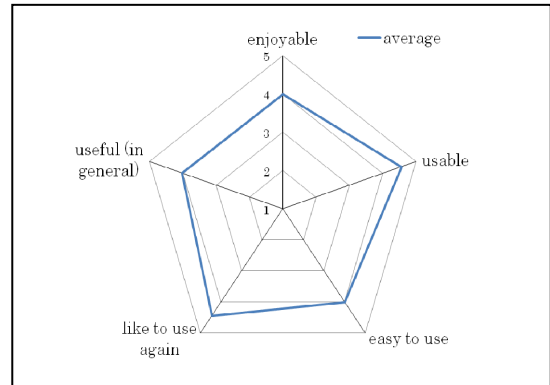


Fig.5. Results of questionnaire I

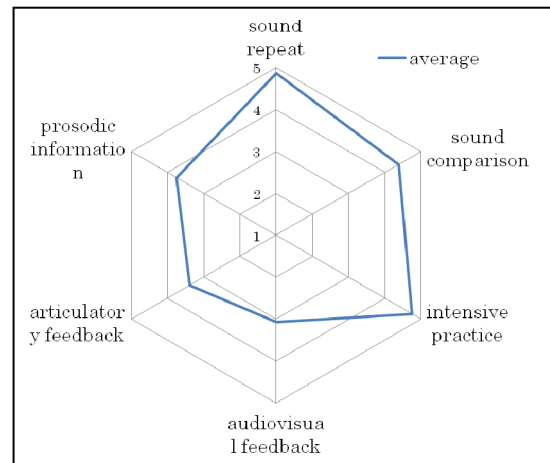


Fig.6. Results of questionnaire about II

Table 2. Results of pre- and post-tests

	level	home town	improved segments	remaining errors	new errors in post-test
A	Preliminary II	Thanh Hoa	14	6	4
B	Intermediate I	Da Nang	20	8	7
C	Preliminary II	Thanh Hoa	18	13	4
D	Intermediate I	Nam Dinh	20	5	8
E	Preliminary II	Thanh Hoa	16	8	2
F	Intermediate I	Nam Dinh	18	12	8
G	Preliminary II	Thanh Hoa	7	11	13
H	Preliminary II	Nam Dinh	15	6	7
I	Preliminary II	Da Nang	11	4	8
J	Preliminary II	Thai Binh	12	9	7
K	Intermediate I	Nam Dinh	10	15	8
L	Preliminary II	Thanh Hoa	25	13	7
M	Intermediate I	Thai Binh	12	15	8
N	Intermediate I	Tien Giang	11	12	8
O	Intermediate I	Da Nang	17	11	8
P	Intermediate I	Nam Dinh	15	6	5

**5. Conclusions and Future Directions**

We developed the proto-type of a pronunciation training system for Japanese phonemic segments using speech recognition techniques. We carried out a preliminary evaluation of the system through a trial use by Vietnamese learners.

Results of the questionnaire show that the scores of the users' affective dimensions were all at a higher level, 4~4.6 (the perfect score being 5), while scores regarding usefulness of each function of the system include some below 4, especially for the cases containing literal feedback in Japanese. Results of pre- and post-tests show that about 61% of the errors in the pre-test were improved, but new errors still occurred in post-test at the rate of 29% compared with the total amount in the pre-test. Especially, typical errors for Vietnamese learners, such as [j] > [z] (for the Northern Vietnamese), are well recognized and improved.

As future directions, literal feedback in learners' first language is highly required as shown in the questionnaires. And prosodic evaluating function is also required, because in case of Vietnamese learners, some segmental errors, such as long/short vowels, are closely related with the prosodic features (Shimizu 2007).

#### **Acknowledgments**

We would like to express our appreciation to the teachers at Naganuma School, especially Mr. Hoshi, Mr. Ishikawa, Ms. Kawate, and Mr. Nishimura, for their cooperation in the process of labeling and evaluation, all the learners' contribution of their speech data and all the trial users' evaluation of the system.

#### **References**

- Agency for Cultural Affairs (1988). *Nihongo Kyouiku Shidou Sankousho (1) Onsei to Onsei Kyouiku (Guidance for Japanese Language Education 1- Speech Sounds and Speech Education)*, 15<sup>th</sup> edition.
- Jo, C.H. (1999). *Studies on Computer-Assisted Pronunciation Learning System for Non-native Learners based on Speech Recognition Techniques* (Doctoral Dissertation), Kyoto University.
- Nishina K., Yoshimura Y., Saita I., Takai Y., Maekawa K., Minematsu N., Nakagawa S., Makino S., & Dantsuji M. (2002). Speech Database Construction for Japanese as Second Language Learning, *Proceedings of SNLP-Oriental COCOSDA 2002*.
- Shimizu M. (2007). *A Study on the Development of Interactive Teaching Materials for Mutual Understanding of Japanese and Vietnamese Culture*, Institute for Extended Study, Tokyo Metropolitan University.
- Tsubota Y., Shimizu M., & Dantsuji M. (2003). Multimedia-based English CALL Contents utilizing Speech Processing Technology, *Proceedings of the Symposium 2003, Academic Center for Computing and Media Studies, Kyoto University*.



## Students' Motivation and Satisfaction in Learning English and Culture in the BBS-Based Intercultural Exchange Project

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The aim of this research is to identify motivational enhancements in the Bulletin Board System (BBS)-based intercultural exchange project. The exchange project was carried out by the 386 students of 14 universities in 9 countries, Japan, Korea, Taiwan, Brazil, Indonesia, UAE, Burkina Faso, Mexico, and Namibia in 2005. This research deals with Japanese student's motivation for English and culture learning systematically in terms of Keller's ARCS Model of Motivational Design. Based on analyses of questionnaires and English tests, it is indicated that the exchange project sustained students' motivation for learning and enhanced students' English writing and intercultural communicative competence.

### 1. Introduction

Motivating students to learn English is one of educational challenges in Japan. Most Japanese students do not have many opportunities to communicate in English, and many students regard English as a subject for examination rather than as an international language. In order to improve this situation, students in a Japanese university joined an intercultural exchange project in 2005. The result of post questionnaires showed that students' satisfaction for the class was high, and the study effect was enhanced more compared to the previous year in which the exchange project had not been conducted (Kasami, 2006). In this research, the project is examined in the light of ARCS Model of Motivational Design, and it is shown that students' motivation to learn was enhanced in the project.

### 2. Internet English Class and Exchange Project

#### 2.1 Problems before the exchange project

'Internet English' class was offered for college students. Homepage publishing project was conducted in 2004, and students published their own homepages and the goal was that students put out the information on their own opinions and Japanese culture to people in other cultures. However, since homepage-based communication was one-way basically, there were four limitations. First, students focused on writing English grammatically correctly rather than writing English paragraphs to attract readers' concerns. Second, since students did not communicate with people in other cultures, they did not have opportunities to notice the importance to consider other cultures. Third, since students had few chances of interactive communication in English, they were not confident

of their English ability. Fourth, since there was no reaction from other people, it was difficult to keep students' motivation and satisfaction for the class.

In order to solve these problems, the class joined a BBS-based intercultural exchange project in the class of 2005. The purpose of this research is analyzing the effectiveness of BBS-based exchange project in terms of enhancing students' motivation to study, English writing ability, and intercultural communicative competence.

#### 2.2 The overview of the targeted class and project

This research focuses on the class of 'Internet English' of fall term of 2005. This was one of elective courses for second-year students (n=19) of Junior College of English Literature focusing on developing skills in English writing and using the Internet as a communication tool. In fall of 2005, the class joined Project 'Ibunka' coordinated by Professor Masahito Watanabe of Yokohama National University. The aim of this project is exchanging ideas with students in many countries. 'Ibunka' means 'different cultures' in Japanese. Participants of this project can learn much about both cultural differences and similarities between many countries of participants. In 2005, 386 students participated from 14 universities in 9 countries (Japan, Korea, Taiwan, Brazil, Indonesia, UAE, Burkina Faso, Mexico, and Namibia). Each teacher of participated universities was in charge of his or her own students' administration and study. In Project Ibunka, all students were required to write and post three essays as new messages on the BBS. Topics were school life, cultures and world peace according to the schedule. Students were also encouraged to reply to other students.

### **3. ARCS Model of Motivational Model**

Keller (1983)'s ARCS Model of Motivational Design is well-known as a model for instructional design. According to this model, in designing class, there are four essential elements to be considered for motivating students to learn; attention (A), relevance (R), confidence (C) and satisfaction (S). Students are motivated to learn when they feel that the instruction is interesting and relevant to their concerns, and when they are confident in the learning process and satisfied with learning. There are four motivational factors and three sub-components of each motivational factor.

Recently researchers have investigated the relationship between motivation and learning experiences. Kijima and Suzuki (2003) state that it is available to apply Keller's ARCS Model in order to evaluate motivation, when a new strategy for autonomous learning has been implemented.

The followings are the results of analysis of the project from perspectives of each motivational factor and sub-component of ARCS Model.

#### *3.1 Attention (A)*

When something unusual happens in a class, students wonders what happens and become interested, and it is time that they learn.

##### **A-1 Perceptual arousal**

It provides surprise and uncertainty. In Project Ibunka, the teacher showed video letters from oversea partner students to gain students' attention.

##### **A-2 Inquiry arousal**

It stimulates curiosity by asking questions and revises the preoccupation. For example, the teacher asked students whether it was essentially important to write English messages grammatically correctly.

##### **A-3 Variability**

It provides getting out of a rut. Students did many activities such as writing, chatting and making video letters through the project.

#### *3.2 Relevance (R)*

The aspect of relevance is what they are learning is relevant to their concerns or useful for their future life. Students' opportunity to use English is limited. To compensate for this, it is important to give students opportunities to use English.

##### **R-1. Familiarity**

Students chose topics of English writing according to their concerns in the project.

##### **R-2. Goal orientation**

The teacher and students tried to write interesting messages in order to receive replies from partners.

##### **R-3 Motive matching**

Students enjoyed communicating with partners.

#### *3.3 Confidence (C)*

Building students' confidence is very important. It builds students' confidence to increasing the level of difficulty comfortably and gradually.

##### **C-1 Learning requirement**

Each student was required to improve their abilities based on each original level of knowledge. The minimum number of words for the assignment was firstly small (150 words), and gradually it increased (to 200, and 250 words). The learning requirement was introduced at the beginning and students had study goal images. Before writing essays, the teacher explained how to write an essay.

##### **C-2 Success opportunities**

The teacher gave an individual tutorial and positive feedbacks with advices for each assignment to show which parts were good, and students felt that they wrote better than before.

##### **C-3 Personal control**

When a student received a reply, the teacher said that it was because the student wrote an interesting message with good ideas. Other students also learned why the student received the reply.

#### *3.4 Satisfaction (S)*

Satisfaction is the final component of the ARCS Model. Satisfaction from achievement is a great motivator which often affects future studies.

##### **S-1 Natural consequences**

There were many opportunities to write. If they received advices for English improvements, they made use of it for the next assignment.

##### **S-2 Positive consequences**

After writing essays, some students received replies from partners. The replies were the best presents for students. Even if some students did not receive any messages, the teacher gave feedbacks.

##### **S-3 Equity**

The teacher showed study goals and evaluation standard at first, and they were consistent.

### **4. Analysis**

#### *4.1 Questionnaires based on ARCS Model*

At the end of the Project Ibunka, a questionnaire was conducted to check whether the project enhanced students' internal motivation based on 4 elements of the ARCS Model (n=18). According to the result, the average was generally high and the project was effective to enhance students' motivation to learn. However, the aspect of confidence was slightly lower than others. This is because some slow learners found it difficult to write even short English messages, and it will be necessary for a teacher to follow up them.

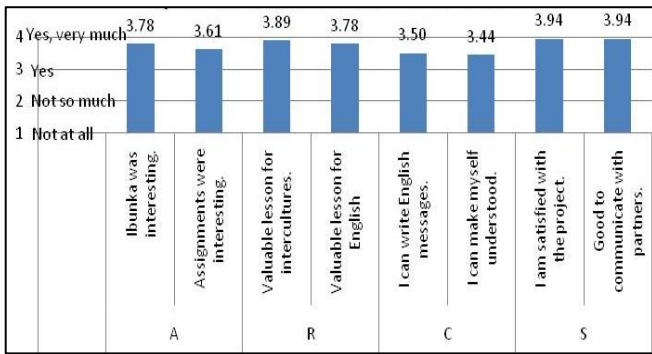


Fig.1. Questionnaires in terms of ARCS

4.2 Learning effectiveness from pre and post tests

The results of pre-test and post-test were compared. Both tests were the same questions which were to write a self-introduction in English within 3 minutes. The study effect was scaled with the T-unit measures. The T-unit which was first used by Hunt (1965) and adapted to ESL in Japan by Hirano (1989) is an index of syntactic complexity in writing English. Hunt states T-unit is “grammatically capable of being terminated with a capital letter, and a period” For analysis using this measure, there are important valuables such as (a) average T-unit length, (b) average error-free T-unit length (EFT), (c) percentage of error-free T-units (EFT). As a result, first, while average T-unit length was 4.9 in the pre-test of BBS-based project, it increased to 5.7 in the post-test. Second, while average EFT was 2.5 in the pre-test, it increased to 5.6 in the post-test (t=3.69, df=13, p<0.01). Third, while percentage of EFT in all T-units was 63.1% in the pre-test, it increased to 87.9% in the post-test (t=2.5, df=13, p<0.05). From these results of T-units measures, the project was effective in terms of English length, complexity, and accuracy.

Table 1. Changes of T-unit measures

Valuable	Before and after
Number of words	14 -> 29
Average T-unit length	4.9 -> 5.7
Average EFT	2.5 -> 5.6
Number of T-units	2.7 -> 5.1
Percentage of EFT in all T-units	63.1% -> 87.9%

Next, students’ self-introduction in English were evaluated with scale of Hughes (1989) in 5 aspects of grammar, vocabulary, mechanics, fluency, and form with score from 1 to 3 points with the support of a native English speaker. There were great improvements in fluency and form.

Table 2. Results of qualitative evaluation

Aspect	Average
Grammar	2.1->2.7
Vocabulary	1.8 -> 2.5
Mechanics	1.8 -> 2.6
Fluency	1.0 ->2.6
Form	1.0 -> 2.6

As for contents of students’ writing, while contents of all students’ introduction were almost the same in the pre-test and they were only data, such as name, hometown, and age, there were many unique messages in the post-test. For example, there were messages about their own future dreams, strength, and so on. The contents of both tests are listed on Table 3. The contents which were attempted to attract readers’ concerns are put ‘\*’.

Table 3. The contents of self-introduction in English

Student	Pre-test	Post-test
A	Name, hometown, age	Japanese movie*
B	Name, hometown, address, hobby	Personal experience of stay in Australia*
C	Name, English ability*	Job after graduation*
D	Name, age, hobby	Part-time job*
E	Name, nickname*, hobby	Favorite Japanese folk dance*
F	Name, hometown, age	Hip-hop*
G	Name, address	Home-stay in Australia*
H	Name, hobby, family*, pet*	My guitar*
I	Name, age, hobby, favorite food	American artist*
J	Name	My favorite music concert*
K	Name, address, commuting*	Double dutch*

As an example of students’ writing, the following sentences were written by the same student.

Pre-test (17 words) I am XXX. I’m 20 years old. I live in Yokohama with my family. I like cake.
Post-test (37 words) I like drawing a picture and making something very much. I always draw for class in my school. So, I am not sleep while studying. I like Norman Rockwell very much. He is famous artist in America.

4.3 The results of questionnaires

The same questionnaire was conducted in both classes. For BBS-based exchange class (BBS

class), more positive responses were collected to the following questions. Students were required to ask by choosing one from four (1. Not at all, 2. Not so much, 3. Yes, 4. Yes, very much). The average point of the total points was counted up. Figure 2 shows the difference of growth between BBS class and Homepage-based class (HP class) by comparing pre and post-questionnaires results.

- Q1 Do you try to write clear English to make yourself understood?  
 Q2 Are you able to compare Japanese education, custom and religion with those of other countries?  
 Q3 Can you explain what you want to express easily in English?  
 Q4 Are you able to talk about Japanese history in the context of world history?  
 Q5 Has your vocabulary been increased?

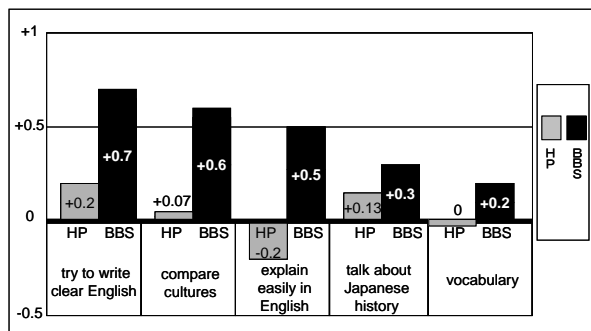


Fig.2. Comparison of before and after projects

Only the data of students who answered both pre and post-questionnaires were analyzed. The number of students of HP class was 10 and the number of BBS class was 15. In BBS-based class, the result of question, “Are you able to compare Japanese education, custom and religion with those of other countries?” was improved by 0.6 by comparing post-questionnaire result with pre-questionnaire. The result of “Can you explain what you want to express easily in English?” was improved by 0.6, which is statistically significantly different ( $t=2.90$ ,  $df=22$ ,  $p<0.01$ ).

### 5. Conclusion and Suggestions for Improvement

This research examines the effectiveness of BBS-based project, in which students can experience collaborative learning with foreign students. In conclusion, there were the following findings as the effectiveness of the project.

- [1] The project enhanced students to learn.
  - [2] Students’ English writing was improved.
  - [3] Students began to communicate with consideration for other cultures and concerns.
- For further improvement, the aspect of

confidence can be more enhanced according to ARCS Model as follows.

[1] For a slow learner, it is important that a teacher encourages and tells the learner that to outgrow his or her former self is important, and also failure breeds success. It is also important to give feedbacks according to the level of proficiency. These enforcements are related to learning requirement (C-1), success opportunities (C-2), and personal control (C-3).

[2] For all students, the learning requirement (C-1) should not be too high and not too low. It is important to set a learning requirement slightly higher when student can establish a certain confidence. For the first assignment, a teacher should not interfere or correct students’ writings very much, but gradually it becomes effective to give advices for students’ writing.

[3] Regarding personal control (C-3), it is important to make students feel that they can make a success because they made efforts. When students make mistakes, it is important not to blame them, but to prepare checklists with which students can make sure which points were problematic.

### Acknowledgments

I appreciate the coordinator of Project Ibunka, Professor Masahito Watanabe who gives me great advices for my class and research. I also thank all participants and Ms. Namsook Chung of Hanyang University and Ms. Su-hsun Tsai of Taipei Municipal University of Education, Ms. Vera Menezes of Universidade Federal de Minas Gerais and any other partner teachers and students.

### References

Hirano, K. (1989). Research on T-unit measures in ESL. *Bulletin of Joetsu University Education*, 67-77

Hughes, A. (1989). *Testing for language teachers*. Bell & Bain Ltd., 91-93

Hunt, K. W. (1965). Grammatical structures written at three grade levels. *Research Report 3*. Champaign: National Council of Teachers of English

Kasami, N. (2007). The effectiveness of BBS-based collaborative learning project for inter-cultural communication. *ED-MEDIA 2007*, 699-704.

Keller, J. M. (1983). Motivational design of instruction. In Reigeluth, C.M. (ed.): *Instructional design theories and models: An overview of their current status*. (pp.383-434). Lawrence Erlbaum Associates.

Kijima, H., & Suzuki, Y. (2003). A study on the support of self-directed learning in Japanese as a second language: Procedure and evaluation using the ARCS motivation model. *Japan Society for Educational Technology*, 27(3), 347-356.

## Academic Writing with Blogs and a Moodle Forum

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Some goals of any EFL writing program should be to get learners to write more, write more correctly, and to experience writing in a variety of genres. While institutions, programs, instructors, and students face time limitations, they also have increased access to a plethora of tools with which to teach and learn writing. The present study compared learners in two sections of a course titled “Essay Writing” at a junior college in Japan to see whether asking students to post writing assignments and do peer-editing in either Moodle Forums or individual blogs can result in better quality peer-editing, a larger quantity of written output, or any differences in non-assignment written participation. The findings showed that while both platforms were effective for group-organized peer-editing and there were no real differences in the amount of student writing or length of postings, there were some interesting minor differences in student commenting styles.

### 1. Introduction

The widespread use of the Internet has changed writing. This is true for native speakers of any language and also for EFL students for whom there are new opportunities to write meaningfully in the L2 and challenges with learning new genres such as blogs, forums, chat, virtual worlds, e-mail, and commenting boards. At the same time, many EFL learners are enrolled in courses in which the curriculums and syllabi were designed before the Internet existed. Instructors have not been oblivious to this changing configuration of needs and opportunities but they are challenged to incorporate the new technology and new genres into their courses in pedagogically sound ways. Some of the challenges in doing so, of course, are the different vocabulary and discourse features that these new platforms and genres of writing entail (Warschauer, 1999) and the effect new platforms can have on student needs and behavior (Thorne, 2008).

### 2. Initial Study

In an initial study done in 2006 blogs were used in a course titled “Essay Writing” with 14 second-year students at a junior college in Japan. Students were placed in groups of 3 or 4 and asked to submit weekly assignments on their blogs and comment on and edit the posted assignments of their group members. Comments were collected and analyzed for amount (in relation to total written output) and content. Ten comment content types were identified. In addition, the characteristics of the 3 most proficient (by volume) learners were compared with the 3 least proficient. The results

indicated that blogs greatly facilitated student written communication and increased the total written output of all learners. The blog system also was successful in getting students to write in different genres and facilitated peer-editing. Lastly, the more proficient learners not only wrote considerably more (average of 4866 words) compared to the least proficient learners (average of 1565 words), but the percentage of their total writing that was comments (that is, non-assignment writing) was much higher (51% compared to 18%). These findings suggested that blogs allowed more motivated learners to maximize their participation in the course.

### 3. Comparative Study

Based on the findings from the initial study, a second study was designed, comparing blogs with a closed Moodle forum (BBS) platform for the same course of Essay Writing in the fall of 2007. The research questions of the study were to see if the use of blogs or the Moodle forum:

- result in better quality peer-editing;
- facilitate a larger quantity of written output;
- result in any differences in non-assignment written participation

### 4. Subjects

The subjects were 2<sup>nd</sup> year junior college students from two sections of the same elective course titled “Essay Writing”. All students had previously completed 2-3 college level writing courses and were placed into the essay-writing course by schedule availability, not ability.

Twelve students were enrolled in section “A” and created and used individual blogs to submit assignments and respond to and edit peer writing. They were put into groups of four students for the purposes of commenting and peer-editing.

The second group consisted of 5 students in section “B”. These students used the forums section of a class Moodle web site to post assignments, respond to, and peer-edit others’ assignments. Due to the small enrollment, the students were put into one group. Also due to the small *n* size, this study is considered as a pilot for reference to inform and shape a future, more substantive study.

### 5. Data Collection

Data was collected via pre and post-course questionnaires, as well as analysis of the peer comments and editing. The questionnaires utilized a 5-point Likert scale (5=strongly agree/1=strongly disagree). Both questionnaires contained questions concerning the students’ self-perceptions in their writing abilities/attitudes (e.g., “I like writing in English” or “I can make paragraphs in English”), as well as their perceptions concerning their computer literacy. The pre-course questionnaires also asked students about their experiences using blogs and/or on-line forums. The post-course questionnaires asked about the students’ self-assessments concerning the time spent on both writing course assignments as well as commenting/peer-editing group members’ writings.

The on-line assignments, comments, and peer-editing were first analyzed for amount of writing (via word counts). The comments and peer-editing were then analyzed for percentage of total writing, number of comments/edits, and average length of comments/edits. The comments/edits were further analyzed for content divided into 2 categories. The first category was “corrections” whereby the comments were sorted according to the following: 1) corrections (correct); 2) corrections (incorrect); 3) request for clarification or elaboration; 4) structural or organizational feedback; 5) positive feedback; and 6) no corrections to make. The second category was “non-academic” which was sorted accordingly: 1) greetings; 2) apology for being late; 3) softener for being late and/or lack of confidence; and 4) social (e.g., “I think that dogs are the best pets, too”).

### 6. Questionnaire Results

Within the data from both sections there were only several instances which showed noteworthy differences. Regarding pre-course questionnaires, group “A” had considerable experience using blogs, although exclusively in Japanese. Group “B”,

however, had almost no experience using forums, either in Japanese or English. With regard to computer abilities, however, group “B” rated themselves as more comfortable with typing and using a word processor in English than group “A”.

In the post-course questionnaire, group “A” showed noteworthy (i.e., >1 on the 5 point scale) increases in three areas, while group “B” showed an increase in one area. Group “A” expressed improvement in the following: 1) like typing in English (+1.17); 2) comfort with peer-editing (+1.17); and 3) ability to type (+1.01). Group “B” expressed improvement in “Can understand English sentence types” (+1.20).

Also in the post-course questionnaire, two noteworthy interpretations were conveyed concerning attitudes on the use of blogs/forums. Group “B” rated blogs as more difficult to use after the course with an average response below neutral (i.e., net negative response=2.58/5). Conversely, group “B” *strongly* agreed peer-editing, both providing and receiving, had helped them improve (4.85/5), while group “A” simply agreed (3.8/5).

### 7. Results: Comments/Peer-editing

With regard to comments and peer-editing, there was little difference between the two groups in either the amount of time spent on comments/editing or in the percentage of comment/editing writing vs. overall writing (17.64%/17.34%) and the overall comment word length (27.70 words vs. 32.04 words). The range of the number of comments given over the semester by class, however, did vary widely. Group “A” had a range of 2-35 comments, while group “B” had a range of 8-15. The noteworthy differences, as expressed in average instances for the semester, in content of the comments/peer-editing are summarized in Table 1:

Table 1. Peer feedback

Comments:	Group A (Blogs)	Group B (Forums)
Corrections (correct)	7.08	0.80
Corrections (incorrect)	1.17	0.00
Positive Feedback	13.33	8.80
Structural/organizational advice	1.58	5.20
Social Comments	1.42	5.20

### 8. Discussion

While the sample size used in this study precludes us from making definitive statements, several insights were gained which we feel are worthwhile for future study. First, both systems

appear to facilitate peer interaction, non-academic writing, and computer literacy. Second, while blogs were more difficult to set up, they perhaps allowed more self-expression for self-motivated students. Third, the forums appeared to help students stay on class-related tasks as well as promoting class cohesion. Obviously, further research is needed to explore the expanding technologies and how they influence student writing, interaction, and attitudes, and how those technologies can be utilized to enhance the students' writing and learning experiences.

### **References**

- Thorne, S. L. (2008). Mediating technologies and second language learning. In Leu, D., Coiro, J., Lankshear, C., & Knobel, M. (Eds.), *Handbook of research on new literacies* (pp. 417-449). Mahwah, NJ: Lawrence Erlbaum.
- Warschauer, M. (1999) *Electronic literacies: Language , culture, and power in online education*. Mahwah, NJ: Lawrence Erlbaum

## Improving Pronunciation via Accent Reduction and Text-to-speech Software

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This study aimed to find out whether integrating accent reduction and text-to-speech software in elementary language classes would result in improvements in students' pronunciation. The study made use of a quasi-experimental research design since it did not include the use of random assignment. Three classes at a private language institution in Turkey participated in the study. One class (control group) followed traditional instruction (using a CD player and a pronunciation text-book- *Tree or Three?*), another group (experimental group 1) followed traditional instruction which integrated the use of accent reduction software (*Pronunciation Power 1*) and the final group (experimental group 2) followed traditional instruction which integrated the use of accent reduction and text-to-speech software (*Text Aloud MP3* with *NeoSpeech voices*- Paul and Kate). The results of the study showed that the students following instruction integrating the use of accent reduction and text-to-speech software performed better in the post-tests.

### 1. Introduction

Pronunciation is important not only to communicate ideas easily but also to understand other speakers well. It is particularly important to integrate pronunciation into beginner classes as it will, from the very beginning, help avoid the risks of fossilization and stabilization of pronunciation habits (DETYA, 2001; Ritchie & Bhatia, 2008). This integration can be achieved through various activities such as drills, listen and imitate, and computer-assisted pronunciation teaching (González, 2007; Goodwin, 2001; Hansen, 2005; Kılıçkaya, 2006; Levis, 2007, and Seferoğlu, 2005).

The goal of teaching pronunciation is not to make the learners sound like native speakers of English and only few highly gifted and motivated individuals can achieve it (Jenkins, 2004; Jenkins, 2005). Therefore, a more realistic approach is to enable the learners to pronounce the language without detracting from the ability to comprehend the message (approximating) (Celce-Murcia, M., Brinton, D., & Goodwin, J.D., 1996).

The aim of this study was to find out whether integrating accent reduction and text-to-speech software in elementary language classes would result in improvements in students' pronunciation.

### 2. Method

The study was designed as a quasi-experimental study since it did not include the use of random assignment.

#### 2.1. Participants

35 Turkish EFL students were the participants of this study. The participants in the study were selected using purposive sampling. Three elementary classes at a private language institution in Turkey participated in the study and were aged between 22 and 28. Most of them were graduates of high schools where English is a must subject. Age and sex were not taken into consideration.

#### 2.2. Instruments

The pre/post test method was used for the study. Pronunciation questions were developed from the book, *Tree or Three?* by Ann Baker (1993), a pronunciation course for beginner and elementary of English and provides practice in the pronunciation of English sounds, word stress and intonation through a variety of interesting exercises and activities. Pre and post tests consisted of three sections: The first section consisted of 20 most-frequently mispronounced words; the second consisted of 10 affirmative and declarative sentences including these words and the last section of a picture which portrays a picnic where some children are busy with activities such as playing a football and eating. Answers for both the pre and post tests were rated according to a 5-point Likert scale for responses.

#### 2.3. Procedure

On the first day of class, an informed consent form was signed by the students agreeing to participate in the study. After students signed the



form, the instructors administered the pre-test. One class (control group) followed traditional instruction (using a CD player and a pronunciation text-book- Tree or Three?), another class (experimental group 1) followed traditional instruction which integrated the use of accent reduction software (Pronunciation Power I) and the final class (experimental group 2) followed traditional instruction which integrated the use of accent reduction and text-to-speech software (*Text Aloud MP3 with NeoSpeech voices- Paul and Kate*). The sample consisted of 10 students in the control group, 13 students in the experimental group 1, and 12 students in the experimental group 2. The study lasted for 16 weeks and the instructor met the groups three hours each week. With the results obtained from the test, and by means of a one-way ANOVA test, it was possible to establish whether or not there were significant differences between two groups of participants at the 0.05 alpha level (see Table 1).

Table 1  
Pre-test results

Group	Std.			
	N	Mean	Deviation	Std. Error
control	10	5.60	.516	.163
experimental1	15	5.73	.458	.118
experimental2	10	5.60	.516	.163
Total	35	5.66	.482	.081

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.152	2	.076	.315	.732
Within Groups	7.733	32	.242		
Total	7.886	34			

As can be seen, the significance level was higher than 0.05,  $F(2,32) = .315$ , which lead to the conclusion that there were no significant differences between the groups. Once this point became clear, the study was carried out with these three groups. On the last day of class, the instructor administered the post-test to all of the groups. Also, the experimental group 2 was interviewed regarding their views on accent reduction and text-to-speech software. The scores obtained by pre and post tests were statistically analyzed to see whether there was a statistically significant difference among the groups.

### 3. Data Analysis

The post-test scores obtained by experimental and control groups were analyzed using the SPSS software package using the one-way ANOVA test to establish whether there were significant differences among the three groups of participants at the 0.05 alpha levels (see Table 2).

Table 2  
Post-test results

Group	Std.			
	N	Mean	Deviation	Std. Error
control	10	62.50	4.859	1.537
experimental1	15	70.33	6.651	1.717
experimental2	10	78.10	2.283	.722
Total	35	70.31	7.851	1.327

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1216.810	2	608.405	22.156	.000
Within Groups	878.733	32	27.460		
Total	2095.543	34			

As can be seen, the significance level was higher than 0.05,  $F(2,32) = 22.156$ , which lead to the conclusion that there were significant differences between the groups.

### 4. Findings

Considering the data analysis,

- Experimental group 2 (exposed to accent reduction and text-to-speech software did better than the other groups).
- There were no statistically significant differences in the pronunciation of single words (All the groups did equally well).
- However, there were statistically significant differences between the groups in the pronunciation of sentences (Experimental group 2 did significantly better than the other groups).

During the semi-structured interview session, the participants in the experimental group 2 provided their opinions on accent reduction and text-to-speech software.

- Addition of visual support
- Sheltered practice sessions in which the learner can take risks without stress and fear of error
- Self- pacing
- Immediate feedback
- Pronunciation of any word or sentence.

- Improving writing (They were probably talking about spelling).

## **5. Conclusion**

It is noteworthy to state that the integration of accent reduction and text-to-speech software into classrooms can help learners of English improve their pronunciation due to factors such as practice sessions in which the learner can take risks without stress and fear of error and immediate feedback.

## **6. Limitations of the study and further research**

Since the study was carried out for 16 weeks and two hours for each week with a small number of participants due to the time constraint and the availability of the participants, it is suggested that similar experiments with a large number of subjects should be replicated.

## **References**

- Baker, A. (1993). *Tree or three?: An elementary pronunciation course*. Cambridge University Press.
- Celce-Murcia, M., D. Brinton, & J. Goodwin. (1996). *Teaching Pronunciation*. CUP
- DETYA . (2001). *Teaching pronunciation: A handbook for teachers and trainers*. Department of Education Training and Youth Affairs.
- González, D. (2007). Text-to-speech applications used in EFL contexts to enhance pronunciation. *TESL-EJ*, 11(2), 1-11.
- Goodwin, J. (2001). Teaching pronunciation. In M. Celce-Murcia (Ed.) *Teaching English as a second or foreign language* (3rd ed.) (pp. 117-138). Boston: Heinle & Heinle.
- Hansen, J.T. (2005). Pronunciation teaching in the 21st century. *Review of Applied Linguistics in China: Issues in Language Learning and Teaching*, 1, 81-98.
- Jenkins, J. (2005). Implementing an international approach to English pronunciation: The role of teacher attitudes and identity. *TESOL Quarterly*, 39(3), 535-543.
- Jenkins, J. (2004). Research in teaching pronunciation and intonation. *Annual Review of Applied Linguistics*, 24, 109-125.
- Kılıçkaya, F. (2006). Text-to-speech technology: What does it offer to foreign language learners? *CALL-EJ Online*, 7 (2).
- Levis, J. (2007). Computer technology in teaching and researching pronunciation. *Annual Review of Applied Linguistics*, 27, 184-202.
- Ritchie, W. C., & Bhatia, T. K. (2008). Psycholinguistics. In B. Spolsky and F. M. Hult (eds), *The Handbook of Educational Linguistics* (pp. 38-52). Singapore: Blackwell publishing.
- Seferoğlu, G. (2005). Improving Students' Pronunciation Through Accent Reduction Software. *British Journal of Educational Technology*, 36(2), 303-316.

## Development of and Effectiveness in Vocabulary Learning Content for Mobile Phones in Japan

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In this study, for developing effective vocabulary learning (VL) content for mobile phones (MPs), three research questions were addressed: (1) to find out what components are ideal for VL with MPs, (2) to ascertain the differences in VL strategies and learning styles with and without MPs, and (3) to measure the effectiveness of VL with MPs. A pre-test and a post-test for English vocabulary knowledge and 2 researcher-developed questionnaires on VL strategies and learning styles were used to examine the research questions. In conclusion, we propose an idea of ideal VL contents for MPs as an anytime, anywhere learning tool.

### 1. Background

In 2000, mobile phone subscribers outnumbered fixed-line telephone subscribers in Japan. This shows that mobile phones have been established as a personal communication tool.

Since 2006, our mobile learning study group, which belongs to a research center for e-Learning Professional Competency (eLPCO) at Aoyama Gakuin University, has conducted a survey per year of the situation about mobile phone usage of undergraduate students in Japan. From the data from 2006 through 2008, almost everyone (over 99.9%) of the students have their mobile phone. Mobile phones are always carried about by anyone anywhere at any time. On the other hand, not every student has a computer at home, and not all schools have enough computers or good CALL systems. Therefore, mobile phones hold the promise of becoming effective learning tools if we could develop effective learning contents.

### 2. Literature review

From the data of our survey conducted in May 2007, which 712 undergraduate students in Japan participated in, only 23.3% of them had used their mobile phone for learning. However, as the answer for the question about the preference for vocabulary learning between mobile phones and computers, 63.1% students chose the former and 15.4% chose almost the same. For the question about short training in learning, 65.2% prefer using mobile

phones and 14.6% answered almost the same. Vocabulary is the most important level of L2 knowledge for all learners (Harp, S. F., & Mayer, R.E., 1998), and about 80% of the students are interested in vocabulary learning with mobile phones over computers, we decided to develop vocabulary learning content for mobile phones.

According to Kadota *et al.* (2006), it is possible to activate vocabulary learning by showing words in different forms. They refer to five forms: (1) Translation; (2) Illustration; (3) Example Sentences; (4) Oral introduction with sound; (5) Appropriate amount of words. To identify the effectiveness of vocabulary learning with mobile phones, (1), (2) and (3) forms were selected, considering functions of mobile phones in Japan.

### 3. Research question

Our research question is to investigate what is the best way to learn vocabulary by mobile phone. The subordinate research questions are as follows:

- (1) Which type is the most effective, among translation only, translation with an illustration, and translation with an example sentence?
- (2) Does vocabulary learning by mobile phone fit students' learning style?
- (3) What kind of learning strategies do students use?

### 4. Experiment

#### 4.1 Vocabulary selection

Two vocabulary lists (JACET 8000 word list, and ALC 12000 word list) were referred to, and 150 words were selected by 7 instructors at 6 different universities. The vocabulary was focused on useful words for daily lives, but made few appearances in the textbooks of junior high schools or senior high schools in Japan. Ahead of the experiment, to verify the selected words, the word test was applied for advanced learners of English in Japan. The results shows that the words are effective to ascertain to what extent the participants make gains for mobile vocabulary learning.

#### 4.2 Preparation of the contents

150 words were divided into three groups considering the part of speech and the meaning, and each group of words was used for three types of the contents respectively.

##### Type 1: Word

English words + sound links of the words + Japanese meaning

##### Type 2: Illustration

English words + sound links of the words + Japanese meaning + illustration

##### Type 3: Example sentence

English words + sound links of the words + Japanese meaning + example sentences

What we elaborated was that every model used by the students could display the contents because mobile phones in Japan vary in display resolution and in the display capacity.

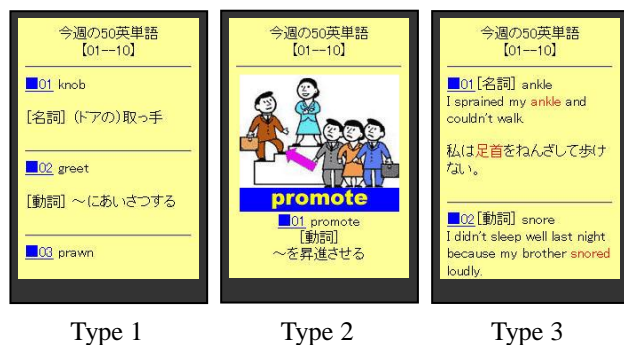


Fig. 1. Three types of contents

#### 4.3 Participants and procedure

The participants were undergraduate students living in/around Tokyo in Japan. Totally, 137 students majoring 7 different fields joined the experiment (Nursing:42, Caretaking:17, Liberal Art:5, Economic:13, Business:24, English:28, Pharmacology:9).

The experiment extended across 6 weeks in autumn in 2007. In the first week, a pre-test and a pre-questionnaire were conducted. Pre-test consisted of 30 words out of 150 words.

Pre-questionnaire was organized to describe the vocabulary learning styles and strategies of the participants. Students' feedback were used from the viewpoint of three strategies (O'Malley & Chamot, 1990; Oxford, 1990): (1) meta-cognitive (planning, monitoring); (2) cognitive (memorization, practice); (3) affective (communication with others).

In the second week, one of the three types was delivered to students over the Internet. The order of the delivery was randomly selected to each class.

In the third week, small quiz for the review of the words delivered in previous week was conducted, and the second type of the words was delivered.

In the fourth week, small quiz for the words of the third week was conducted and the third type of the content was delivered.

In the fifth week, small quiz for the words of the fourth week was given.

In the sixth week, post-test and post-questionnaire were conducted. The test was composed of the same words of the pre-test to measure the effect of mobile vocabulary learning. The questionnaire was organized to investigate the preference for the type of the contents and the strategies the students used.

### 5. Results and Discussion

Results are summarized into mainly three parts in order to answer the three research questions.

First question was which type was the most effective for vocabulary learning by mobile phone among three. Actually, differences in effectiveness was not found among three types, however, most students preferred type 3 to other two, studying words in example sentences (Fig. 2). They commented that studying words in sentences helped them understand how to use words in a real communication.

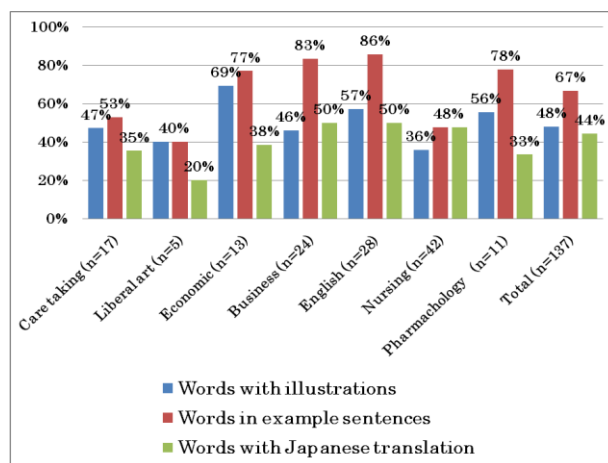


Fig. 2. Students' favorite vocabulary contents

Figure 3 gives information on students' interest in vocabulary learning before they participated in this project. 91% of Pharmacology major studied vocabulary for TOEIC, and 73% for TOEFL, which implies their keen interest in vocabulary study. Similarly, 83% of Economic major studied vocabulary for term exams, and 78% for TOEIC, which is also an implication of their interest in vocabulary study. When we looked at test scores (Fig. 4), English, Business, and Nursing majors improved their scores considerably, however, Pharmacology and Economics did not improve so much, despite the fact that their scores were very good in pre-test. We will discuss the cause for this later.

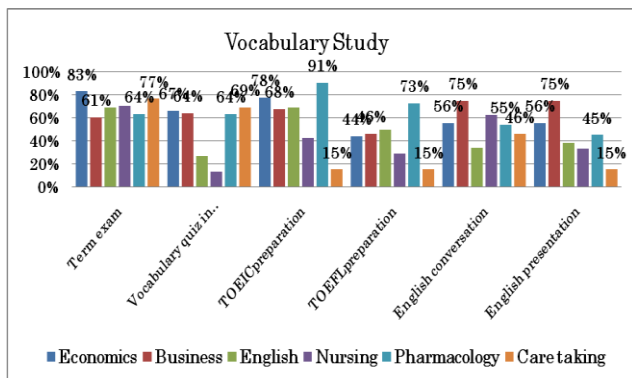


Fig. 3. Purposes to study vocabulary

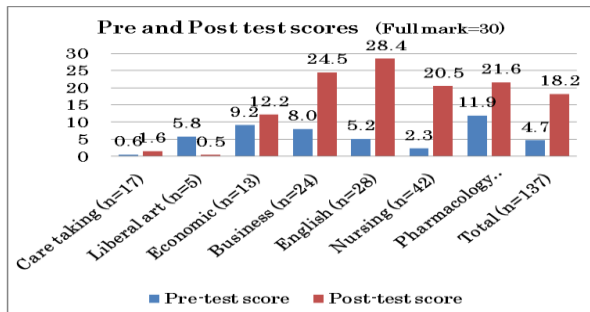


Fig. 4. Comparison of two test scores

Next question is whether vocabulary learning by mobile phone fits students' learning style, or not.

Figure 5 summarizes feedback from students on ideal model for vocabulary study. Many students appreciated "anytime, anywhere learning" style, and wanted to study vocabulary periodically using example sentences for a review of class. Actually, English, Business, and Pharmacology majors increased the chance to study by mobile phones during commute (Fig. 6) and this is a good proof that learning by mobile phone fit their learning style and life style.

The last research question was what kind of learning strategies students used when they studied by mobile phones. Figures 7 and 8 show

strategies that the students usually used before this project. Popular memory strategies were "making a word list", "writing words many times", and "reading words aloud" (Fig. 7). We need to pay attention to Figure 8, affective strategies which are important to enhance learners' motivation (Dorneyei, 2001). Care taking, Pharmacology, and Nursing majors like studying with friends and they, except for Pharmacology, needed encouragement from the teacher, however, they didn't use those strategies very much during the vocabulary study (Fig. 9). It is assumed that this must have caused them some setback in study, because they could not get support which they expected.

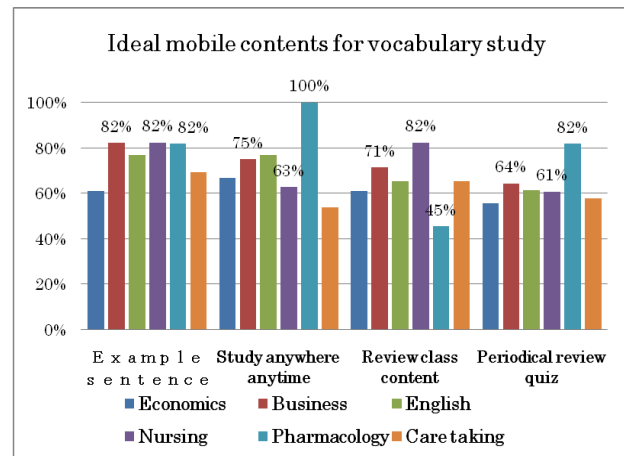


Fig. 5. Students' ideal model of vocabulary study

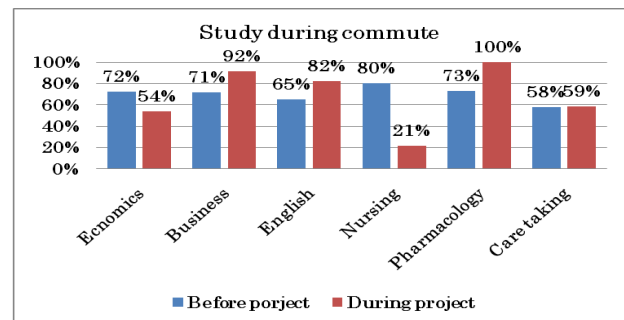


Fig. 6. Change in study time

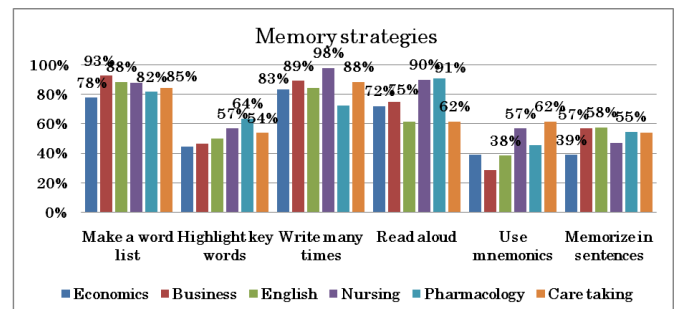


Fig. 7. Memory strategies before the project

So far, focus has been put on students' strategy use before the project, and now attention also

should be paid to how their strategy use changed during vocabulary learning by mobile phones. Our survey found that memory strategy use changed during the project; percentage of “making a vocabulary list” decreased, and especially percentage of “memorizing words by writing” decreased considerably in all groups.

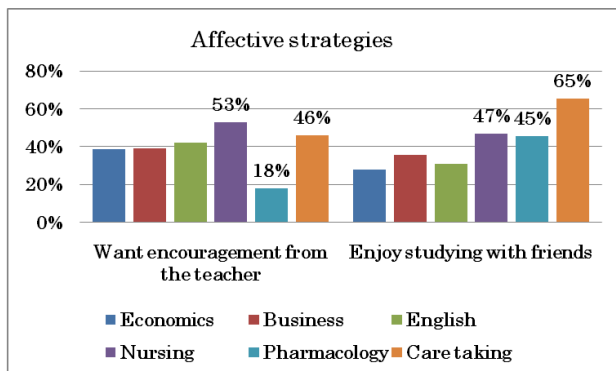


Fig. 8. Affective strategies before the project

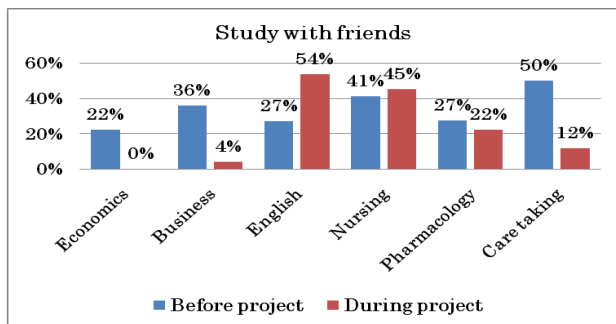


Fig. 9. Changes in affective strategy use

Next, let us focus on strategy increase. English and Nursing major, both of which improved their scores greatly in post-test, used strategy of “studying with friends” more often during the project than before the project (Fig. 9), and they received encouragement from teachers, too. We assume that these are important keys to their success in score improvement. Self-access to mobile learning does not automatically promise improvement in study. Some students need a support from others, especially from friends and teachers.

Figure 10 compares study hour (minutes) of 50 words and post-test score, and it is very clear that they did not correlate in this study against our expectation. English major spent longest time, 76 minutes, to study 50 words for a week, and next long was Caretaking major, 53 minutes, followed by 49.4 minutes of Nursing. Post test scores of English and Nursing major were high, however, that of Caretaking was very low despite their long time to study. We analyze the problems of Caretaker and Pharmacology majors were caused by the lack

of affective strategy use. Because both of them enjoy studying with friends (Fig. 8) usually, however, they didn’t do so in this project (Fig. 11). Besides, we found that their teachers did not encourage them to learn vocabulary by mobile phones.

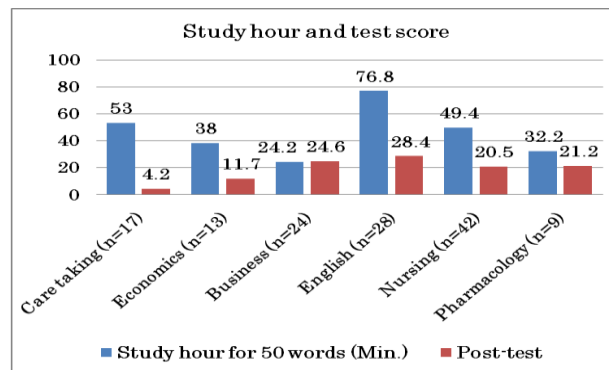


Fig. 10. Study hour and test score

## 6. Conclusion

Summarizing all the results, we will conclude four findings. (1) Vocabulary study by mobile phones suits university students’ lifestyle and learning style in Japan. (2) Especially, learning vocabulary in example sentences meets students’ needs. (3) Students’ learning strategies changes when they study by mobile phones, however, not greatly. (4) Self-access study will become more effective when teachers and students used affective strategies.

## Acknowledgments

We express our appreciation for all the support and collaboration we have received from eLPCO at Aoyama Gakuin University.

## References

- Dorneyei, Z. (2001). *Motivational Strategies in the Language Classroom*. Cambridge Language Teaching Library. Cambridge University Press.
- Harp, S. F., & Mayer, R.E. (1998). How Seductive Details Do Their Damage: A Theory of Cognitive Interest in Science Learning. *Journal of Educational Psychology*, 90, 414-434.
- Kadota, S. et al. (2006). *Eigo Goi Shido Handbook*. Taishukan Shoten.
- O’Malley, M.J. & Chamot, A.U. (1990). *Learning Strategies in Second Language Acquisition*. Cambridge.
- Oxford, R. (1990). *Language Learning Strategies: What Every Teacher Should Know*. Heinle and Heinle Publisher, Boston.

## **Using Anime as a Teaching Tool in US Undergraduate Courses**

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Visual forms of pop-culture such as *anime* (Japanese animation), *TV drama*, *manga*, and *video games* have become the primary motives for US undergraduate students to take Japanese language and culture courses. Using these pop-culture materials as teaching tools attracts students and creates a fun learning environment. However, the persistent preconception of these visual forms as mere entertainment causes the instructors to face various challenges when these courses are implemented in a higher education institution. This paper discusses how we can use visual forms of pop culture, especially anime, as an effective teaching tool in academics and utilize them to attract students to Japan-related courses. To understand students' motivation and attraction, an anime survey was conducted and the results are presented. Furthermore, based upon my successes and difficulties in using anime to teach US undergraduate students are also analyzed based on student comments on the course evaluations.

### **1. Previous Studies**

Previous studies on anime discuss the reasons why anime is so popular worldwide from social and psychological viewpoints. For example, Napier (2005) discusses anime's popularity by pointing out that anime is a fusion of technology and art, the perfect medium to capture today's social issues. Kinsella (1995) analyzes the 'cutie', which is defined as a 'cute' element of pop culture in Japan that reflects the intense desire among young Japanese for escape from reality. Standish (1998) especially focuses on the anime *Akira* and explains its popularity as its 'compensatory function,' its mythologization of the marginalized in the society and its nostalgic portrayal of freedom from social constraints. These studies point out that the discrepancy between reality and the mystical world in anime provides the viewers with temporal freedom and illusion from reality, which seems to be the primary reasons for the attractions of the anime fans.

Globalization of anime seems to be attributed to intercultural exchanges that have overcome the linguistic and cultural barriers. Maniond (2005) argues that anime became 'an integrated part of American life (p.20).' Levi (1996) contends that Americans chose anime because it is uniquely difficult to appreciate. Hubka (2002) states that anime TV programs became popular in the US because they could be adjusted to meet the expectations of local consumers. Thus, the global popularity of anime is attributed to the contemporary issues that anime deals with and its flexibility to be modified according to the targeted audiences.

### **2. Survey Results**

Then, how can we, educators in the US, use this anime boom to help teach Japanese language and culture? A survey was conducted to three distinctive groups of college students: 1) anime club members who expressed keen interests in anime, 2) those who are taking Japanese language courses, and 3) those who are taking Japanese culture courses. Group 1 and Group 2 overlapped to a great extent, but it seems that the intensity of anime zeal decreased in this order. The questionnaire used for this research follows Marion's (2005) in many respects.

#### **2.1. Data**

Eighty-nine subjects participated in this survey: 14 anime club students, 26 Japanese language students and 49 Japanese culture course students. Their ages ranged from 15-40, but most were college students, Caucasians, and born and raised in the Midwestern United States. Because of the limited ranges of age, ethnicity and geographical background of the subjects, this study is not intended to generalize the anime trend in the US, but to serve as a pilot study for future research.

#### **2.2. Data Analysis Results**

The first question asked if the anime club students would like to study Japanese. The result shows that approximately 80 % of the students want to learn Japanese. No anime club member responded negatively to this question. This result indicates that anime could be a great motivation for Japanese language learning.

Second, we asked the Japanese language and culture course students why they had chosen to take these courses. The result shows that Japanese language course students are taking the courses because of their interests in Japanese language and minor or general education requirements whereas the Japanese culture course students are taking the courses because of their interests in culture as well as fulfillment of general education requirements.

The third question asks those who indicated a desire to learn Japanese why they want to learn the language. More than one third of the students want to learn Japanese language to understand Japanese culture and one fourth of the Japanese language and culture course students want to enjoy Japanese pop culture such as anime.

The fourth question is, 'what are the first things that come to mind when you think of Japan?' All of the three groups show the highest percentages of responses for 'anime/manga', which shows the great influence of anime as a pop culture among the students.

The fifth question inquires about the students' interests in pop culture. About 30% students are interested in video games and anime among others in Japanese pop culture. This result implies if we can cooperate with anime/ video game industry to develop video games or anime that have many educational components, these forms of entertainment will be attractive and useful to the students learning Japanese culture.

The sixth question reveals the subjects' preferences for the various genres of anime. Many students are interested in comedy and action. The anime club students seem interested in science fiction on anime, which may not be as interesting to non-anime club students. Although it might be hard to use anime that is interesting to every student, this information is helpful in choosing anime for anime courses.

In the seventh question, the students are asked why anime is attractive to them. The cartoon-nature of anime and Japanese components in anime are the two highest reasons why the students are attracted to anime.

The eighth question is, 'do you think people are attracted to anime because it is Japanese?' More than 60 % of the Japanese language course students answer positively, indicating that Japanese language components in anime are attractive to them. This result might indicate that using anime in Japanese language instruction may increase their interests in the subject.

The ninth question concerns the stereotypes of anime fans, and most of the students answered that

there are some negative stereotypes associated with anime fans, which are described as 'creepy', 'nerdy' and 'weird'.

The tenth question reveals the students' preferences for subtitles or dubbed anime. Eighty-five percent of Japanese language course students and 64% of anime club students prefer subtitled. Japanese language students seem to learn Japanese language more through anime using subtitles.

The eleventh question asks if the students learn anything from anime. The result shows that the students are learning various things, such as Japanese culture, language and institutions including the education system.

The twelfth question asks the students to name one thing they like about anime. They like the various plots in anime, which indicates that the anime plot is one of the most important factors for the students to appreciate anime.

Finally, we asked if they watch non-Japanese animation, and most of them answer positively, indicating that they like anime regardless of the language or country of the anime from which it originates.

### *2.3. Summary*

The survey results can be summarized as follows: First, the students who like anime are interested in learning Japanese language and culture, and this result indicates that anime is the strong motivation to enroll in these courses. Second, those students who enrolled in Japanese language and culture courses are interested in learning about many aspects of Japanese culture like anime, so using anime in Japanese language and culture courses will enhance their learning. Third, students are specifically interested in video games and anime among Japanese pop culture, and they like comedy and action anime genres with interesting plots, so instructors should use these kinds of anime in class to attract students' attention. Finally, the students are learning language and culture through anime, so anime can be a great teaching tool in Japanese language and culture courses.

### **3. Teaching an Anime Course**

Three years ago, I have proposed a course on anime, which was approved by the faculty and has been offered four times thus far. In this section, the successes and difficulties in this anime course are presented, in hopes that this information will be helpful to those who are contemplating offering an anime course in the near future.



### *3.1. Proposal*

To offer the anime course, I had to write a proposal. Detailed information about the course such as the title, level, and general education category were determined to develop the proposal. First, I had to find a title that is academic enough yet attractive to students and accurately descriptive. I chose the title, 'Japanese Studies through Anime' for this course. Second, I had to determine the level of the course. As this course was intended for freshmen, I offered this course at the 100 level. I offered one section on Tuesday evening and another on Wednesday evening. Classes were 3 hours each so that the course could include viewing and discussion of anime without interruption. Next, I had to decide if this course counted toward any of the specific general education credits. I chose the general education category called 'Historical and Cultural Change' since students can learn Japanese history and culture by studying anime. Students were expected to compare the history and culture in Japan depicted in anime listed below and those in factual documents.

1. Tale of Genji (Late Heian Period)
2. Yokoden: Wrath of the Ninja (1580 during reunification)
3. Princess Mononoke (Azuchi-momoyama)
4. Ronin Kenshin OVA (Tokugawa / Edo)
5. Growing up (Meiji)
6. Wandering Days (Early 1900s)
7. The Harp of Burma (WWII)
8. Barefoot Gen (1945)
9. Grave of the Fireflies (post WWII)
10. Sennen Joyu (1920-1990)
11. Omohide Poro poro (Modern)
12. Laputa Castle in the Sky (Modern)

Two textbooks, one by Napier and the other by Reischauer and Jansen were used. The book by Napier discusses anime in general while that by Reischauer and Jansen includes the factual documents that are used to compare the anime's depiction of Japanese history and culture with actuality.

### *3.2. Successes and Difficulties*

The anime course was very popular. The first year it was offered, the two sections were filled with 20 students in each section. The students' comments in the evaluation at the end of the semester were mostly very positive, indicating that the students really enjoy the course. However, students wrote some constructive criticisms. For

example, I asked the students to come on Sunday evenings to view the anime of the week, which was not listed on the course schedule, and some students did not like this extra time requirement. Also, some students did not like some of the 12 anime. I realized that every student has a preference, and it was hard to choose anime that all students liked. In addition, the textbook discussion or lecture and anime discussions needed tighter association. Based on these comments, I made some changes for the following year's anime course. First, I asked each student to bring a clip of their favorite anime to show and discuss in class. This worked very well since both the students and I were exposed to new anime. I put the extra hour class time for viewing anime on the course schedule. Furthermore, I asked the students to use Wikipedia for the final project. The students did some research on the anime of their choice and went to Wikipedia to create or edit the anime page: in this way, they can share their final project publicly. This Wikipedia final project, however, caused a lot of frustration for the students. Although I invited a technology professional to class to explain how to use Wikipedia, some students uploaded information that did not fit the guidelines for Wikipedia. As a result, some of the information that the students had uploaded to Wikipedia had been erased at the time of their final presentations. Fortunately, Wikipedia can show a page's editing history, so they were able to present the page before and after their editing, and their projects were evaluated based on the information they had put on Wikipedia.

### **4. Discussion**

This paper consists of two parts: one is the anime survey, which was conducted to identify the reasons why students like anime and how anime can be used in Japanese language and culture courses. The survey results suggest that anime could be a great teaching tool since students are motivated to study Japanese language and culture through anime and vice versa. The second section, which discusses my own experience of teaching anime courses, shows that there are some obstacles that instructors have to overcome. To propose a course on anime and have it approved by the appropriate committee and faculty, we have to persuade our colleagues that anime can be sufficiently academic to be included in a regular curriculum. Assessing students' progress in their language acquisition and cultural learning can also be challenging. I used Wikipedia to assess students' understanding of cultural and historical

knowledge on Japan. However, I am still trying to find an appropriate assessment method.

Scollon and Scollon (2000) discuss two types of culture, high culture and low culture. High culture refers to arts that are sophisticated, intellectual and refined while low culture refers to pop culture, to which anime is often attributed, even though anime by some producers such as Yaya Miyazaki are considered to be high culture because of the esthetic and technical superiority.

To teach anime or use anime in a higher education institution, instructors have to transform anime from low to high culture by analyzing anime, appreciating it and articulating the analysis and appreciation to students. This teaching requires a lot of efforts on the instructors' part as there are not yet many teaching materials such as textbooks, instructor's manuals and quiz/exam banks. Thus, we have to cooperate with our colleagues to exchange information as well as work with others such as textbook publishers to develop teaching materials.

## **5. Conclusion**

This paper discusses the anime survey that I conducted and my experiences of offering anime course in a university. Anime is an excellent teaching tool since it attracts students' attention and creates a fun environment, but because of the preconceived notion of entertainment, instructors have to overcome various obstacles in teaching anime in a higher education institution. This requires a lot of effort on the instructors' part, so it seems crucial to develop teaching materials and collaborate with colleagues so that we can use anime as a truly effective teaching tool for Japanese

language and culture courses.

## **Acknowledgments**

I would like to express my sincere appreciation to my capable research assistants, Emily Franzen, Amy Grigoletti, and Anne Marquette, who worked on anime survey analysis and created graphs. Emily and Amy also proofread and edited the final version of this paper. However, remaining errors are solely my own.

## **References**

- Hubka, D. (2002) Globalization of Cultural Production: The Transformation of Children's Animated Television, 1980-1995. In D. Crane, N. Kawashima, K. Kawasaki (Eds.) *Global Culture: Media, Arts, Policy, and Globalization*. New York: Routledge.
- Kinsella, Sharon. (1995). Cuties in Japan. In L. Skov & B. Moeran (Eds.) *Women Media and Consumption in Japan*. Honolulu, U of Hawaii Press.
- Levi, A. (1996) *Samurai from Outer Space: Understanding Japanese Animation*. Chicago: Open Court.
- Manion, A. (2005) *Discovering Japan: Anime and Learning Japanese Culture*. Master's thesis for U of Southern California. (<http://www.chanpon.org/archive/manionthesis.pdf>)
- Napier, S. (2005) *Anime from Akira to Howl's Moving Castle*. NY. Palgrave.
- Reischauer, E. and M. Jansen. (2003) *The Japanese Today*. Boston, Harvard UP.
- Scollon, R. & S. Scollon. (2000) *Intercultural Communication*. M.A. Wiley-Blackwel.

## Towards a cultural history of CALL

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This paper begins to explore the role that sociocultural theory can play in developing our understanding of the increasingly complex world of CALL. It focuses specifically on Activity Theory as a way of exploring the ‘contexts and dimensions’ of CALL, but which also helps us build a situated picture of CALL in action. Activity theory is already being used in a number of fields to explore the lived experiences of social practice. The social practice in this paper is described as captured in case studies, which are being collected as a part of an ongoing project that is a collaboration between the Cambridge University Press (CUP) and the University of Manchester and while the case studies are not described in this paper, because of lack of space, they will eventually give us a deep insight into the developing world of CALL.

### 1. Introduction

In our increasingly complex world in which digital technologies become more deeply embedded in what humans do, so we might eventually see it as normalised (Bax, 2003), we need a more comprehensive theory of learning to explain the world of computer assisted language learning (CALL) than we have used hitherto. In many other parts of the computing world (Nardi and Kapetlinin (2006), in areas of applied linguistics (Lantolf and Thorne, 2006) and in education (Roth and Lee (2007), sociocultural theory has become increasingly seen as having value in trying to explain the complexities of teacher and learner worlds. This paper will make use of one sociocultural theory, Cultural Historical Activity Theory (CHAT, hereinafter referred to as Activity Theory – AT), to provide a way of better describing and understanding the ‘activity’ that we engage in as practitioners and the processes that our learners undertake.

### 2. Activity theory and CALL

AT is increasingly recognised as being a powerful tool for enabling educators both to describe what teachers and learners do in ‘classrooms’ and at the same time place classrooms within their broader cultural-historical context. It is important that we do this because as CALL practitioners we need to show how what we do is connected to the wider worlds of computing and education, but as well show how some of what we do is different and distinct. CHAT is also relevant to the field of CALL because it is a subject that is steeped in ‘activity’; we need to engage with other people in order to use language and also in order to learn.

This has been shown very effectively in interactionist theory (see Levy and Stockwell, 2006 for a useful background on this area of applied linguistics research).

Activity Theory (AT) has its origins in the work of Lev Vygotsky who at the beginning of the 20<sup>th</sup> century was interested in exploring how children develop higher level cognitive processes. He suggested that for humans to develop beyond their basic biological make-up they needed to engage in goal directed activity, mediated through cultural artefacts.

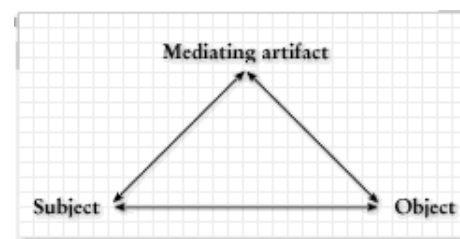


Figure 1: Basic Vygotskian activity theory

Cultural artefacts can be sign and symbols, but also tools (Figure 1).

Vygotsky’s ideas were further developed by Leont’ev and Luria in the Soviet Union, amongst others, but did not really known in the west until his writings began to be translated in the 1960s and 70s. A key western proponent of AT is Engeström (2001) who has used AT to explore a number of contexts, but particular the world of work. In recent years he has proposed a 3rd

generation of AT (Figure 2) which he sees as being the only way of understanding our complex international and globalised world.

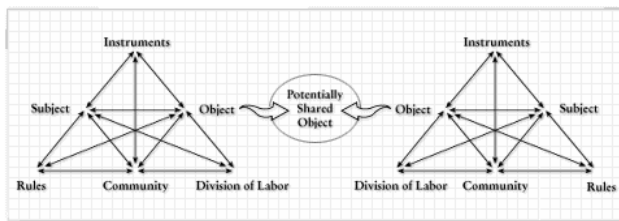


Figure 2: 3<sup>rd</sup> generation activity theory

The 3<sup>rd</sup> generation of AT is useful in that it allows us to explore the relationship that is typical of a ‘classroom’ of the teacher and the learner

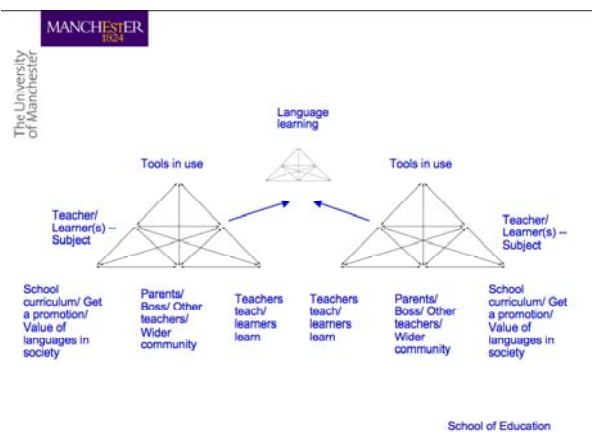


Figure 3: 3<sup>rd</sup> generation activity theory in operation in classrooms

If we see our shared objective in the ‘classroom’ as being the learning of a language (and I accept that this may not be the case in all classrooms around the world), then we can immediately see there are two possible activity systems work towards a shared object. The activity systems would depend on which phase of education we are in and Figure 3 is generalised to include school as well as adult and higher education where the rules, community, divisions of labour and the tools in use may be quite different. I have generalised the subject position to include both the teacher and the learners because although in many contexts it is the teacher who manages lessons and the learner can end up being quite passive, this is not my preferred model of education where I would like to see the learners as more active and engaged in the classroom. In AT ‘Rules’ are the conditions that are in place which govern the activity, in this case I have proposed the school curriculum for children, for adults learning a language it may be

important to develop language skills in order to get a promotion or even to maintain a position in a company. The rules may be broader and it may be that the society itself sees language learning as an important process and perhaps languages have certain cultural or religious significance as well as the more pragmatic need to communicate needs and wants.

Language learning according to AT theory occurs first in the interpersonal plane and so it is the ‘community’ that you are engaged in that will help you develop language skills. As a young child learning your first language you will initially be supported by your caretakers and, if available, siblings in the initial stages, as a learner of languages at school the community changes as does the role of the parents. As an adult learner the conditions for study may be radically different and now it may well be lessons conducted in 2<sup>nd</sup> Life with the support of Wiki, or it may be a weekly class in a local education college supported by random handouts. The community that is interested in your progress may simply be yourself, but it could also be your boss at your annual appraisal who sees your progress on a language course as a key issue in your development as an employee.

The ‘divisions of labour’ may be as simple as those expressed in Figure 3 where it is teachers who see their role as managers of the process and learners engage because it is a lesson on the timetable. However, this is not necessarily the case and the motivation to learn the language may come from the learners themselves and the role of the teacher here is less important.

The tools in use may be many and various, but if we are concerned with the world of CALL, then the tools now available increase by the day and many of these are online.

The two activity systems may see the process of learning a language as rather different, the teacher may see certain tools as valid, the learner may make use of something totally different. The classroom may focus on the use of a specific textbook, but the learner may go home and chat online with English friends who are a part of their *Facebook* group. For the learner it may be the community of friends that provide the motivation to learn a language, not their parents or the exam system.

### 3. Conclusions

While in this brief paper I can only provide a theoretical background to the project that we are involved in, the case studies that will be produced

as a part of the CUP/ Manchester project will show both the detail of the activity that the teachers and the learners engage in, but will also be able to use the framework of AT to look across the cases to see where there is agreement and where there is difference. The cases will enable the researchers on this project to gain a clearer picture of the developing world of CALL. It will be able to show analysis at the level of a particular classroom, the practice of a particular teacher and their learners, as well as giving us insights into ongoing CALL developments.

### **References**

- Bax, S. (2003). CALL - past, present and future. *System, 31* (1), 13-28.
- Engeström, Y. (2001). Expansive Learning at Work: toward an activity theoretical reconceptualization. *Journal of Education and Work, 14* (1), 133-156.
- Levy, M., & Stockwell, G. *CALL dimensions: Options and issues in CALL*. Mahwah, New Jersey: Lawrence Erlbaum.
- Lantolf, J. P., & Thorne, S. L. (2006). *Sociocultural theory and the genesis of second language development*. Oxford: OUP.
- Nardi, B., & Kaptelinin, V. (2006). *Acting with technology: activity theory and interaction design*. Cambridge, Mass: MIT Press.
- Roth, W. M., & Lee, Y.J. (2007). Vygotsky's neglected legacy: Cultural historical activity theory. *Review of Educational Research, 77* (2), 186-232.

## **Computer Keystroke Logging and the Study of Revisions in the EFL Classroom**

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Although research on word processing in the EFL classroom started in the early 1980s, the inconsistent results it has yielded so far call for more systematic and varied research (Susser, 1998). Greek intermediate-level students took part in a comparative study (paper vs. word-processor) which looked into attitudes, writing quality and revision patterns. One of the main aims of the study was to compare and contrast the revisions carried out by the two groups. Accurate comparisons between the number and kinds of revisions made were possible by using tracking software in the computer group. This paper presents a general overview of the research project and looks at the process of analysis and categorization of revisions obtained through the computer logs.

### **1. Background**

A strong interest in writing as a skill emerged in the 1970s as a result of the seminal work of researchers like Emig and Flower and Hayes who emphasised the recursive nature of writing and the multiplicity of processes involved in the composing process. As a result, a cognitive dimension of writing drawing on cognitive psychology and psycholinguistics was introduced to research. Due to the nature of such internalized processes which were difficult to document, more complex and sophisticated techniques were required for investigation. In the first place, cognitive theorists proposed think-aloud verbalisations as the main method for real time studies (Newell and Simon, 1972) while direct observation and video recordings followed as more advanced techniques. However, the advent of the microcomputer made possible the use of keystroke logging software, an unobtrusive and reliable means of gathering such data. This software runs in conjunction with word processing programs and it records all keyboard activity which is subsequently saved in logs that can be extracted and analyzed. Keystroke logging software has been used in studies investigating writing processes, quality and revising (Spelman Miller, 2000; Thorson, 2000; Lindgren and Sullivan, 2003). In the present study the logs produced were used for examining the revising behavior of students writing with the word processor and to enable the comparison between this group and the handwriting group in terms of the number and kinds of revisions produced.

### **2. The project**

This paper presents part of research conducted in 2007-08 for a PhD project entitled “The effects of the word processor on writing quality, revisions and attitudes towards its use: a classroom-based study of Greek learners of L2 English”. The study lasted a whole school year (32 weeks) and it took place in two branches of the same private English language school. What motivated the study was that word processing research to date has produced inconsistent or even contradictory findings on the one hand, and that there has been almost no research in word processing in Greek contexts on the other. In addition, exams are now turning into their computer-based counterparts all over the world, lending a fresh perspective to the use of this writing medium.

One of the main aims of this study was to investigate the effects of the word processor on revising with respect to the actual number of revisions produced by the two groups (quantitative) and the kinds of revisions they focused on (qualitative). In order to examine differences in revising, the present study followed a comparative design using two groups consisting of 10 students each: a control group writing by hand and an experimental group writing on the computer. All students were Intermediate level or B1 according to the Common European Framework (CEF) and their age ranged between 13-15. Both groups were taught by the teacher-researcher and were exposed to the same materials throughout the year. The writing tasks students were asked to complete were exactly the same. Each task was limited to 120 words and students were allowed 50 minutes. The writing took place in class and paralleled exam-situations.



Occasion 2.

Type of revision	Occasion 2	
	Computer group	Handwriting group
<i>Surface-level</i>	15,2 (5.67)	6,3 (3.86)
<i>Formal</i>	14.4 (4.88)	4,7 (4.02)
<i>Meaning-preserving</i>	1,9 (1.79)	1,1 (1.1)
<b>Text-based</b>	4,2 (2.69)	2,1 (2.13)
<i>Microstructure</i>	3,6 (2.22)	1,5 (2.01)
<i>Macrostructure</i>	0,6 (.96)	0,1 (.31)
<b>Total Number</b>	19,4 (7.5)	8,4 (4.86)

According to Table 2, the computer group performed more revisions by the end of the school year. Statistical analysis using ANOVA revealed significant occasion by group interactions in the total number of revisions ( $F_{(1,18)} = 16.300$ ,  $p = 0.001$ ) and in the number of Surface-level changes ( $F_{(1,18)} = 14.339$ ,  $p = 0.001$ ). Within this larger category, it was only formal changes that were significantly higher for the computer group ( $F_{(1,18)} = 14.339$ ,  $p = 0.001$ ) while there were no significant differences for meaning-preserving changes between the two groups ( $F_{(1,18)} = 1.037$ ,  $p = 0.322$ ). Examining the second major category of Text-based changes, none of the groups managed to outperform each other. Despite the fact that the computer group made significantly more microstructure changes ( $F_{(1,18)} = 4.862$ ,  $p = 0.041$ ) none of the two groups carried out more macrostructure revisions ( $F_{(1,18)} = 1.532$ ,  $p = 0.232$ ) resulting in a non-significant total number of Text-based changes ( $F_{(1,18)} = 3.751$ ,  $p = 0.069$ ).

On the whole, the results obtained through statistical analysis revealed that the computer group performed a significantly higher total number of revisions overall in comparison with the handwriting group. With respect to the total number of Surface-level changes, the computer group also carried out a greater number of such changes, yet, no significant differences were reported for Text-based changes. Therefore, the statistical findings reported indicate that the word processor had both quantitative and qualitative effects on students' revising behavior. Quantitative effects were linked to the significantly higher number of changes students in the computer group produced for all categories of revision. Qualitative effects were also reported as students carried out more higher-level, text-based revising.

## 5. Conclusion

The use of the word processor in the foreign language classroom needs to be extensively and reliably evaluated in a variety of contexts. Keystroke recording software carries strong research potential as it provides an accurate and detailed record of the revising processes involved in composing. Hence, the use of keystroke logging software can provide the researcher and the foreign language teacher with insights into students' revising behavior.

The results of the present study suggested that the word processor as a writing tool in the foreign language classroom can have quantitative effects on the number of revisions performed by students writing on the computer as opposed to those writing by hand in that the computer group produced a higher number of revisions overall. Qualitative effects were also reported as there was an increase in the number of microstructure revisions which fall under the category of text-based changes. In conclusion, it seems that the ease of revising offered by word processing features can help students to increase the amount of revising they make and also to encourage them up to some extent to focus on higher level changes.

## References

- Faigley, L., & Witte, S. P. (1981) Analyzing revision. *College Composition and Communication*, 32, 400-414.
- Lindgren, E. and Sullivan K.P.H. (2003). Stimulated recall as a trigger for increasing noticing and language awareness in the L2 writing classroom: A case study of two young female writers. *Language Awareness*, 12, 172-186.
- Newell, A. & Simon, A. (1972). *Human problem solving*. Englewood Cliffs, NJ: Prentice-Hall.
- Spelman Miller, K. (2000) Academic writers on-line: Investigating pausing in the production of text. *Language Teaching Research*, 4, 123-148.
- Susser, B. (1998). The mysterious disappearance of word processing. *Computers and Composition*, 15, 347-371.
- Thorson, H. (2000). Using the computer to compare foreign and native language writing processes: A statistical and case study approach. *The Modern Language Journal*, 34, 155-169.



## Corpus Research and Its Application in ESP Programs Lexical Profiling of Reading Materials Using Frequency Vocabulary Lists

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The present study explores the use of technology to profile authentic reading materials in the biomedical field, which can be used in both traditional classrooms and computer-assisted learning environment. In order to accommodate the needs of students majoring in biomedical sciences, which require lexical knowledge specific to the field, using content-based reading materials not only enhances students' vocabulary size but also helps them acquire state-of-the-art information in a fast moving field. Profiling reading texts using a vocabulary list containing frequently used vocabulary in biomedical literature facilitates the process of text selection in ESP programs. Based on several corpora a word list (LS Wordlist) comprised of several sub-lists reflecting various types of vocabulary was created. Three small corpora and nine texts were profiled based on this word list. The output clearly indicates the characteristics of texts, showing how easy or technical the text is for the learners.

### 1. Background

In English for specific purposes (ESP) programs, choosing appropriate reading materials for teaching is extremely important. One obvious reason is that a specific field has its preferred writing style (Dudley-Evans and St. John, 1998) and makes use of specific vocabulary and widely used sub-technical vocabulary (Fraser 2001). However, controlling the vocabulary in text selections is a challenging task, because reading materials in ESP programs need to contain a sufficient number of specialized terms including both technical and sub-technical vocabulary, but they should also be readable by the learners.

As Laufer (1989) suggests, if a reader knows 95% of the words in a text, she can comprehend it without much trouble. Based on this claim it is hypothesized that the percentage of known vocabulary in a text can predict the difficulty of it for the learner.

Vocabulary profilers can be a useful tool to facilitate the process of text selection, but available profilers (e.g., Cobb 2007, Someya 2008) that are based on vocabulary used in general texts do not suffice for the needs of ESP in the biomedical field. Moreover, they do not take into consideration the vocabulary size of second language (L2) learners in a foreign language situation.

The present study attempted to profile texts and

small corpora using a word list comprised of six sub-lists. By using this word list, individual texts as well as corpora can be profiled in the same way. We can obtain some general tendency of vocabulary use in a specific genre by profiling a corpus, and we can estimate the difficulty and technicality of a single text by profiling a text. In this study we attempted to test the usefulness of the word list we have empirically generated by profiling various types of texts and corpora.

### 2. Methods

First, we generated a word list, LS Wordlist, comprised of six sub-lists that reflect various types of vocabulary. Since this study aims at selecting reading materials, we have decided to categorize words into word families rather than lemmas. The six sub-lists are Basic, Simple, Moderate, Life Science, Academic and General Wordlist. These are mutually exclusive.

The Basic Wordlist (1030 words) is based on a learner corpus consisting of 600 essays written by 400 undergraduate students (200,000 words). We made a frequency word list and selected words that appeared more than 50 times in this corpus. In order to supplement the data, we created additional lists of students' known vocabulary. They are the Simple Wordlist (947 words) and the Moderate Wordlist (1092 words). We gave 10 students a word

recognition test based on *JACET 8000 word list*. We selected the words that the majority of the students knew (the Simple Wordlist) and that half of them knew (the Moderate Wordlist). We have further divided the Basic Wordlist into five levels based on frequency. Those are Basic-100 (1-100), Basic-200 (101-200), Basic-300 (201-300), Basic 500 (301-500), Basic 1030 (501 to 1030).

The Life Science Wordlist (1178 words) is generated from the Life Science Corpus (LSC). In order to create LSC, we chose texts from 10 fields in the life sciences based on the curriculum offered at the Tokyo University of Pharmacy and Life Sciences. For each field, we collected 50 texts of 2000 words (total 500 texts) from textbooks, research articles, protocols and general science reading materials. From this one-million-word LSC, we grouped words into word families, and we selected frequently used words that covered 95% of the entire LSC.

In addition to the above sub-lists, we made the General Wordlist (80 words) and the Academic Wordlist (246 words) based on the *BNC Wordlist* (Scott 2008) and the *Academic Word List* (Coxhead 2000). These two are used in order to include enough general and academic lexical items that do not appear in other sub-lists.

By the use of three commercial software products, *WordSmith Tools v.4*, *Microsoft Excel 2004 for Macintosh* and *FileMaker Pro v.7*, we profiled three small corpora and six individual texts based on the LS Wordlist.

The Newspaper article corpus (860,000 words) is a collection of 1168 scientific articles from various newspapers between January and August in 2006. For the research article corpus (400,000 words), we collected 89 scientific reading materials used in freshman seminars at Tokyo University of Pharmacy and Life Sciences. We also examined textbooks used in English classes at St. Marianna University School of Medicine and generated a medical corpus. These textbooks are all targeted at the students of universities and medical schools in the United States.

As for the texts, we profiled scientific readings targeted at general readers as well as researchers, an English textbook for academic purposes, and a medical text for internal medicine. In addition, *Anne of Avonlea* and *the Origin of Species* were also examined.

### 3. Results and Discussion

Regarding corpora, as Fig. 1 shows, while the newspaper article corpus contained more basic words than the other two corpora, which suggests

the relative ease of the texts in newspaper articles in general. Because this is a corpus of newspaper science articles, there were some technical words categorized as LS vocabulary.

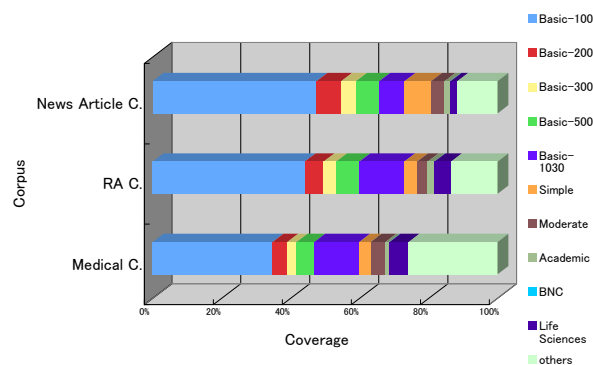


Fig. 1. Coverage of LS Wordlist in Corpora

The research article corpus contained a larger portion of the LS and Basic-1030 vocabularies. The biggest difference between these two corpora was the proportion of LS vocabulary and less frequent basic words. The coverage of the LS Wordlist as a whole was only 70% or so in the medical corpus, and there was a large proportion of the category “Others.” Although there are number of different items such as proper nouns, acronyms, and infrequent vocabulary included in this category, it was assumed that a large part of it is specialized vocabulary used in medicine.

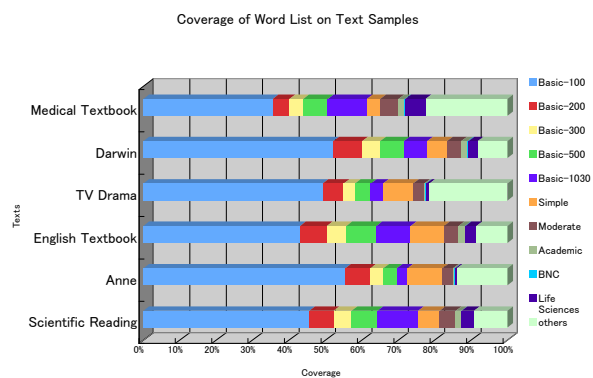


Fig. 2. Coverage of LS Wordlist in text samples

Figure 2 shows the results for the individual texts. *Anne of Avonlea* contains 50% of vocabulary comprised of the 100 easiest word families that every college student in Japan should know. Darwin's *the Origins of Species* also shows a similar pattern, but it contains a portion of life science vocabulary. The TV drama script is the only spoken language data in this sample, and it shows a different pattern compared to other texts. There is a

small portion of both academic and life science vocabulary in this drama script. This suggests the LS Wordlist we have created cannot fully analyze spoken language data, and which is also true for the medical textbook sample. Both texts contain a large portion of “Others” vocabulary. Unless we further analyze the data in the “Others” category, it is difficult to determine the difficulty and technicality of these texts.

#### **4. Limitations and Suggestions for Future Studies**

Profiling texts using the LS Wordlist is potentially very useful, but the present LS Wordlist cannot deal with specialized medical vocabulary and proper nouns, both technical and non-technical. Further refinement is definitely needed before we can implement this profiler into a practical application, but even with this LS Wordlist, we could visually see the characteristics of small corpora and individual texts.

#### **References**

- Cobb, T. (2008) *The Compleat Lexical Tutor*. v. 6.2. Retrieved July 3, 2008, from <http://www.lextutor.ca/>
- Coxhead, A. (2000) A New Academic Word List. *TESOL Quarterly*, 34(2): 213-238.
- Coxhead, A. and Nation, P. (2001). The specialised vocabulary of English for academic purposes. Research perspectives on English for academic purposes (pp. 252–267). In J. Flowerdew (Ed) *Research Perspectives on English for Academic Purposes*. Cambridge: Cambridge University Press.
- Laufer, B. 1989. What percentage of text-lexis is essential for comprehension? In C. Lauren and M. Nordman (eds.), *Special Language: From Humans Thinking to Thinking Machines*. Clevedon: Multilingual Matters.
- Nation, I.S.P. (2001) *Learning vocabulary in another language*. Cambridge: Cambridge University Press.
- Scott, M. (2008) *The BNC wordlist*. Retrieved October 10, 2007, from <http://www.lexically.net/wordsmith/index.html>
- Someya, Y. (2008) *Word Level Checker*. Retrieved September 22, 2007, from [http://www.cl.aoyama.ac.jp/english/newSite/wlc/index\\_J.html](http://www.cl.aoyama.ac.jp/english/newSite/wlc/index_J.html)

## The E-Job 100 Project: CALL for Increasing Motivation of English Learning in Japan

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To increase the motivation of Japanese students in learning English, by applying Carl Rogers' educational theory "student-centered education," we have started the "E-Job 100" project on the internet (<http://www.las.osaka-sandai.ac.jp/asuzuki/ejob100/e-job100.top.html>) with support from NTT communications. Our website contains videos that show how people of various occupations read, write, listen, and speak English at their workplaces. In addition, students can access English documents that are used in real work environment. Students are able to play different roles by choosing their favorite occupations and practice their English in different situations. In this way, students are motivated and easily understand why they need to study English. The following is the results from the questionnaires for this project. It shows this project has good effect in increasing students' motivation to learn.

### 1. Introduction

Following the advancement of the Internet and multimedia, various high quality CALL software has emerged. However, at least in Japan, good CALL software and E-Learning system are still just the gold mine that remains unexcavated. Many college students tend to avoid learning English. There are several reasons. One of the main reasons is that students believe they do not need English. Even some teachers feel the same way.

Many college students in Japan need to learn, first of all, why they need to learn English before they start learning English. We truly believe that the solution is in CALL education. "E-Job 100" that is based on Carl Rogers' educational theory is one of its embodiments. Our purpose is to create a bridge between students and a good existing CALL system. Our focus is on how to motivate college students in Japan in learning English.

### 2. Background

One of the problems in English education for college students in Japan is the low motivation and academic ability (See Table 1).

Table1: Problems of English education in college in Japan (Committee of the Survey. 2003. 787 correspondents. Multiple answers allowed.)

Item	Ratio of Respondents
(1) Low motivation and academic ability of students	64.5%
(2) Skills of teacher	29.7%
(3) Excessively high expectations on English education	22.7%
(4) National support of foreign language education	22.1%
(5) Curriculum	21.9%

Over 50% of the students have already lost their motivation to learn before entering into college (See Fig. 1).

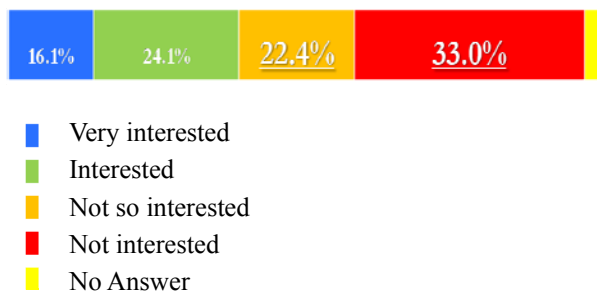


Fig. 1: "Are you interested in learning English?" (Curriculum Research Center. 2005. Correspondents: 30,000 seniors in high school in Japan)

On the other hand, it is also true that over 80% of Japanese students think that learning English is important. (See Fig. 2.)

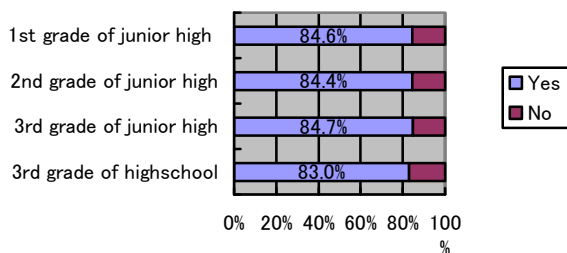


Fig. 2: “Is learning English important for Japanese?” (Curriculum Research Center. 2003. Correspondents: 243,000)

Many Japanese students know the importance of English in Japan. However, many students think that English is useless for them at the same time. These lead us to a view that students think English has something to do with Japanese but it is none of their personal business.

### 3. The Reason of Low Motivation

This situation derives from Japanese social condition. Many Japanese do not need English in their daily life. However, none of the Japanese have done research in various occupations in detail to find out if English is needed or not. In addition, college students in Japan cannot accurately comprehend the real work environment because of lacking in information. Therefore, even when teachers tell their students that they need English after they enter the job market, many of the students tend to think that it is none of their business. Furthermore, in Japan, social norm has become dysfunctional (cf. Kuwamura). Various pathologies in education have appeared; for example, more and more students cannot find out value of study or future goal. Furthermore, some students are becoming antisocial because they hold bad feelings such as abjection and feeling of inferiority toward society. Those reasons above have contributed lacking of learning motivation of students.

We have to pay attention to not only students' ability and motivation, but also independence of each student and their realization of adequacy. When we look into various educational theories, Carl Rogers' educational theory and CALL program become the best solution.

### 4. Rogers' “Student-Centered Education” and CALL

Regarding Rogers' educational theory, Dörnyei, one of the authorities in English education

motivation study, admits its effectiveness.

Rogers is the first person who insisted that a teacher should be a facilitator. The facilitator does not boost up students' motivation (e.g. Warschauer) nor is at the mercy of their interest, but increases it. Understanding and sharing students' inner worlds from their viewpoints, the facilitator positively regards them, fulfills their inner worlds, comprehends their interests, accesses their developmental stages, and thinks up suitable ways of education for each of the students. The facilitator is the one who increases the meaning of education in students' mind and shapes the future direction for them. The facilitator supports students to exert their potentiality of personal fulfillment by themselves and facilitates their perfection of human character and self-independence.

Rogers (1995) says, “the students who are in real contact with life problems wish to learn, want to grow, seek to find out, hope to master, desire to create” (289). By this way, students would be self-motivated and self-responsible to learn (cf. Brophy, Gribbs, Krapp, Schiefele).

Hence, we came up with “E-Job 100.” “E-job 100” is a learning system on the web in which the video of the actual scene where Japanese of various occupations use English. Students can choose their favorite jobs and learn English by experiencing the actual scene.

### 5. E-Job 100

95% of labor population in Japan works in 504 kinds of jobs. We have finished researching around 150 kinds of jobs to find out whether they need English or not. The answer is that all the occupations except tax accountant require Japanese to use English now. Most of Japanese now need English. In addition, we asked people in different occupation if they need, when, how, what level, how often, for what they use English.

According to the answers to our questions, we went to each job site and shot a video of the real work environment for a day with the scene where English is used. We have edited the video into the scene of work contents and the scene of each skill for about two minutes. In addition, we have obtained the original documents that are used in their daily tasks as the learners' educational materials. We have made the video and the documents available to people on the web (See Fig. 3 to 5).

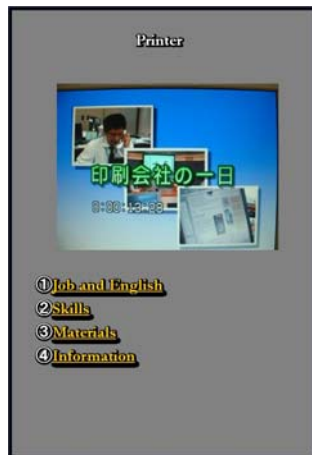


Fig. 3 A top page of an occupation.



Fig.4. The scene of each skill.

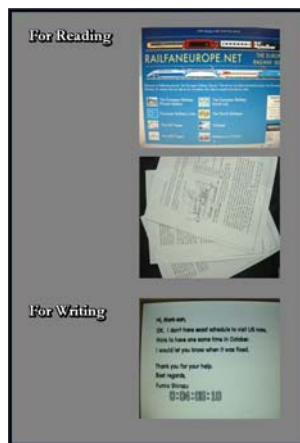


Fig.5. Educational materials.

We have been creating contents of 100 kinds of jobs. That is why we call this project as “E-Job 100.”

“E-Job 100” can be used as a reference for class, for example, a teacher gives students task, such as presentation, conversation with customer and client. Students choose their favorite job and complete tasks with learning English and its reason and meaning. Teacher also can use it as career education, an introduction to their English classes, the student’s target-setting in the future, ESP, and so

on.

## 6. Effect and Conclusion

Common answers to the questionnaire given in 2007 (78 correspondents) before students use “E-Job 100” were “I hope I can get the credits very easily,” “I don’t expect anything,” “I don’t like English.” On the other hand, common answers to the questionnaire in the same after the students used “E-Job 100,” were “I realized we need English,” “I realized the truth,” “I need English for my future,” and “I am interested in English.” The FD questionnaire in 2007 (74 correspondents) showed that 97.2% answered “easily comprehensible,” 90.4% “Predigested,” and 90.2% “Interested in this class.” In addition, when we asked the students in the second class in 2006 whether they wanted to give a presentation, only 5 students of 72 students wanted it. In the latest class, all but five of 72 students had little hesitation of giving a presentation.

These results have led us to a conclusion that CALL education that is “not persuasion but showing the fact” by a facilitator in Rogers’ theory is effective to students who lost motivation for learning English in Japan.

## References

- Brophy, J. (1998). *Motivating students to learn*. Ine: Mcgraw-Hill.
- Committee of the Survey in Japan Association of College English Teachers. (2003). *A multidisciplinary research on the reality of the situation about education of foreign languages and English in Japan—Individual’s edition of college teacher of foreign languages and English*. Tokyo: Tanseisha.
- Curriculum Research Center at National Institute for Educational Policy Research. (2003). Report about the reality of the situation of the implementation of the curriculum in elementary and junior high schools in 2001: English in junior high school, from <http://www.nier.go.jp/kaihatsu/jissihoukoku/Taro12-9chuei.pdf>.
- . (2005). Report about the reality of the situation of the implementation of the curriculum in elementary and junior high schools in 2003: English in junior high school, from [http://www.nier.go.jp/kaihatsu/katei\\_h15/H15/03001051030007004.pdf](http://www.nier.go.jp/kaihatsu/katei_h15/H15/03001051030007004.pdf).
- Dörnyei, Z. (2001). *Motivational strategies in the language classroom*. Cambridge: Cambridge University Press.
- Gribbs, C. (1989). *Alternatives: Games, exercises and conversations for the language class*. Harlos: Longman.
- Krapp, A., Hidi S., & Renniger, K.A. (1992). Interest, learning, and development. A. Krapp, S. Hidi &

- K.A. Renniger. (eds.), *The Role of interest in learning and development*. Hillsdale: Erlbaum, 3-26.
- Kuwamura, T. (2008). Comparative study between John Dewey's "child-centered education" and Carl Rogers' "student-centered education. *Bulletin of John Dewey Society of Japan*, vol. 49, 145-154.
- Rogers, C. R. (1995). *On becoming a person: A therapist's view of psychotherapy*. (revised ed.) Boston: Houghton Mifflin.
- Schiefele, U. (1991). Interest, learning, and motivation. *Educational psychologist*, 26(3/4), 299-323.
- Warschauer, M., Shetzer H. & Meloni C. (2000). *Internet for English teaching*. Washington, D.C.: Teachers of English to Speakers of Other Language.

## Developing a Computerized Readability Estimation Program with a Web-searching Function to Match Text Difficulty with Individual Learners' Reading Ability

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Readability has been used as a measure to predict English text difficulty in Japan, just like many English-speaking countries. Nevertheless, only a limited number of studies have addressed the reliability and validity of various conventional statistics, still less the development of original model as well as the creation of an environment that facilitates this process. The present study aims to develop a computer program that is designed to help Japanese teachers and learners of English to construct original, personalized readability formulas on demand and to locate web text of appropriate readability range by incorporating an innovative web-searching device.

### 1. Introduction

Readability has been used as a measure to predict text difficulty or ease in English-speaking countries and elsewhere. Some of the most well-known models are Flesch Reading Ease, Flesch-Kincaid Grade Level, and Dale-Chall readability formulas. These formulas, most of which were originally intended for grading of reading material for English-speaking school children, have also been employed in Japan for teaching and research purposes, but only a limited number of studies have reported on the reliability and validity of such conventional statistics, much less the development of original statistics and the creation of an environment that facilitates this process.

The aim of the present study is twofold. First, a computer program is developed to help Japanese teachers of English to produce new readability formulas which are better tuned to their own teaching context. The second objective is to program an automatic web-searching function which allows users to select web text of appropriate difficulty that matches their reading ability. Additionally, individual users can create their own personalized readability formulas by referring to their retrieved browsing history data.

### 2. Readability

#### 2.1 What is readability?

Readability is defined as a measure of “how easily written materials can be read and understood (Longman Dictionary, 2002)”, and has been used

worldwide for decades, mainly by

- teachers who want to choose materials of reasonable text difficulty for students, and
- editors who want to check how readable the text is for expected readers.

#### 2.2 Studies on readability

A variety of readability formulas have been developed in English-speaking countries and elsewhere. Well-known formulas are: Flesch Reading Ease (FRE), Flesch-Kincaid Grade Level (FKGL), original Dale-Chall (1948), revised Dale-Chall (1995), Zakuluk-Samules, Bormuth, Coleman-Liau, Gunning Fog, and the like (see Norizuki 2004). Let us show the FRE formula as one example:

$$R_{FRE} = 206.8 - 1.05 X - 84.6 Y,$$

where X is the number of words divided by the number of sentences, and Y is the number of syllables divided by the number of words.

On the other hand, due to fluctuating results for Japanese learners of English (JLEs), some Japanese researchers have pursued better solutions for them, based on the premise that more suitable parameters can be explored. Hasegawa and Norizuki 1998 found out that the formula produced by Kiyokawa (let this be called the Kiyokawa formula) was shown to be more accurate than the two Flesch counterparts (FRE and FKGL) as a measure of text difficulty for JLEs.

The Kiyokawa formula is expressed as:

$$R_{Kiyokawa} = 0.288 N + 0.17 X + 1.739,$$

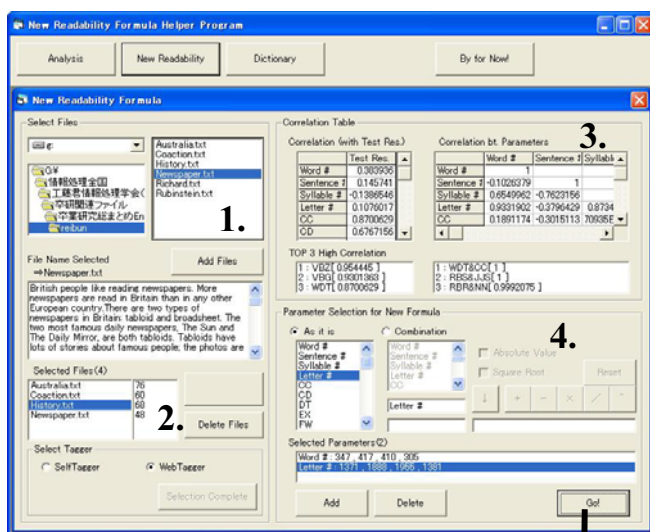


where N is the ratio of words not included in the word list defined by Kiyokawa (X is the same as defined above).

### 3. Provision of programmatic solutions to help teachers to develop readability equations

As a solution to the first objective, the authors developed computer software providing an environment for new readability formulas for teachers of English (Miyazaki and Norizuki 2005). The program features the following functions, with its procedure illustrated in Fig. 1:

- (a) the numerical representation of various parameters. (Users can devise new parameters along with the use of conventional ones.)
- (b) the computation of correlation coefficients for all the possible pairs of available parameters.
- (c) the provision of lexico-grammatical information stored for each word (enabled by incorporating the “Tree-Tagger” program<sup>1</sup>).
- (d) the formulation of regression equations (i.e., original readability formulas).



**Procedure**

1. Choose English passages
2. Input corresponding students' test results
3. Correlation table shows important parameters
4. Choose parameters with additional operations
5. The best formula pops up!

**Result of Regression Analysis**

Formula Calculated

$$R=216.3148$$

$$-Word \# \times 0.2009698$$

$$-Letter \# \times -0.1374949$$

Fig. 1. Program for new readability formulas

### 4. Provision of programmatic solutions to produce students' own equations

For the second objective, the program in section 3 was updated so that individual learners could produce their own equations tailored to suit their needs. The procedure in which they develop the equations is described as follows:

- 1) They read articles from NHK online news (e.g., Fig. 2).
- 2) They self-assess text difficulty levels on a six-point (0-5) scale (0: the easiest, 5: the most difficult) (“P” in Fig. 2).
- 3) With potential parametric values available for assessed materials combined optimally (such as word length, sentence length, the ratio of unfamiliar words), their own baseline readability equations can be computed (“Q” in Fig. 3).



Fig. 2. Phase of reading and self-assessing articles

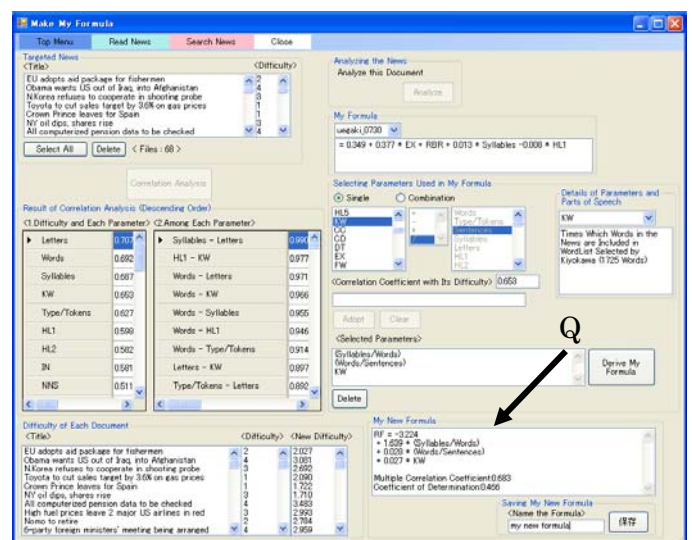


Fig. 3. Phase of producing original equations

### 5. Use of Web-searching function to match text difficulty with their reading abilities

In addition to producing equations for individuals,

<sup>1</sup><http://www.ims.uni-stuttgart.de/projekte/corplex/TreeTagger/DecisionTreeTagger.html>

a web-searching function to match text difficulty with their reading abilities was implemented. By using this function, individual learners can narrow down passages which may suit their English levels in conjunction with keyword search and date choice options in response to their specific needs.

There are rich English learning resources available on the Internet, but regrettably learners cannot find the right text easily.

The current program focuses solely on NHK online news pages for the sake of statistical analysis, since some other web pages are often not amenable to readability estimation due to such structural constraints as bulleted lists and headings (Uitdenbogerd 2006).

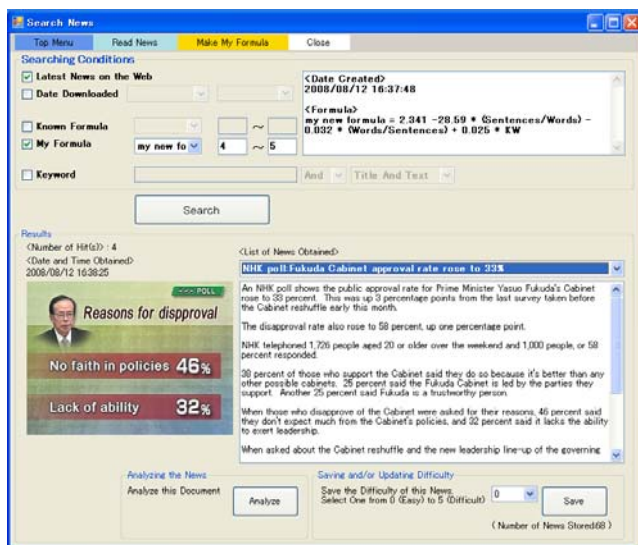


Fig. 4. Searching function with your equation

## 6. Pilot Experiment

The authors conducted a pilot experiment to see if the subjects would perceive the English passages selected in accordance with their own equation(s) by our program as more “suitable” than the ones that would pop up randomly without recourse to their equations.

### 6.1 Method

As illustrated in the specifications below, the experiment was conducted:

- **Material:** NHK online News (<http://www.nhk.or.jp/daily/english/>).
- **Subjects:** 12 Miyazaki Lab members (aged 21-24), divided into 2 groups (Group A, and B, [6 members each])
- **Procedure:**

[1-1] The subjects read 20-30 news articles and assessed difficulty levels on a six-point scale (0-5).

[1-2] The subjects produced their own equations

with parametric values from assessed materials.

[2-1] Group A subjects read 10 (4,3,3) unread articles, selected by the program, with three levels (2-3.5 <appropriate>, 0-2 <easy>, 3.5-5 <difficult>) of readability, as measured by the equation.\*

Group B subjects read 10 unread articles without recourse to the equation

[2-2] The subjects rated the passages on a five-point scale (0-5) in accordance with the criteria.\*\*

[3] The subjects performed [2-1] and [2-2] three more times with the roles of Groups A and B exchanged each time.

Notes:

(\*) When subjects could not find 4 <appropriate> -3 <easy>- 3 <difficult> articles, they read 10 articles in total close to the 4-3-3 ratio.

(\*\*) Distinct rating scales were employed for Groups A and B as follows:

(For Group A) The subjects rated the extent to which passages selected statistically by the program were properly categorized into the three designated levels <5: materials being properly categorized into each of the three levels – 1: materials being not properly categorized at all>.

(For Group B) The subjects rated the extent to which passages picked up randomly by the program were of appropriate difficulty <5: materials being of appropriate difficulty – 1: materials being thoroughly inappropriate (i.e., too easy or too difficult)>.

### 6.2 Results

Table 1. Effects of the use of learners’ own equations

	TK	KN	YI	SK	TO	MO
(1)	2.58	2.70	3.35	3.65	4.70	3.80
(2)	3.76	3.20	2.95	3.70	4.40	3.80
(3)	3.33	3.78	3.00	4.10	4.40	3.93
(4)	4.14	3.25	3.33	3.30	-	3.00
(5)	5.00	1.33	2.00	-	-	4.00
(6)	<b>0.75</b>	<b>1.08</b>	-0.35	<b>0.45</b>	-0.30	<b>0.13</b>

	TU	YS	YK	AK	MT	YS	AVG
(1)	3.37	3.20	2.90	2.75	3.25	4.05	3.36
(2)	3.90	3.65	3.75	3.10	3.45	3.55	3.60
(3)	3.44	3.63	3.00	3.22	3.36	3.57	3.64
(4)	4.00	4.83	4.86	3.22	2.33		3.69
(5)	4.50	2.50	3.50	2.00	4.17	3.50	3.33
(6)	<b>0.08</b>	<b>0.43</b>	<b>0.10</b>	<b>0.47</b>	<b>0.11</b>	-0.48	<b>0.21</b>

(1) mean ratings for all the passages derived without the use of original readability equations

(2) mean ratings for all the passages derived with

- original readability equations
- (3) mean ratings for the extent to which passages of appropriate difficulty were categorized into the right level via original readability equations
  - (4) mean ratings for the extent to which easy passages were categorized into the right level via original readability equations
  - (5) mean ratings for the extent to which difficult passages were categorized into the right level
  - (6) (3) minus (1)

Table 1 displays several mean ratings made by each subject (whose initials are written on top of each column). Values at the bottom of the table indicate that 9 out of 12 subjects made higher appropriateness ratings for passages of appropriate difficulty when they used equations. The table also shows overall similar mean ratings for easy, difficult and all the passages involved for the analysis.

Table 2 summarizes the t-test analysis of the mean difference between the two groups in the ratings of appropriate difficulty. The assumption of homoscedasticity, or equal variance, was met even though the sample sizes were unequal. The difference between the groups was found to be significant at the level of 5% for a two-tailed test.

Table 2. The mean difference between Groups 1 and 2

	Group (1)	Group (2)
Mean	3.37	3.64
Variance	1.37	1.26
N	258	133
Df	389	
<i>t</i>	<b>-2.20</b>	
Sig. (1-tailed)	<b>1.65</b>	
Sig. (2-tailed)	<b>1.97</b>	

Table 3 presents correlation coefficients between readability statistics and each subject's ratings. E1 and E2 represent two original readability equations, as computed by the authors, which can be compared with each other and with two conventional statistics derived from the Flesch Kincaid Grade Level (FKGL) and Kiyokawa formulas. E1 was made on the basis of 20 passages that the subjects had read and self-rated. E2 was constructed, with the same set of parameters, from the same 20 passages plus additional 20 passages also used in the experiment.

Bold-faced numbers represent the highest correlation coefficient among the four readability statistics with each subject's ratings. It is observed that in most cases our original equations show higher correlations with the subject's ratings.

Table 3. Correlations of conventional and original readability statistics with the subject's ratings

	TK	KN	YI	SK	MO
FKGL	0.05	<b>0.34</b>	<b>0.69</b>	0.17	<b>0.19</b>
Kiyokawa	0.12	0.06	0.11	0.21	0.10
E1	<b>0.57</b>	0.33	-0.06	0.53	0.18
E2	0.45	-0.13	-0.15	<b>0.61</b>	0.08

	TU	YS	YK	AK	MT	YS
FKGL	0.03	0.53	0.46	0.26	0.50	-0.32
Kiyokawa	0.23	0.41	0.30	0.26	0.40	-0.41
E1	0.54	0.71	0.41	0.33	<b>0.55</b>	-0.05
E2	<b>0.62</b>	<b>0.78</b>	<b>0.49</b>	<b>0.35</b>	0.53	<b>0.04</b>

### 7. Concluding Remarks

The authors developed a computer program featuring its practical assistance for teachers and learners of English in devising their own equations and web-searching function to matching them to right reading materials. The results of the present study indicate that our approach merits continued exploration. Areas of our future research include:

- allowing learners to choose the genres they would like to read about;
- computing all the possible combinations of parameters for the best readability equation;
- allowing learners to refer to previously graded news articles (and their difficulties);
- accelerating the program;
- customizing word lists created by individual learners, and
- comparing difficulty levels assessed by automated cloze tests with those done by learners' self-ratings.

### References

Hasegawa, K., & Norizuki, K. (1998). The Process of CAI English Language Learning and Teaching (Part 2) -An Analysis of Learners' Rapid Reading and Gap-filling Exercises-, *Bulletin of Shizuoka Sangyo University 1*, 69-80.

Kiyokawa, H. (1988). Development of a Readability Formula for High School and University Students, *Studies of Language and Literature, Wayo Women's University 21*, 43-63.

Kiyokawa, H. (1993). Some Issues Associated with Readability Studies, *Studies of Language and Literature, Wayo Women's University 27*, 53-67.

Miyazaki, Y., & Norizuki, K. (2005). Development of Computer Software Providing an Environment for New Readability Formulas, *FLEAT 5 Proceedings*, 72-75.

Norizuki, K. (2004). In Search of New Dimensions for Readability for Japanese Learners of English, *Bulletin of Shizuoka Sangyo University 6*, 167-180.

Uitdenbogerd, A.L. (2006). Web Readability and Computer-Assisted Language Learning, *Proceedings of the 2006 Australasian Language Technology Workshop (ALTW2006)*, 99-106.

## Essential Conversations: 4 Visions of CALL

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In recent years there have been numerous discussions of key issues in CALL, but many of these discussions do not intersect with each other. Thus, it sometimes appears that the field of CALL – like e-learning in general – is informed by a series of essential but quite separate conversations. This paper proposes that in these conversations, e-learning is viewed through four different lenses: the technological, the pedagogical, the social, and the sociopolitical. It argues that we need to make use of all four lenses, and integrate the insights from our disconnected conversations, in order to achieve a broader and deeper understanding of the field. This will help us develop more effective models of CALL.

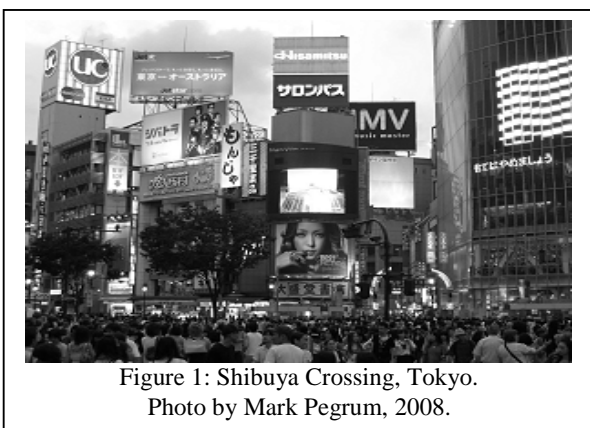


Figure 1: Shibuya Crossing, Tokyo.  
Photo by Mark Pegrum, 2008.

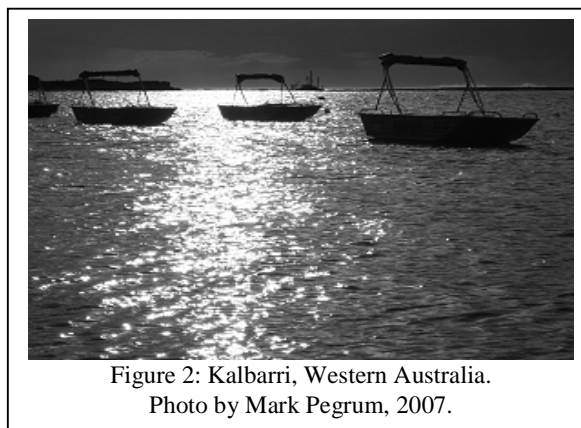


Figure 2: Kalbarri, Western Australia.  
Photo by Mark Pegrum, 2007.

### 1. Taking a Step Back

Technology seems to be everywhere (Fig. 1). But sometimes technology is not really about technology. Sometimes, indeed, it may be necessary to take a step back from the technology in order to understand it better. The 4-lenses model of e-learning described in this paper was originally developed on a holiday away from communicational technologies (Fig. 2). It may be that taking regular breaks from our typically close focus on technology is the only way to give ourselves the time and space to appreciate the bigger picture.

### 2. Separate Conversations

In recent years there has been no shortage of discussions of major issues in CALL, but many of these discussions simply do not intersect with each other. It sometimes appears, in fact, that the field of CALL – like e-learning in general – is informed by a series of essential but quite separate conversations. In many of these conversations,

e-learning is viewed through one of four lenses: the technological, the pedagogical, the social, or the sociopolitical. All of these conversations, each focused through a different lens, are important. However, it is necessary to use the lenses in combination, and to synthesise the insights to which they lead us, in order to achieve a broader and deeper understanding of the field.

### 3. A 4-lenses Model of E-learning

The model in Fig. 3 shows the four lenses. As with any set of lenses, there is some overlap in what the various lenses enable us to see, but there are also considerable differences in what comes into sharpest focus and what is relegated to a blurrier presence. So, even allowing for overlap, a minimum of four lenses seems necessary to capture the focal points of the main types of conversations about new technologies in education: the technological discussions typically favoured by IT professionals and some educators; the pedagogical

discussions favoured by many academics and teachers; the social discussions favoured by the media and politicians; and the sociopolitical discussions favoured by cultural and political theorists. It might even be appropriate to add a fifth lens to include broader ecological issues, but the majority of key issues impacting on CALL specifically, and e-learning in general, can be covered by the four lenses shown.

The model attempts to capture some of the main issues which come into focus through each of the lenses. Like all models, it involves a trade-off between detail and depth on the one hand, and clarity of presentation on the other. Inevitably, it entails some simplification, though its main aim is certainly not to simplify our conversations. On the contrary, the aim is to lead us away from simplification, by offering a more complex, nuanced and differentiated picture of the area of electronic technologies in education, and reminding us of the many issues which have a bearing on it.

The topics which seem to be more prominent in contemporary discussions are presented, in the style

of a tag cloud, in larger and darker (bold) fonts. As with most tag clouds, this represents a personal perspective, a snapshot of electronic technologies in education taken from one point of view among the constellation of possible points of view, although it does draw extensively on the views of others working in the field. The model should be seen as a work in progress and like the internet, the web and e-learning itself, will have to be revised from time to time.

The terms used in the model are largely drawn from common usage, with some referring to developments and others to trends, some to problems and others to fields of study or debate. Some are widely accepted and others are more controversial. Some are relatively neutral and others carry positive or negative overtones. Closely related issues often cluster together, with issues at one level feeding into and articulating with issues at other levels. While some phenomena are shown on lens boundaries, many can in fact be viewed through multiple lenses, with each lens highlighting particular aspects.

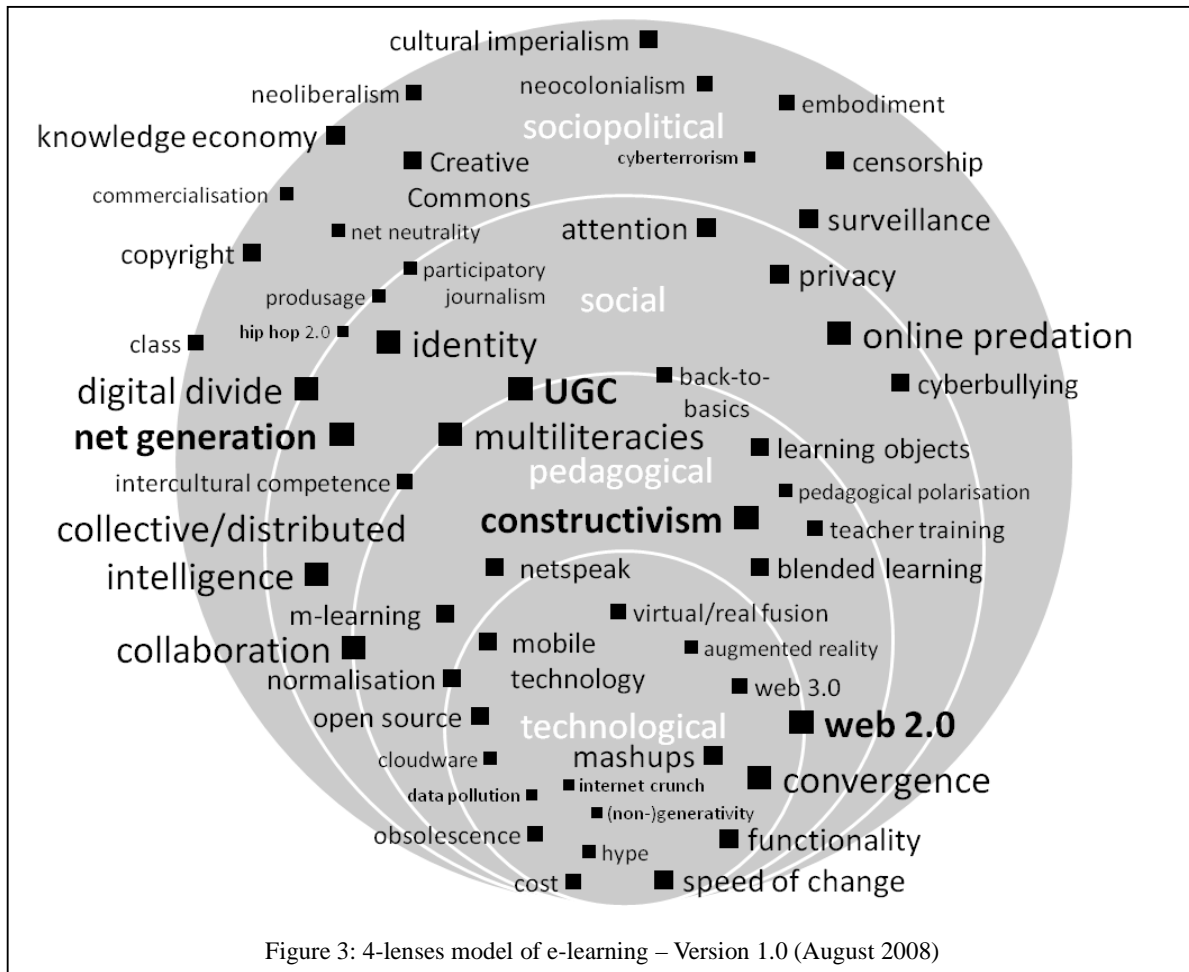


Figure 3: 4-lenses model of e-learning – Version 1.0 (August 2008)

#### **4. Technological Conversations**

Conversations focused through a technological lens typically concentrate on the available technologies and how to use them in education. In addition to analysing the ever-expanding range of web 2.0 tools, they may deal with practical concerns such as the speed of change and cost, alongside broader issues like the convergence of technologies, the rise of web 3.0 and, on the border between the technological and the pedagogical, the area of normalisation (Bax, 2003, 2008).

An example of a less frequently addressed but increasingly important issue is the growing overlap between the virtual and real. Digital immigrants often make the mistake of seeing the virtual and the real as quite separate, whereas many digital natives barely differentiate between the two. As one school student told Mark Prensky (2007): “You look at technology as a tool. We look at technology as a foundation – it’s totally integrated into what we do.” A quick glance at the everyday technologies around us shows the blurring of the virtual-real divide. A social networking service like Facebook allows users to mix virtual with real world friends, while signing up to groups supporting causes which may be virtual, real, or both. It also offers virtual language teaching applications such as *Dictionary.com* or the *Japanese Audio Word of the Day* alongside applications like the *Language Exchange*, which integrates users into real world networks of language learners. Real world students are now able to gather in virtual spaces to listen to real world speakers: a speech by Kofi Annan, for example, was simulcast live to four virtual worlds by Global Kids on 20 March 2008. Meanwhile, a service like Vodafone’s *InsideOut* has allowed phone calls to be made between the real world and the virtual world *Second Life*. This increasing virtual-real fusion challenges us, as educators, to find new ways of using electronic tools to help our students improve their language abilities – which are vital both online and offline.

#### **5. Pedagogical Conversations**

The pedagogical discussions which have now come to dominate the field suggest that educational rather than technological principles must drive CALL. A key theme is constructivism, with other major emerging themes including collaboration, collective intelligence and UGC (user-generated content), all of which are arguably on the pedagogical-social border. The current deluge of ironic and satirical cartoons and other commentary about education and online tools indicates that this is an area of broad societal concern.

One specific area of concern to educators is the ongoing polarisation of pedagogical opinion. At one extreme, techno-enthusiasts like Mark Prensky (2007) insist that as educators, we must adapt to our students, who are far ahead of us technologically – but also, in many ways, pedagogically and even socially. At the other extreme, Tara Brabazon (2002) laments that internet education, with its tendency towards “the cheap, the delicious and the colourful”, has to date “been a tragedy for education” (pp.151-152). The danger is that as the debate becomes increasingly polarised, those who hold opposing views are less and less likely to engage with each other, which is limiting for all of us working in the field. Note that this comment is not directed specifically at Prensky’s or Brabazon’s writings, both of which contain valuable insights, but is a general observation about the potential breakdown of dialogue in the field.

#### **6. Social Conversations**

In social discussions – conducted largely in the media – major themes include identity issues related to the net generation, as well as concern (sometimes bordering on hysteria) over issues of privacy, online predation and cyberbullying.

In both the media and academia, an important theme which has recently come to the fore is attention. This reflects the fact that people feel increasingly overwhelmed by the number of digital tools available, the amount of information streaming through their lives, and the maze of personal connections they have woven around themselves with the help of web 2.0 tools. Connectivity may be an advantage of web 2.0, but how much connectivity is too much? While some commentators take a positive perspective, celebrating the rise of the multitasking generation and highlighting the possibilities of lateral thinking, others, such as Linda Stone (2008), note that we now live in an age of “continuous partial attention”. This must have real consequences in many areas of our lives, ranging from personal relationships to reflective academic thought. To combat the growing “infomania” (report cited in Naish, 2008, p.18) or even “infobesity” (p.25), we may need to develop a sense of “enoughism” (p.2), adopt a “neo-Amish” strategy (Kelly, 2004), or simply get “off the grid” (Lessig, 2008) from time to time. In other words, we may need to take a step back from the technology to give ourselves time to reflect on the bigger picture – including engaging with other parts of our lives. If, as educators, we ask students to spend many hours online, we need to consider whether we are also giving them the opportunity to

think, to relate, and just to be, in spaces which exist outside the web of online connectivity.

### 7. Sociopolitical Conversations

Sociopolitical discussions focus on discourse and power, situating the struggle over different visions of e-learning with respect to political, economic, legal and cultural paradigms. Thus, they encompass issues that are largely political (censorship, surveillance), economic (commercialisation, neo-liberalism) and legal (copyright, net neutrality), as well as others, like digital divide and cultural imperialism, which are a real mixture.

The cultural imperialism of the net begins with the iconography that requires computer users to be familiar with the metaphor of the Western corporate office – the desktop icon, manila folders, a recycling bin. But even if most of our students have previously encountered Western-style offices, there are still many hidden cultural aspects to the tools we use and the tasks we set. Asynchronous discussion forums are an excellent way of engaging students in extended target language conversation, but they build on thousands of years of Western history, extending back to the forums of ancient Rome. As such, they carry fundamental cultural assumptions we rarely stop to think about: they depend on the notion of the autonomous individual operating in a mode of rationality and on a basis of equality – including teacher-student equality – and engaging in debating-style interaction characterised by speed and informality. Yet research indicates that not all participants approach online forums with debating-style principles in mind (Pegrum & Bax, 2007). Blogs are a good way to involve students in extended writing, but for some students they may create very real conflicts around issues of privacy and publicity. Wikis – including Simple English Wikipedia, to which many TESOL teachers ask their students to contribute – are commonly regarded as co-operative ventures. Yet, as Clay Shirky (2008) notes, Wikipedia is actually the product of “unending argumentation” (p.139), while Jimmy Wales (2007), founder of Wikipedia, has stated that: “We need to have places on the internet [...] to disagree with each other safely.” Both elements in this statement are equally important: the safety, and the disagreement. As Martha McCormick (2007) has suggested, we may have to accept that our technologies are inevitably cultural and ideological. Despite – or indeed because of – this, we must be very sensitive to the cultural and ideological codes which are embedded in our tools and tasks, and which may prove challenging or troubling for some of our students.

### 8. Conclusion

All of the above conversations are important. However, too many of our discussions have been too narrow, focused through only one lens. We need to use all four lenses in conjunction and join up our discussions of technology, pedagogy, society and sociopolitics. In short, we need to look beyond the technology itself to grasp the bigger picture, so that we can develop more informed and more effective models of CALL and e-learning.

### References

- Bax, S. (2003). CALL – Past, present and future. *System*, 31, 13-28.
- Bax, S. (2008). *Bridges, chopsticks and shoelaces*. Plenary paper presented at WorldCALL 2008, Fukuoka, Japan, 6-8 Aug.
- Brabazon, T. (2002). *Digital hemlock: Internet education and the poisoning of teaching*. Sydney: UNSW Press.
- Kelly, K. (2004). What technologies do you reject? *Kevin Kelly's Lifestream: Help Wanted*, 2 Mar. Retrieved Aug. 16, 2008, from <http://www.kk.org/helpwanted/>
- Lessig, L. (2008). Lessig blog: Closed until June. *Lessig 2.0*, 2 May. Retrieved Aug. 16, 2008, from [http://www.lessig.org/blog/2008/05/lessig\\_blog\\_closed\\_until\\_june.html](http://www.lessig.org/blog/2008/05/lessig_blog_closed_until_june.html)
- McCormick, M.H. (2007). Webmastered: Post-colonialism and the internet. In J. Lockard & M. Pegrum (Eds.), *Brave new classrooms: Democratic education and the internet* (pp.75-86). New York: Peter Lang.
- Naish, J. (2008). *Enough: Breaking free from the world of more*. London: Hodder & Stoughton.
- Pegrum, M., & Bax, S. (2007). *Catering to diversity through asynchronous online discussion*. Paper presented at the 20th English Australia Conference, Sydney, Australia, 13-15 Sept. Slides retrieved Aug. 16, 2008, from [http://www.elicos.edu.au/index.cgi?E=hcfunc&PT=sl&X=getdoc&Lev1=pub\\_c08\\_07&Lev2=c07\\_pegrum](http://www.elicos.edu.au/index.cgi?E=hcfunc&PT=sl&X=getdoc&Lev1=pub_c08_07&Lev2=c07_pegrum)
- Prensky, M. (2007). *Engage me or enrage me*. Presentation to Dept of Education & Training, Perth, Western Australia, 29 May. Slides retrieved Aug. 16, 2008, from <http://www.groups.edna.edu.au/course/view.php?id=1304>
- Shirky, C. (2008). *Here comes everybody: The power of organizing without organizations*. New York: Allen Lane.
- Stone, L. (2008). Fine dining with mobile devices. *The Huffington Post*, 9 Jan. Retrieved Aug. 16, 2008, from [http://www.huffingtonpost.com/linda-stone/fine-dining-with-mobile-d\\_b\\_80819.html](http://www.huffingtonpost.com/linda-stone/fine-dining-with-mobile-d_b_80819.html)
- Wales, J. (2007). *Challenging how knowledge is created*. Presentation to *education.au*, Melbourne, 27 Apr. MP3 (9) retrieved Aug. 16, 2008, from <http://www.educationau.edu.au/jahia/Jahia/home/cache/offonce/pid/605>

## **A CALL Project with Low-Level EFL Students**

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This presentation reports on a CALL project at Kyoto Sangyo University involving its first-year, low-level, non-English majors using two CALL applications—DynEd and ALC. In addition to explaining the way the project developed and evolved, the pros and cons of the software will be compared. Implementing CALL software in a classroom setting involves adaptation to suit needs of both learners and the institution. In this project these key issues were student motivation, assessment, and adaptation. By examining the challenges of this project the presentation will provide ideas for other CALL projects involving low-level students.

### **1. Introduction**

CALL, or e-Learning, is increasingly being used in Japanese universities for the teaching of English in a variety of ways, from individual teacher projects to larger campus-wide projects such as the one discussed in this paper. Bingham and Larson (2005) attribute this increase to reasons ranging from staff cuts and shrinking budgets in Japanese universities to marketing strategies. They go on to say that many expensive CALL labs are then underused or misused, or simply become self-access centers.

In their study of e-Learning in Japan, Ozkul and Aoki (2006) support this claim and examine its causes citing reasons from lack of teacher training and support, cultural and social issues, lack of pedagogy, as well as managerial issues. Pagel and Reedy (2007) echo some of these points, in their own study of a project similar to the one in this paper and mention that whilst many universities invest in CALL labs and software, there are very few studies in the implementation and success of these projects, with the implementation being left to the individual teachers charged with teaching the classes.

This paper reports on one such course-wide project involving the use of purchased package English learning software in a newly built highly resourced computer lab with lower-level, first-year non-English majors in a compulsory English oral communication course.

### **2. CALL for Lower Level Students**

Literature on teaching CALL with lower level

students is difficult to find, in contrast to the wealth of studies with intermediate and much higher-level students. This lack of balance is often reflected at CALL conferences, including WorldCALL 2008, where more papers and reports on projects with higher-level, highly motivated students are presented. This is particularly surprising in Japan, where the great bulk of students studying English at university are low-level non-English majors in their first and second years of compulsory English study, and who tend to have little motivation for learning English.

A common theme in some of the papers found on teaching English to low-level learners from outside of Japan was an increase in student motivation with the use of CALL. Al Jarf (2005), in her study from Saudi Arabia, reported “heightened motivation”, and Berzosa and Rokowski (2000) found that increased motivation was the most outstanding characteristic of CALL use in their study from Spain. However, studies in Japan with lower-level students similar to those in this project made no mention of motivational benefits. Ito (2006) found that students felt that the CALL course required them to work harder than in traditional face-to-face classes.

Redfield and Campbell (2005), in their study comparing Hybrid and self-access use of CALL, found better results with the self-access students but surmised this could be due to these students being forced to spend more actual time on the computer than the hybrid students. Observation of students in this study found similar results to both Ito and Redfield and Campbell.



### **3. The KSU Course**

In 2006 Kyoto Sangyo University (KSU) implemented a CALL program as part of their first-year non-English-major English Oral Communication course. KSU places these students into five levels on the basis of their own in-house placement test. The lowest two levels were chosen for the CALL course because it was felt that CALL could help improve their most basic English skills. Each year the course consists of about 500-550 students from a total population of around 3000. The students are generally at the false beginner or elementary level and typically have little-to-no interest or motivation for studying English.

The English Oral Communication course at KSU involves students participating in two 90-minute classes per week: one class held in a brand new, specially designed, state-of-the-art computer room, the other a face-to-face (f2f) class in a traditional classroom setting. In most instances, students had the same teacher for both classes. However, the weekly CALL class combined two classes of up to 35 students each simultaneously, while the same teacher taught the f2f classes separately, essentially cutting what would have been a total of four koma in a week to three. Integration of the CALL and f2f classes was not required or fostered in the beginning of the project; however, as the course developed, individual teachers saw the need to do so and began to integrate content and materials from the two classes.

The teachers of the course were native English speakers on contract with KSU and generally with some interest, experience and expertise in teaching CALL. Whilst not involved in the creation of the CALL project, a CALL committee was established for improving and fine tuning the project as it progressed including teacher training and support.

### **4. The KSU Software—DynEd and ALC**

The two primary software applications used in the Oral Communications CALL courses at KSU are DynEd's *New Dynamic English* and ALC's *Basic English Listening Course*. The software was chosen after a search of available software in Japan by full-time faculty of the General Education Committee. Japanese language support was an important factor in the selection process, as it was to be used with low-level students. Indeed, both DynEd and ALC provide Japanese support for students to differing degrees.

DynEd offers a suite of nearly a dozen different courses for schools and universities aimed at a range of ages and proficiency levels. At KSU, students mainly use *New Dynamic English* (NDE) from

DynEd's suite, although the other courses are also available for use. NDE was deemed the most appropriate for the level and interests of the students after a team of teachers evaluated the various courses available.

*New Dynamic English* is a listening/speaking-based interactive multimedia course that includes colorful graphics, animation, video, and speech-recognition activities. NDE consists of eight units, or Modules, that range in level from beginning to advanced. Students at KSU typically begin with Module 1 or 2 and progress through to Module 3 or 4 by the end of the year. NDE also includes native-language support in the form of audio translations and a Japanese version of the Intelligent Tutor, which tracks and evaluates all study activities and offers specific study recommendations to students.

In a typical NDE study session, students listen to a story or conversation, answer periodic questions about it, and then complete a variety of exercises to further develop their mastery of the grammar, vocabulary, and functions presented. Exercises include reordering words into sentences, fill-ins, dictations, and speech practice using the speech recognition system. Students are also encouraged through the Tutor to use the repeat button to listen to the sentences presented more than once and to record their own voices to compare them with the native-speaker recordings.

One of the most useful features of NDE is the Records Manager, which allows teachers (and students) to track student progress, including time spent, percentage complete, and scores on the exercises and tests. The Records Manager is not only useful as an assessment tool, but it also helps to motivate students since they are able to follow their own progress as well.

ALC's *Basic English Listening Course* is part of a suite of applications called NetAcademy produced by a Japanese publishing company. ALC was initially chosen mainly because of its Japanese language support, which is integral to the lessons and appreciated by many of the students. However, ALC offers little English support beyond the content of the lessons themselves. The listening course was chosen for the Oral Communications course because it seemed to fit best with the theme of the course.

The course consists of 30 listening units on various themes, from telephone calls and conversations to speeches. In each unit, students listen to a short passage, answer three comprehension questions about it, and then review the passage with the English transcript and a Japanese translation. In addition, the program offers

a personal glossary and usage notes in Japanese to help with studying the vocabulary and grammar. The software also allows students to replay the recordings at various speeds for “speed listening” training.

ALC also provides a records management system, but it is not nearly as extensive or useful as DynEd’s. The main information provided is the time spent on each unit and the student’s score on the three-question comprehension quiz.

## **5. Motivation**

Cultivating and maintaining student interest in the CALL classroom has been a constant challenge for KSU teachers each semester. The presence of cell phones, the internet, email, Mixi, and YouTube provided constant distractions for some students, while others found the whirr of 70 computer fans conducive to a much needed nap. It is difficult enough for anyone to concentrate on a given task for 90 minutes, particularly on a compulsory subject of little interest for these students, like English. For this reason teachers discovered that giving students a variety of tasks in combination with quantifiable target learning goals for the semester, helped many students maintain focus. Roaming around the room and interacting personally with the students also helped teachers stem potential distractions and give help and advice to students as needed.

## **6. Assessment**

How to best assess student work in the CALL room was another major issue to contend with. DynEd provides teachers with a flood of data, including mastery test scores and completion percentages, while ALC generates almost nothing useful. This prompted teachers to discuss which of the DynEd data was most useful for assessment purposes, and led the CALL committee to develop a series of ALC mastery tests to compensate for the assessment deficiencies of ALC, all of which were administered via Moodle.

It was initially decided that time of study, completion percentage (for DynEd only), and mastery test scores would be the main assessment factors. The CALL committee then generated a set of student learning goals for the semester based on these criteria, which were then recommended to CALL teachers, who were given the option of altering these for their respective classes.

It soon became apparent that time of study was an inappropriate assessment factor, as students simply opened up both applications simultaneously and let them run freely whether the students were actually paying attention or not. In subsequent semesters,

only completion percentage (for DynEd) and mastery tests were the official assessment factors, thus rendering ‘time of study’ valid again as a reflection of student effort.

At the end of each semester, a grading spreadsheet was sent out to all CALL teachers that allowed them to calculate grades for their students by entering the appropriate values from the DynEd records manager and ALC mastery test scores from the course Moodle.

## **7. Adaptation**

Being an upstart CALL program, both the software and the teaching situation was new to all teachers involved. Thus the process of constant adaptation to arising challenges in the classroom was the third key issue in this project. As was previously mentioned, mastery tests for ALC had to be created, as well as time of study being dropped from assessment criteria.

Another adaptation made was a move away from attempting to work with data exported from each application to Excel spreadsheets, massaging it, and using complicated formulas to render it meaningful for assessment. Teachers found it easier to simply eyeball the data in the records manager and input it all into the grading worksheet by hand. This unfortunate time consuming step is one of the current challenges still facing CALL teachers in the program.

In addition to assessment and software related adaptations, there were also technical difficulties to overcome, such as malfunctioning hardware and software, as well as a rapidly decreasing supply of headphones from the university-provided stock. A paper-based system of identifying problematic computers and reporting them to administration was developed, while headphones were eventually secured firmly to each computer with plastic straps, thus stemming the tide of their mysterious disappearance.

Finally, once the adaptations described above were made, teachers began to address one of the obvious weaknesses of the CALL program: a total separation in both content and practice between what happens in the f2f classroom and what is being done in the CALL classroom. Therefore, a move toward better integration between classes was called for, especially in light of the motivational issues discussed earlier. It was thought that since f2f classes contained much more student-centered topics of discussion, that finding a way to integrate what goes on there into the CALL classroom would be more stimulating for students and lead to a better overall quality learning experience. The initial

attempts at better integration included Moodle-based discussion and chat activities, the incorporation of digital materials from the textbook, web-based research and discussion activities, and the delivery of quizzes via Moodle related to f2f class material.

### **8. Student Surveys**

Three separate intakes of students—from January 2007 to July 2008—were surveyed to shed light on their perceptions of the software and their experiences with the CALL program at KSU. Overall students felt that the use of the CALL software was significantly improving their listening ability, and to a lesser extent their pronunciation (thanks to voice recognition technology of DynEd), while they deemed their grammar and vocabulary to see only slight improvements, to no improvements at all. Students far preferred the use of DynEd's *New Dynamic English* over ALC's listening course.

Perhaps the most salient trend noticed in the results of the three surveys over time was a steadily increasing level of overall satisfaction with the CALL program in terms of student perception of both how enjoyable and how educational the use of the software was. We attribute this increase in satisfaction to the adaptations described above, along with the recent attempts at better integration between f2f and CALL classes.

### **9. Conclusion**

As with the implementation of any new CALL program in a university setting, a variety of challenges will arise, necessitating adaptations along the way, both in terms of how software is put to use and how assessment is carried out. With lower level students, cultivating and maintaining motivation is particularly important. We hope that this paper has shed some light on the challenges faced when starting a new CALL program with lower level students, as well as providing some feedback on the pros and cons of the software used, from DynEd and ALC.

### **References**

- Al-Jarf, R. S. (2005). The Effects of Online Grammar Instruction on Low Proficiency EFL College Students' Achievement, *Asian EFL Journal*, 7(4), Retrieved August 1, 2008, from [http://www.asian-efl-journal.com/December\\_05\\_rsaj.php](http://www.asian-efl-journal.com/December_05_rsaj.php)
- Berzosa, M. J. & Rokowski, P.E. (2000). CALL for Beginners: Motivation or Rejection, Proceedings of *ESP conference 2000 ESP and IT 2000*, Retrieved August 1, 2008, from <http://www.it.uom.gr/elu/director/>
- Bingham, S. & Larson, E. (2006). Using CALL as the Major Element of Study for a University English

- Class in Japan. *JaltCALL Journal* 2(3), 39-51.
- Ito, E. (2006). CALL English Courses in the General Studies Program: A Case Study in Iwate prefectural University. *Language and Culture* 8. Retrieved August 1, 2008, from [http://p-www.iwate-pu.ac.jp/~acro-ito/Other\\_Essays/CALLEnglishCoursesGSP.html](http://p-www.iwate-pu.ac.jp/~acro-ito/Other_Essays/CALLEnglishCoursesGSP.html)
- Ozkul, A. E., & Aoki, K. (2006). e-Learning in Japan: Steam locomotive on shinkansen. Retrieved August 1, 2008 from [http://aide.nime.ac.jp/research/ICDE2006\\_Ozkul&Aoki\\_.pdf](http://aide.nime.ac.jp/research/ICDE2006_Ozkul&Aoki_.pdf).
- Page, J. W. & Reedy, D. W. (2007). Integrating e-Learning in all English Classes: Success at the half way point of a five-year project. *JaltCALL Journal*, 3(3), 94-109.
- Redfield M. & Campbell, P.D. (2005). Comparing CALL Approaches: Self-access Versus Hybrid Classes. *JaltCALL Journal*, 1(3), 50-56.

## Using a Perceptual Measure to Evaluate Students' Acceptance of Digitally Created English Learning Content

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The use of connected computers as interactive tools in the creation and presentation of media-rich content for teaching is increasing rapidly. However, while it is technically possible to create or use digital materials, a number of issues must be explored before teachers can confidently reuse them. Teachers need to know whether the digitally created contents work effectively in their teaching. Institutions need to assure that those contents are of the highest standards and fit for their educational purpose. This paper outlines the process and procedures used in the development of an instrument to investigate students' perceptions of digital materials presented in an English language course at a college in Japan. It also describes how a perceptual measure can be used to evaluate whether the content presented meets the learners' needs.

### 1. Overview of the Digitally Created English Learning Content

The sophistication and ease of web browsers to display media-rich content and the advancing computer skills of students mean educational institutions are using the power of connected computers to supplement and enhance classroom activities, to provide learners with the ability to access information and to deliver learning activities (Clayton, 2006). At Matsue National College of Technology, Japan, English language teachers have been challenged to develop appropriate digital materials to deal with new information and communication technology rich ways of teaching and learning (Iwata & Fujii, 2001).

The content developed at Matsue was Web-based using a range of streamed video clips for review by English language students. The material could be accessed by any web browser and was designed using a task-based learning approach categorized as an 'Integrative CALL' application (Warschauer & Healey, 1998). They are designed specifically to help English as Foreign Language (EFL) learners understand the social context of the conversation and to help them practice the language in authentic settings. A sample lesson page is shown in Fig. 1.

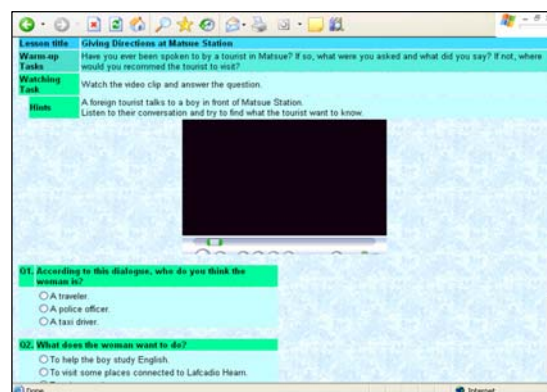


Fig.1. A Sample Lesson Page

Each lesson consists of four (4) tasks: Warm-up, Watching and 2 Follow-ups. The warm-up task aims to attract the students' attention and build an expectation of what they may experience in the video clips. The watching task reviews their comprehension. The follow-up tasks provide them with firstly, communicative activities relevant to the language topic and secondly, allowed them to practice the English structures learned in real life settings.

## 2. Learning Environment Research

The essence of a learning environment is the interaction that occurs between individuals, groups and the setting within which they operate. It is recognized that both teachers and learners hold views on the learning environment they operate within and these views will affect the way they participate in learning activities undertaken (Fraser, 2002). Through ongoing research, perceptual measures have been proved to be flexible, reliable, cost effective and versatile (Clayton, 2007) and the authors believed it feasible to develop a perceptual measure capable of successfully analyzing students perceptions of the content presented in web-based activities. It was envisaged the data generated from such an instrument would firstly help validate the instrument and secondly, inform English language teachers at Matsue of the effectiveness and appropriateness of the content presented to students.

## 3. Sample and Instrumentation

The sample comprised eighty-nine (89) 15 and 16 students at Matsue. Given the exploratory nature of the study and the limited number of participants, no attempts were made to structure the data based on gender, age or socio-economic status, although with further data the authors feel this may be a worthwhile area to explore.

The instrument used for this study was based on four scales, “computer competence”, “active learning”, “information design and appeal” and “reflection”. Each scale consisted of 6 items. Each of the scales and items had been used in previous learning environment research and could be considered to be reliable (Clayton & Gower, 2006).

## 4. Data Collection and Results

A web-based form of the instrument was created, in both English and Japanese, using the question and quiz functionality of the open source learning management system Moodle. Before releasing the questionnaire to participants, access, readability and administration were tested at locations in New Zealand and Japan. The results were analysed in each scale.

### 4.1. Computer Competence

To participate fully in e-environments, it could be argued that learners have to be technologically literate, confident and competent in using a computer.

When analyzing the data as shown in Table 1, it was found more than a half of the participants were confident and competent in using computers, searching for information using the World Wide Web and using a web-browser. 60 % of them were capable of storing information on their computer. However, students’ technical knowledge was rather weak with more than a half of the students feeling uncomfortable and incompetent when trying to reconnecting to the internet when disconnected and they did not know what to do when an error message occurs. On the surface it appears that the participants are not so confident and technologically capable of participating in the e-environment. This indicates that the provision of ongoing technical support could be regarded as a crucial service to enable continuing success of learners in digital environments.

Table 1. Computer Competence

Question Item	%
1. I am confident and competent using a computer.	53%
2. I am confident in using the World Wide Web to search for information.	57%
3. I am confident in using the web-browser tool bar (back, forward, home, and search).	52%
4. I am able to reconnect to the network if anything goes wrong.	48%
5. I know what to do if a computer 'error message' occurs during my learning.	46%
6. If necessary I can electronically store information on my computer or disk.	63%

### 4.2. Active learning

To remain motivated in digital environments, students should be encouraged to engage with the content presented.

When analyzing the data as shown in Table 2, it was found that about 60% students felt the feedback received from material helped them to identify areas of concern and they were also motivated by engaging with the content provided and mentioned the responses the activities helped them understand where they were having difficulty. A majority of the students felt it enhanced their learning and the responses provided during activities were meaningful to them. These findings indicate materials created for students with a high degree of interactivity and feedback will be appreciated and there is much room for improvement to give more effective and useful feedback to students in this content.

Table 2. Active Learning

Question Item	%
1. The feedback I receive from activities / quizzes helps me to identify those things I get wrong.	60%
2. The feedback from activities / quizzes helps me to locate where I am having difficulties.	58%
3. I am motivated by the responses I get from the activities / quizzes included in this course.	63%
4. The activities / quizzes provided in the course enhance my learning.	70%
5. The responses provided during the activities / quizzes are meaningful to me.	70%
6. The responses to the activities help me understand where I am having difficulty.	63%

4.3. Information design and appeal

It is argued that students will perform more productively in their preferred learning environment. Therefore, it was hypothesized that if students felt "comfortable" with course material presented, they would achieve at a higher standard.

When analyzing the data as shown in Table 3, it was found that a majority of the students felt the formatting of the text helped them to be able to read clearly and the backgrounds used in tables and pages enhanced the look of the material. More than 60% students indicated and they found the material was visually appealing and showed originality and creativity in the way it was structured. The use of video and graphics seems to have played a useful role in illustrating main points and aiding understanding and enhancing their learning. These findings indicate materials created for learners should utilize well designed, appealing graphics and videos extensively.

Table 3. Information Design and Appeal

Question Item	%
1. The choice of colors and style used in the text assisted my being able to read clearly.	68%
2. The backgrounds used in tables and pages enhance the look of the material.	72%
3. The material presented is visually appealing.	64%
4. The material shows originality and creativity in the layout.	65%
5. I find the videos used in the course are appropriate and helps me understand the topic.	70%
6. I find the graphics (photos, images and graphs) used are well designed and visually appealing.	71%

4.4. Reflection

It has been speculated that e-learning students need to be highly self-regulated and be responsible

for organizing and reflecting on their learning. They must become self-directed learners.

When analyzing the data as shown in Table 4, it was found that student's perceptions of online learning were quite positive. More than 80 % students found that using the internet for learning was stimulating. About two-thirds of students had few problems accessing material presented and they felt they were in control of their learning. It was significant that a majority of the students believed online learning could enhance the classroom environment and they felt they would learn more if this occurred and they were satisfied with their experience. These results may indicate that online activity sessions for these learners should be an integral part of learning activities offered.

Table 4. Reflection

Question Item	%
1. I find using the internet for learning is stimulating.	83%
2. I have no problems accessing and going through the materials on my own.	65%
3. I feel I am in control of my learning as I review the material provided.	68%
4. I feel the web based learning approach can substitute for, or enhance the normal classroom approach.	76%
5. I feel I learn more in the online environment.	71%
6. I am satisfied with my experience of using the internet and learning online.	73%

5. Discussion

This study found that student expectations of digital environments were high. They believed they would learn more in these virtual environments and they would be motivated by digital material and electronic activities. These findings appear to indicate that students want to engage with materials with a high degree of interactivity and feedback. This has implications for developers and institutions as materials created for learners need to utilize appropriate instructional design strategies and techniques.

However, the creation, development and publication of digital materials may not be sufficient to meet student needs. This study also indicates students' familiarity with computer hardware and software applications is critical to their perceived enjoyment of online activities. It could be argued the provision of ongoing, readily available technical support is critical in e-learning environments.

The authors are conscious there are limitations to this study as listed below;

- (1) The sample, based within one institution, and of limited size, is a sample of convenience and the data described here should not be regarded as representative of all current or potential students in English language courses at Matsue.
- (2) The instrument did not fully probe student online interactions with each other or their online interactions with their teachers.

## **6. Conclusions**

This paper has described students' perceptions of the digitally created English learning content presented to students in English language course at Matsue. This exploratory study with 89 students indicates the digital material created can be used and further developed with confidence. The authors also believe the further development and refinement of perceptual measures exploring the deployment of pre-packaged digital material in networked learning environments would be valued tools.

## **References**

- Clayton, J. (2006). Education and the Internet. In C. Ghaoui (Ed.), *Encyclopedia of human computer interaction* (pp. 175-178). Hershey: Idea Group.
- Clayton, J (2007). *Development and validation of an instrument for assessing online learning environments in tertiary education: The Online Learning Environment Survey (OLLES)*, Unpublished Doctor of Science Education Thesis. Perth: Curtin University of Technology.
- Clayton, J. & Gower, B. (2006). *Open Source Learning Object Repository. Final report to the Tertiary Education Commission (e-Learning Collaborative Development Fund)* (p.145). Hamilton: Waikato Institute of Technology.
- Fraser, B. J. (2002). Learning environments research: Yesterday, today and tomorrow. In S. Goh & M. S. Khine (Eds.), *Studies in educational learning environments: An international perspective* (pp.1-26). NJ: World Scientific.
- Iwata, J. & Fujii, S. (2001). Web-CALL: An authorizing System for Implementing Web-based CALL. *The Proceedings of the FLEAT IV conference: Fourth Conference on Foreign Language Education and Technology*, 745-751.
- Warschauer, M. & Healey, D. (1998). Computer and Language Learning: An Overview. *Language Teaching*, 56-71.

## **CALL e-Portfolios: Developing Reflective and Autonomous Learning**

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This paper provides an overview of the work carried out over the period of a semester with a group of BA in English Language and Literature students studying CALL in a private tertiary institution in Cyprus. It claims that by using E-Portfolios in undergraduate CALL courses, students do not only acquire theoretical knowledge and practical skills in the area of using new technologies in second language (L2) teaching and learning, but also develop reflective autonomous learning skills, which would prepare them for lifelong learning. The paper first introduces the rationale for the use of E-Portfolios with this group of students. Then it reports on their feedback, deriving from their reflections on four different aspects. Lastly, it draws some preliminary conclusions that suggest how students' reflections contribute to a greater student involvement in the learning process, and to more autonomous CALL learners and future practitioners.

### **1. Portfolios**

In education, portfolios have been around a long time. Student E-Portfolios were born out of print-based portfolios (mid-80s). They gained status in higher education during the mid-90s (Lorenzo & Ittelson, 2005), and are now stored in digital form electronic portfolios. The literature on traditional paper-based portfolio involves collecting, selecting, reflecting, projecting and celebrating, as part of its development processes. The inclusion of technology added some more dimensions such as storytelling, planning, publishing (Barrett, 2003). In teacher pre-service education, E-Portfolios give students the opportunity to create digitised presentations of their work and skills, and give evidence of their knowledge, competencies, learning process, and achievements. They are not just a random collection of work but rather a reflective tool that demonstrates growth over time (Barrett, 2000).

There is a wide body of theoretical research supporting the use of portfolios in education in general and in teacher and language education in particular. A vast variety of definitions has also been developed, demonstrating the increase and the multiplicity of its use (Paulson and Paulson, 1991, 1994; Barton & Collins 1993; Hedge, 2000; Brown, 2000; Rea, 2001; Gibson & Barrett, 2003; Wang & Cheng 2003; Barrett, 2000, 2004; European Language Portfolio, 2002; Lorenzo & Ittelson, 2005). Portfolios are a move toward learner-centred, autonomous learning.

### **2. Principles of portfolio development**

Based on Nunes (2004) principle of learner reflection for the development of portfolios in English as a Foreign Language (EFL), we decided to integrate E-Portfolios in the learning and assessment processes of a CALL course to support reflective and autonomous learning. The objectives of this study were to find out how the record of student reflection in the portfolio could contribute to a more informed approach towards reflective and autonomous learning.

### **3. Introduction of portfolios**

The E-portfolio provided a framework for the whole course; it included completed individual and group work as evidence, and documented students' progress (as measured by their reflections on whatever they believed to be important for them as learners) and their achievement (as measured by the "objective" marks given during the semester).

### **4. Learning process**

From the first week, students were introduced to and engaged in reflection (review of previous learning, reflective journal, and end-of-programme self-evaluation). In the end, these techniques transformed the portfolios into a curriculum for reflecting before, during and after learning. The students produced comprehensive portfolios with solid evidence of their learning (CALL material development, research and collaborative work), and a substantial record of



the process of their reflection and development towards autonomous lifelong learning.

### **5. Data Analysis**

For this study, we examined entries from students' reflective journal and end-of-the-programme self-evaluation. To identify what the students most reflected on, we clustered the entries according to the topics repeatedly emerging, and this highlighted four areas: syllabus, instruction, learning, and assessment. Students are referred to by their names' initials. Examples of such entries appear below:

Under **syllabus**, we grouped students' reflections on the content included in the syllabus, in terms of their interest to the students and how they reacted to them:

"In this course we discussed the use of CALL. We learned how it can help us in TEFL (Teaching English As a Foreign Language) and what programmes we can use to create activities for our students" (LC: Reflective Journal)

"Assessment, evaluation, problem solving, collaboration, contemplation, experimentation, and technology are just a few words, which summarise this course...With technology, learning becomes easy and pleasurable. I also learned how to think as a future teacher" (IS: end-of-programme self-evaluation, May 2006).

In the area of **instruction**, we included students' reflections on teaching aids and materials, teaching methods, instructional activities, strategies, and tasks. Here are some examples of the entries considered in this category:

"Today we learned how to use technology to teach pronunciation. We visited some very interesting and helpful pronunciation activities on the Internet ... We found out about WebQuests, which allow students to be self-sufficient and independent in their learning" (NM: Reflective Journal, 27 March 2006).

"I learned valuable information on how L2 teaching can be fun and educational. I learned many creative ideas for teaching and creating exercises" (MS: end-of-programme self-evaluation, May 2006).

Entries grouped under the heading **learning** include reflections on the contents dealt with in class, on the student's weaknesses, strengths, needs and learning strategies. The reflections below illustrate some of the issues referred to by the students:

"I chose this course because I wanted to learn something new and exciting. In all other classes I know what to expect and the boring ways of

teaching. In this course, the tests were abolished; everything I learned was via problem solving and evaluation, while simultaneously I was being taught, without realising it up until now! It was fun and exciting, despite the pressure of time and the stress." (IS: end-of-programme self-evaluation, May 2006).

Under **assessment**, we grouped reflections on the students' competence and skills, their performance in classroom tasks, as well as reflections on the portfolio itself. Examples of some of these entries appear below:

"This was our last class. We all gave our presentations... Each of us evaluated this course and ourselves. It was interesting to realise we all learned what we were supposed to, but we also learned how to think as teachers and how to be good teachers..." (IS: Reflective Journal, 10 May 2006).

"I have learned many activities I can use to teach my future students... There is no doubt, I could have been much better and could have participated more. That is one thing I truly regret." (LC: Reflective Journal).

"This course was so interesting and I am honestly very proud of the work I have done. I will be very proud presenting my website to the others and say: "Look! This is my work. Look at what I have achieved in CALL". However, I put a lot of effort to finish all this work. It was a challenge for me. At first, I didn't believe in myself and thought I wouldn't manage to finish, BUT I'm here alive and very proud, because I made it!!! To be honest, the idea of using CALL in TEFL is very good and will attract many 'customers', in case I open an Institute of English. I consider furthering my expertise in CALL for future job opportunities. It will be another qualification in my CV." (SL: end-of-programme self-evaluation, May 2006).

"I should have worked harder and devoted more time on this course and the tasks... as it turned out, they were very interesting and we all learned from them. We can actually use a lot of the course ideas in the future as teachers." (MS: end-of-programme self-evaluation, May 2006).

"I feel very proud of my work and for selecting this course. Now I am thinking of doing my masters in CALL." (IS: Reflective Journal, 10<sup>th</sup> May 2006)

"I am very happy I studied CALL because I learned so many things about computers and language teaching which will hopefully help me when I become a teacher. In addition, CALL was one of the few courses which made me feel proud

when I finished all the work I had and evaluated all the things I had accomplished.” (NM: end-of-programme self-evaluation, May 2006).

Table 1 shows the number of entries each area had in the portfolios of the students that participated in this study. There were seven students in the class, however only six participated eventually in the study.

Table 1. Areas of students’ reflections

ST	SY	I	L	A
LC	7	6	2	2
GE	not completed the course due to health reasons			
SL	6	16	5	3
NM	19	19	12	9
MS	7	7	8	1
IS	23	20	6	12
<b>Total</b>	<b>62</b>	<b>68</b>	<b>33</b>	<b>27</b>

Key: ST: students; SY: Syllabus; I: Instruction; L: Learning; A: Assessment

## 6. Areas of students’ reflections

As Table 1 clearly demonstrates, most reflective thoughts produced by the students in their portfolios focused on the domains of instruction (68%) and syllabus (62%). For assessment there were only (38%), and for learning only (33%) entries. The entries related to syllabus mainly describe students’ interest in the course content, despite the fact some found the load heavy. While there were some references to some parts of the course as being boring, students’ reflection on syllabus and instruction mainly described their positive feelings about the course content, the variety of teaching strategies, materials used, and the activities they were involved in. They also commented on the flexibility in changing aspects of the instruction that didn’t work as effectively as expected. Although there were some references to students’ learning, these mainly concentrated on their weaknesses rather than their strengths, and on strategies they could use to overcome them. Students stated their preference to portfolio as a tool for assessment rather than tests and exams. Students systematically reflected on the way they worked, their work, the knowledge, skills and experiences they gained from the course, in which areas they could have done better and in what way, and the future prospects of such achievements.

## 7. The value of reflection

The students’ reflections revealed different levels of students’ understanding of issues and learning processes. It also revealed a development of their understanding of self-reflection towards a

more systematic and conscious control of their metacognitive processes. Their reflections on the syllabus and on instruction provided very useful information to the lecturer of how students feel about the content, materials and strategies and what their preferences were. It also enabled students to develop a critical awareness of the value of their studies. Students’ reflections on learning not only provided useful information about their preferred learning styles, needs and difficulties, it also helped them develop into reflective and autonomous learners. Finally, their reflection on assessment helped them develop their metacognitive skills, and encouraged them to become more autonomous learners. Reflecting on their work and the way they worked helped them evaluate themselves and come up with ideas for improvement.

## 8. Conclusion

This study concentrated on the specific case of incorporating E-Portfolio as an integral part of a CALL course, aiming to support reflective and autonomous learning, and prepare future teacher of English become more reflective and autonomous lifelong learners. Although our findings cannot be generalised, we feel they contribute to the general discussion of the use of E-Portfolios in different situations. As current research and our study suggest, E-Portfolios can contribute in a more learner-centred practice by integrating assessment, teaching and learning with the curriculum. As an instrument promoting reflection and autonomy, the portfolio can develop into a valuable instrument in enabling students become more in control of their learning, more aware of their learning processes, more critical of themselves, and more able to make the link with their previous, current and future, lifelong learning.

## References

- Barrett, H. (2000). Create Your Own Electronic Portfolio Using Off-the-Shelf Software to Showcase Your Own or Student Work. *Learning & Leading with Technology*. 27:7, 14-21. Retrieved May 2, 2007 from <http://electronicportfolios.org/portfolios/iste2k.html>
- Barrett, H. (2003). Presentation at First International Conference on the e-Portfolio, Poitiers, France.

- <http://electronicportfolios.org/portfolios/eifel.pdf>
- Barrett, H., & Wilkerson, J. (2004; modified 2006). Conflicting Paradigms in Electronic Portfolio Approaches. Retrieved May 2, 2007 from <http://electronicportfolios.com/systems/paradigms.html>
- Barton, J., & Collins, A. (1993). Portfolios in teacher education. *Journal of Teacher Education*, 44, 200-212.
- Brown, J. D. (Ed.). (2000). *New ways of classroom assessment*. Alexandria, VA: TESOL.
- Gibson, D. & Barrett, H. (2003). Directions in electronic portfolio development. *Contemporary Issues in Technology and Teacher Education*, 2 (4). Retrieved July 12, 2007 from <http://www.citejournal.org/vol2/iss4/general/article3.cfm>
- Hedge, T. (2000). *Teaching and Learning in the Language Classroom*. Oxford: Oxford University Press.
- Wang, H. & Cheng, L. (2003). Portfolio Assessment for ESL Writing. In *Contact*. TESLOntario, Volume 29, No. 3. Retrieved July 12, 2007 from <http://www.teslontario.org/new/publ/contact/summer2003issue.pdf>
- Lorenzo, G., & Ittelson, J. (2005). An Overview of E-Portfolios. Educause Learning Initiative, advancing learning through IT innovation. ELI Paper 1.
- Nunes, A. (2004). Portfolios in the EFL classroom: disclosing an informed practice. *ELT Journal* Volume 58/4. Oxford University Press, 327-335.
- Paulson, F. L., Paulson, P. R., & Meyer, C. A. (1991). What makes a portfolio? *Educational Leadership*, 48(5), 60-63.
- Paulson, F. L. & Paulson, P. (1994) Assessing portfolios using the constructivist paradigm. In R. Fogarty (Ed.) *Student portfolios*. Palatine: IRI Skylight Training & Publishing.
- Rea, S. (June 2001). Portfolios and Process Writing: A Practical Approach. *The Internet TESL Journal*, Vol. VII, No. 6, June Retrieved July 12, 2007 from <http://iteslj.org/Techniques/Rea-Portfolios.html>

## A Framework for Automatic Generation of Grammar and Vocabulary Questions

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We propose a framework for AQG (automatic question generation) for grammar and vocabulary testing. The framework consists of a language-independent XML format and a computer program that generates formatted data from an input text. In this paper, we first introduce the need for AQG. Unlike most of the related work on AQG, we try to generate grammar questions with the use of a syntactic parser. We describe the specifications of the data structure and the method (preprocess) to generate data in a defined data structure. Finally, we discuss possible extension of this framework, with an example of applying it to the Japanese language.

### 1. Introduction

As the Internet becomes ever more pervasive in our lives, and as the world becomes ever “flatter”, more of the world population will be speaking English as a second language. With the Internet, the latest information spreads throughout the world with almost no time lag. One of the notable phenomena in the “flat” world is the outsourcing of highly specialized work throughout the world. This raises the need for education for ESP (English for Special Purposes) with which professionals in non-English speaking world master English in their own specialties.

While there are abundant resources to learn a language online, there are very scarce materials and few teachers that can help language learning in specialized areas. For example, the latest news on the Internet would be the perfect reading material, as there are online news websites specialized in many areas (international affairs, computer gadgets, etc.). Also, learning, and at the same time knowing, about the latest topics would be an exciting experience, thus helping to keep the learner motivated.

An automatic question generator provides independent learners with inexhaustive materials for their practice. It also makes it possible for a learner to practice with a variety of materials, from the latest news to a document of their own interest. We present two applications for AQG: Sakumon, a question making assistance system and SakumonChallenge, a CAT (Computer Adaptive Testing) system that administers automatically generated questions. We have defined a data

structure that underlies these two applications, and refer to it as a framework for AQG. In this study, we focus on grammar and vocabulary questions, which are typically described in the following three examples:

Choose the best among the four alternatives to complete the sentence.

A) We are planning to [ ] to the theater.

1. go      2. make      3. take      4. do

B) We are planning [ ] to the theater.

1. to go      2. go      3. going      4. gone

C) We are planning [ ] to the theater.

1. to go      2. to make      3. gone      4. made

These questions are of the same *format*, which is multiple-choice fill-in-the-blank. We believe that this same format of question can test different kinds of knowledge. Question A tests on vocabulary, B tests on grammar, and C is a symmetric combination of the two. We call this property *type* of question (i.e., grammar question or vocabulary question).

In this paper, we describe a data structure that we call framework for AQG of the above format and type of questions. Section 2 gives a brief review of related work. Section 3 describes the specification of the data structure. Section 4 describes how we automatically generate the data. Section 5 shows how we can extend this framework, with an example of how it can be applied to the Japanese language.

There are two applications that are part of this framework: Sakumon, a question generation

assistance system and SakumonChallenge, a user-adaptive question administration system that uses automatically generated questions. Due to space limitations, we will not give a detailed description of these. Interested readers are directed to (Hoshino et al. 2005) or our paper in the courseware showcase for more information on these applications.

### 1. Related Work

Related work includes existing frameworks for e-learning, especially for testing on language, and studies on AQG for language testing. Lastly, for readers unfamiliar with the technology of NLP (Natural Language Processing), we include a brief introduction to sentence parsing, the use of which differentiates this study from other AQG studies.

#### Frameworks for E-learning

Standardization for E-learning is beneficial because it makes the learning materials reusable, rearrangeable and independent of the interface. SCORM (Shareable Content Object) is the best-known framework for e-learning and defines a general data structure for organizing *learning objects*. For this framework, modified versions or compatible standardizations such as X-TDL (Shoji 2005) are proposed. oqXML<sup>1</sup>, developed independently from SCORM, focuses on language assessment.

One of the major differences of our framework from the others is its specificity. While other frameworks provide a general architecture for e-learning systems, ours focuses on a specific format and type of questions, which is a small subset of contents dealt with by the others. At the same time, our framework shares the lower-level XML data structure with these others, and therefore can be easily integrated into the above systems. Another major difference is that, while the above frameworks come with software for content authoring, ours serves in question authoring assistance and automatic question generation.

#### Automatic question generation

AQG has gained attention only recently as an application of natural language processing and there have been only a few studies reported so far. Table 1 shows a list of major studies on AQG (a detailed explanation of each study is omitted due to space limitations.)

Many of these studies target vocabulary questions only, while (Chien et al. 2005) generates grammar

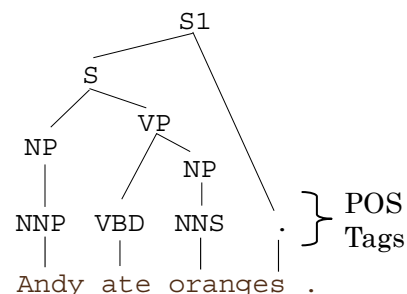
questions. Our work covers the same kinds of grammar questions as these and we also employ the technique of sentence parsing (also called syntactic parsing) to gain more information on syntactic structure.

**Table 1. List of major studies on AQG**

Study	Area of Testing	Technology
Coniam	Vocabulary	Word frequency list POS Tagging
Kunichika	Vocabulary, Reading comprehension	Syntactic parsing, etc.
Sumita	Vocabulary (verb)	Thesaurus POS Tagging
Chien	Grammar	Regular Expression POS Tagging

#### A very brief introduction to syntactic parsing

We take advantage of the output of a syntactic parser, which is a technology that analyses the sentence into a nested phrase structure according to the language's grammar. Figure 1 illustrates a parsing analysis of an English sentence, along with the information available from it. About 90 percent accuracy is reported in the state-of-the-art studies.



**Fig. 1. An Example of a Parse Tree**

The result of sentence parsing is also called a parse tree, because of its resemblance to an up-side-down tree with branches. The lowest level next to the words shows POS (Part-Of-Speech) tags, which are assigned one to each word. In addition to these POS tags, a parse result tells us such information as which of adjacent words are grouped to make a phrase and which noun phrase goes with which verb.

### 3. The Data Structure

In place of an authoring tool for learning objects for general frameworks, our system has an authoring assistance system that allows the user to make questions on an on-line news article, just by

<sup>1</sup> <http://el.osaka-gaidai.ac.jp/oq/index.html>

clicking on a word in the text and selecting from the suggestions for alternatives. The data structure is designed to contain one article (whatever passages serve the same) on which questions are generated. An overview of the data structure is shown in Figure 2.

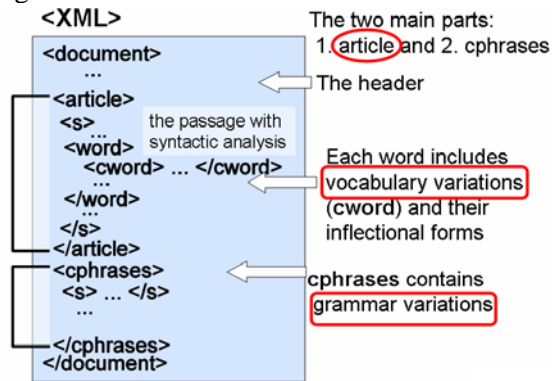


Fig. 2. The Data Structure

This XML data are automatically generated from an on-line news article with the process described in Section 4. At the beginning of the XML document, the basic information on the article, such as title, news source (which website it is from), and date of publication, is recorded. Two main parts come after the heading: 1) article and 2) grammar distractor candidates (cphrases in Fig. 2). The article part contains parsed sentences with up to seven candidate vocabulary alternatives attached to each word. To each candidate vocabulary alternative, all inflectional forms are attached. For example, for a verb, a candidate alternative contains the infinitive form, past, past participle and gerund form.

The second part is called cphrases, which contain grammar distractor candidates. In our methodology, the grammar distractor candidates are generated by converting a phrase in the parse tree. Each phrase refers to the original one by IDs given to the phrases.

Once the data go through the NLP processes and are formatted in the defined structure, it is very simple to generate the three types of questions. To make a vocabulary question, you only have to select three of the vocabulary distractor candidates and obtain the same inflectional form as the right answer (original word in the sentence). To make a grammar question, you select the three grammar distractor candidates contained in the cphrases part. Finally, to make a symmetric combination of grammar and vocabulary question, you make one selection from each of the grammar distractors and vocabulary distractors. Combining the two can be done very quickly, since we have already generated all possible inflectional forms.

### Scalability consideration

There are scalability concerns when we generate an XML file automatically. Huge XML files are difficult to handle with Java and JavaScript. In this study, we have limited the number of distractor candidates and, thanks to the fact that English is not a morphologically rich language, the data size is only linear with the length of the input article.

### 4. Preprocess

The data in the framework we have defined are automatically generated. In this section, we describe the method to generate data for English. In preprocess, data go through many steps in a pipeline manner. We will explain each step briefly (due to space limitations), but our talk slides give a more in depth description<sup>2</sup>.

#### 1. HTML parser:

The raw texts are extracted from downloaded HTML files. We retain paragraph tags (<p>).

#### 2. Sentence Splitter:

The sentence boundaries are determined.

#### 3. Sentence Parser:

A sentence parser tokenizes and analyzes sentences in a bracketed structure.

#### 4. POS Tagger:

The TreeTagger lemmatizes and annotates POS tags to each token. The Look-up and annotating frequency is also done here.

#### 5. Distractor Selector:

By consulting WordNet, the system appends a list of candidate vocabulary alternatives to each document.

#### 6. Morphological Generator:

A morphological generator is used to generate all possible inflectional forms for each word and each vocabulary alternative.

#### 7. GrammarTarget Annotator:

This finds the phrases matching the patterns and appends the converted phrases (grammar alternatives) to the document.

#### 8. Distractor Indexer:

The system indexes vocabulary alternatives for each token (to quicken the response time).

### Possible Extensions

The framework we have defined is a general one, to some extent, and is highly language-independent. Possible extensions include accommodating other types and formats of questions, as well as extension to other languages. Section 5 discusses extension of

<sup>2</sup>Available at

<http://sakumon.r.dl.itc.u-tokyo.ac.jp/index-e.html>

this framework to the Japanese language.

### 5. Extension to the Japanese Language

The Sakumon framework can be extended to other languages. We will use Japanese as an example.

Before doing migration work, people should pay attention to the differences between Japanese and English. First, in Japanese sentences, all morphemes are conjunct without spaces. Second, Japanese emphasizes dependency structure while English emphasizes phrase structure. Therefore, the points for a Japanese test ought to focus on *katsuyo*, or inflection and *Ko-ou*, adverb-predicate agreement, rather than grammatical structures as is done in English.

Generation of a vocabulary question inherits the method based on frequency, which is language-independent. We will mainly work on the grammar part.

As mentioned above, there are eight steps to getting the final XML file. First, the program should be adjusted for downloading Japanese news from designated websites. The second is to split paragraphs into sentences. Since Japanese punctuation markers are simpler than English, a complex sentence-splitting algorithm is not necessary. For the subsequent steps, we need to employ the Japanese processing tool, Cabocha<sup>3</sup>, which recognizes the inflectional forms of verbs, tags POS, and analyzes sentences into dependency structures. The main manual work to be done by people is to program grammar target rules. We suggest JLPT (Japanese Language Proficiency Test) instructions as a reference for classified grammar targets.

Once the distractors are obtained and put into XML files, the Sakumon framework will do the rest of the work. Below is a sample question:

Fujisan-ha hitotsu-shika [ ].  
1. aru 2. nai 3. iru 4. inai  
(Translation: There is only one Mt. Fuji.)

The Sakumon framework is applicable to other languages. The main work needed is to tag grammar targets. In general, people should analyze the target language using the NLP tools available for that language.

<sup>3</sup> <http://chasen.org/~taku/software/cabocha/>  
(in Japanese)

### 6. Summary

We have described a framework for automatic generation of grammar and vocabulary questions. Currently, we have two applications based on this framework: Sakumon, a question-authoring assistance system, and SakumonChallenge, a computer adaptive testing system with automatically generated questions. For more information on these applications, the readers are directed to read our paper in the courseware showcase. We have described the data structure that we have defined and the method for automatically generating the data. We have discussed possible extensions to this framework, using an example of extension to the Japanese language.

Lastly, we would like to remind the readers that the framework we have shown is only a working example. Therefore, this is a framework, but not *the* framework. We do not claim that it is the most compact or the fastest design. Currently, we are working on improvements for future versions.

### References

- Shoji, Nariomi & Koyama, Yoshinori & Tetsuya Nobuhara (2005). A Distribution Architecture of Teaching-Materials for e-Learning. *Proceedings of Data Engineering Workshop*, 2B-03, in Japanese.
- Sumita, Eiichiro & Sugaya, Fumiaki & Yamamoto, Seiichi (2005, June). Measuring Non-native Speakers' Proficiency of English by Using a Test with Automatically-Generated Fill-in-the-Blank Questions. *Proceedings of the Second Workshop on Building Educational Applications Using Natural Language Processing*, 61-68.
- Liu, Chao-Lin & Wang, Chun-Hung & Gao, Zhao-Ming & Huang, Shang-Ming (2005, June). Applications of Lexical Information for Algorithmically Composing Multiple-Choice Cloze Items. *Proceedings of the Second Workshop on Building Educational Applications Using Natural Language Processing*, 1-8.
- Kunichika, Hidenobu & Urushima, Minoru & Hirashima, Tsukasa & Takeuchi, Akira (2002). A Computational Method of Complexity of Questions on Contents of English Sentences and its Evaluation. *ICCE 2002: Proceedings of the International Conference on Computers in Education*, 97-101.
- Chen, Chia-Yin & Liou, Hsien-Chin & Chang, Jason S. (2006). FAST: An Automatic Generation System for Grammar Tests. *Proceedings of the COLING/ACL on Interactive presentation sessions*, 1-4.
- Coniam, David (1997). A Preliminary Inquiry into Using Corpus Word Frequency Data in the Automatic Generation of English Language Cloze Tests. *CALICO Journal*, 16, 15-33.
- Hoshino, Ayako & Nakagawa, Hiroshi (2007, March). Assisting Cloze Test Making with a Web Application. *Proceedings of Society for Information Technology and Teacher Education (SITE)*, 2807-2814, <http://sakumon.r.dl.itc.u-tokyo.ac.jp/site2007.pdf>

## Voices from EFL Teachers: A Qualitative Investigation of Teachers' Use of CALL

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The aims of this study are to 1) qualitatively analyze teachers' use of CALL facilities, and to 2) investigate what factors need to be concerned to achieve "normalisation" (Bax, 2003). This study draws on interview data collected from twenty-five CALL experienced university instructors. All participants specialized in the study of foreign language education and were from several different institutions. A qualitative analysis method, the Grounded Theory Approach (Corbin & Strauss, 2008), was employed to analyze the data. As a result, four factors, a) Human Factor, b) Technology Factor, c) Environment Factor, and d) Institution Factor, along with twenty six sub-codes were generated. The findings suggest the four factors influence on the teachers' use of technology in CALL classrooms, but were treated and discussed separately in teachers' talk as an isolated issue. Based on the findings, an "ecological perspective" (Tudor, 2003) that covers four factors simultaneously is suggested to achieve "normalisation".

### 1. Introduction

The use of technology for foreign language education has been widely discussed in history and it has been advanced in each time when a surge of new technology spreads throughout educational settings. However, the discussions to answer the question, "why and how do we use technologies for foreign language education?", that underpins the use of technology for foreign language education has yet to reach a common consensus to the best of the authors' knowledge. In light of this situation, the term, "normalisation" (Bax, 2000, 2003), has been gaining attention from CALL researchers and aroused considerable discussion as to a theoretical perspective for the use of technology for foreign language education.

According to Bax (2003), "normalisation" is the state in which the use of technology is truly integrated into practice and the physical existence of technology is invisible and unnoticeable such as when we use pen or book in everyday life. This concept provides a new theoretical perspective on the use of technology for foreign language education, but the state of "normalisation" has yet to be achieved in most of educational settings (Chambers & Bax, 2006).

Chambers and Bax (2006) mentioned that social and human factors are probably the most significant and problematic factors that prevent "normalisation" in the majority of educational contexts, but an example that explains how exactly these factors

hinder "normalisation" in a real pedagogical context has yet to be investigated. In the keynote speech, Bax (2008) illustrated the current issues of "normalisation", and indicated the direction of future CALL research regarding "normalisation" as follows.

"CALL in most institutions is not normalised. Normalisation can be one useful and practical goal. If we;

- a) frame the problem in terms of normalisation, then
- b) research the reasons which impede normalisation,
- c) we can start to identify targets and strategies, but
- d) we also need to consider *Denormalisation* of certain technologies".

To sum up, the concept of "normalisation" has become a new theoretical perspective for CALL research, but it has yet to be achieved in most of educational settings. In addition, the research questions as to what factors need to be concerned for "normalisation" and what factors impede "normalisation" in a real pedagogical context have yet to be investigated. Following these lines of thoughts, the authors conducted the present study.

### 2. The Present Study

The purposes of this study are as follows: a) to qualitatively analyze teachers' use of CALL facilities; and b) to investigate what factors need to be concerned to achieve "normalisation" (Bax, 2000, 2003).



### 2.1 Method

In the present study, we decided to conduct a semi-structured interview research to explore factors that influence teachers' use of technology in a CALL classroom. The interview focused mainly on the points regarding the teachers' computer background, the use of CALL facilities in a CALL classroom, and perceptions/attitudes towards CALL.

In regard to factors that influence teachers' use and perception of technology, there exist some empirical studies. Yunus (2007), for example, investigated teachers' use of technology and perceptions of their skills in technology. In this study, a large-scale quantitative survey was conducted with 530 ESL teachers in Malaysia. As a result, it made clear that technology was not widely used in teaching English, even though 91% of participants agreed that using technology in language teaching helped their students' understand English. Similarly, Kessler (2007) conducted a web-based survey with 108 participants, and found that CALL was not used effectively and there was a gap between personal and pedagogical uses of technology.

These two examples illustrate some factors and teachers' perception of CALL with a relatively large number of ESL participants. However, the research has yet to be investigated an actual teachers' use of technology based on a pedagogical context. In relation to this point, Chambers and Bax (2006) emphasized the importance of conducting in-depth qualitative investigation and identifying factors in a real pedagogical context. According to them, "normalisation" of CALL requires an understanding of the social and cultural aspects of local events, and 'the context' includes such aspects and makes it possible to illustrate local events with examples.

Drawing on the work done by Chambers and Bax (2006), we decided to conduct a semi-structured interview study and attempted to qualitatively investigate teachers' use of technologies in a pedagogical context.

### 2.2 Participants

A total of 25 CALL experienced university instructors from several different institutions participated in this study. All participants specialized in the study of foreign language education. The mean of teaching career of the participants was 14.79 (*Min.* = 1, *Max.* = 30, *SD* = 8.64) [year], which means a diversity of participants was guaranteed. The total time for interviews was 14 hours 1 minute and 36 seconds, and the mean of interview time was about 35 minutes and 4 seconds (*SD* = 13 minutes and

17 seconds). The mean of career in using computer was 17.79 (*SD* = 7.11) [years], which means they have been using computers quite long time and computers are essential tools for them for work and research purposes. The interview research started on January, 2007 and finished on February, 2008.

### 2.3 Data Analysis

To analyze the data collected through the interview, one of qualitative methods, the Grounded Theory Approach (Corbin & Strauss, 2008; Dörnyei, 2007), was employed. According to Corbin and Strauss (2008), the Grounded Theory Approach is "a specific methodology developed by Glaser and Strauss (1967) for the purpose of building theory from data" (p. 1), and qualitative analysis is "a process of examining and interpreting data in order to elicit meaning, gain understanding, and develop empirical knowledge" (p.1).

In the procedure of the Grounded Theory Approach, there exist mainly four stages. The first stage is for basic coding. In this stage, reading and interpreting text lines carefully, a number of codes based on the original interview transcription are generated. The second stage is for categorization of the codes. In this stage, some categories are generated based on the codes. Each category usually includes several codes. The third stage is for arrangement and modification of categories. In this stage, consecutive comparing between the generated categories and the original interview transcription carries on, and modification is added to contents or arrangement of the generated categories. In the last stage, the model that represents comprehensive interpretation of the interview is generated to explain social phenomenon interwoven by the interview data.

*MaxQDA 2007* was utilized as a tool for analyzing the data. It has been developed especially for qualitative analysis (Corbin & Strauss, 2008; Lewins & Silver, 2007).

## 3. Results

As a result, four factors along with 26 sub-codes were generated as follows:

1. Human Factor, such as tutors' teaching styles and lesson plans
2. Technology Factor, such as interface problems and system settings
3. Environment Factor, such as difficulty of interaction and classroom settings
4. Institution Factor, such as lack of supports and funding

### 3.1 Human Factor

This factor is related to teachers' talk about human-related issues. This factor made it clear that most of participants have their own teaching styles and lesson plans, but they have to adjust them to the technological and environmental settings in a CALL classroom. They also noted that students depend more on cellphone-based communication than on computer-based communication, which results in the low computer literacy of the student and consequently a cause of troubles in CALL classroom.

In the following comments, the teacher said that his teaching styles and lesson plans became restricted, but he exercised his ingenuity in lessons.

*Question: In what way, do you use CALL facilities in you lessons?*

*I give my students original materials through the Internet for assignments... But you know, there are not USB slots in the computers set in the CALL classroom, so that students can't bring back the materials to home. I let them send the files to their own address by e-mail...I like to do pair-works or group-works in my lessons, but it is really difficult. I think the CALL classroom is suited to drill-practice-based lessons, but it's not for student-centered lessons. Interaction between human-beings is essential for lessons. I know it's my way of having lessons, but I suppose there are a lot of things that need to be changed in the CALL classroom.*

[ID: 01\_M06, 25 years teaching career]

In the next comment, the teacher said that students' low media literacy could be a cause of delay of lesson progress.

*In every lesson, a lot of time is wasted just to explain how to use computers to students.*

[ID: 02\_M06, 5 years teaching career]

### 3.2 Technology Factor

In this factor, comments about problems stemmed from technologies were coded. They are summarized as follows; a) there is a gap in beliefs about CALL between teachers and engineers, and b) improvement of CALL system made it possible to use a variety of functions, but at the same time, CALL system became complex and difficult to use, and it froze up sometimes. As a result, teachers tend to feel excessive fear to use CALL system in class.

The following example is expressing about a gap in belief of CALL between teachers and engineers.

*I know CALL has a variety of functions that were designed by makers, but I am not sure if I use them for my classes, and there is a mismatch between what our teachers want to do and what companies want to develop and sell.*

[ID: 01\_M03, 25 years teaching career]

Another teacher is expressing about complexity of a system setting. The teacher is good with computers, but tends to be confused in a CALL classroom.

*I am always confused when I use CALL facilities, because there are many kinds of buttons. I can't figure out one from the other.*

[ID: 02\_F01, 6 years teaching career]

### 3.3 Environment Factor

In this factor, comments which had relevance to classroom settings were coded. A lot of teachers were complaining about the difficulty of having interaction with students in a CALL classroom because of the arrangement of chair and desk settings. In the Japanese context, CALL is considered to be useful for teaching a large number of students, and the CALL classroom is thus designed to accommodate around fifty students at the same time. As a result, chairs, desks, and computers are squeezed into a classroom, and then, the arrangement of furniture and computer screens can be causes of impediments to smooth interactions.

*I like to walk around classroom but I can't because of fixed desks and chairs. It's really difficult to have an interaction with students.*

[ID: 01\_F02, 14 years teaching career]

*I can't see students' faces because monitors put them behind.*

[ID: 01\_M04, 16 years teaching career]

### 3.4 Institution Factor

Lastly, Institution Factor was generated with comments concerning a lack of sufficient support for operation and maintenance of CALL classroom

*They (administrative staff) don't care about what is going on in CALL classroom. They don't know about technology so we have to deal with everything.*

[ID: 02\_F01, 6 years teaching career]

*When we have a lesson in the CALL classroom, we have to deal with everything. I don't have time for that. In this sense, we need a center and funding. In the center, a lot of specialized staff including native staff are working in full time. We need such systematic supports to implement CALL.*

[ID: 01\_M06, 25 years teaching career]

#### 4. Discussion

##### 4.1 Research Question 1

Based on the findings, it is possible to illustrate teachers' use of technology in a CALL classroom and perception of CALL facilities as follows: Teachers use CALL facilities in a limited way adjusting their teaching styles or lesson plans to the environmental and technological settings in the CALL classroom. A lot of teachers believe that using computers for foreign education is useful, but CALL facilities are not necessarily utilized as intended and were often regarded as an existence impeding the face-to-face interaction between teachers and students. Teachers also tend to feel excessive fear to use technologies in lessons, because system settings and interface design of CALL facilities are complicated.

##### 4.2 Research Question 2

Through the qualitative analysis, four factors that influence on teachers' use of CALL facilities were identified; a) Human Factor, b) Technology Factor, c) Environment Factor, and d) Institution Factor. Interestingly, in a teacher's talk, a comment related to each factor was treated and discussed separately. As a result, a possible solution that is proposed in teachers' talk tends to focus on a single factor such as buying a cutting edge CALL system or hiring a new staff who is in charge of the CALL classroom. However, working on a single factor at a time to achieve "normalisation" cannot be a good solution to the existing problems. To achieve "normalisation", a perspective that covers all four factors simultaneously is needed.

#### 5. Conclusions and Implications

In this study, we aimed to explore teachers' use of CALL facilities in a real pedagogical context and to identify what factors need to be concerned to achieve "normalisation". As the results, teachers' use of CALL facilities became apparent, and the four factors that influence on teachers' use of CALL facilities were identified. However, an actual teachers' use of technology in a pedagogical context has yet to be fully investigated. In this study, a semi-structured interview was conducted,

but it was not sufficient to know an actual teachers' use of technology and 'contexts' in which teachers involve. An in-depth qualitative approach such as an ethnographic classroom observation is needed for further studies.

Lastly, an implication for future research is now in order. To achieve "normalisation", a holistic perspective that covers all factors simultaneously in a real pedagogical context is needed, and it can be an "ecological perspective" proposed by Tudor (2003). According to Tudor (2003), "an ecological perspective" involves exploring language teaching and learning within the totality of the lives of the various participants involved, and not as one sub-part of their lives which can be examined in isolation" (p. 4). It can thus be concluded that, to achieve "normalisation" when implementing CALL, working on a single factor cannot be a solution to the existing problems. Four factors need to be concerned simultaneously from "an ecological perspective".

#### References

- Bax, S. (2000). Putting technology in its place: ICT in modern foreign language. In K. Field (Ed.), *Issues in modern foreign language teaching*. New York: RoutledgeFalmer.
- Bax, S. (2003). CALL: Past, present and future. *System*, 31, 13-28.
- Bax, S. (2008). *Bridges, chapsticks and shoelaces: 'Normalising' computers and computer technologies in language classrooms*. Keynote speech conducted at the meeting of WorldCALL 2008, Fukuoka, Japan.
- Chambers, A., & Bax, S. (2006). Making CALL work: Towards normalisation. *System*, 34, 465-479.
- Corbin, J., & Strauss, A. (2008). *Basic of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.): London: SAGE.
- Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative, and mixed methodologies*. Oxford: Oxford University Press.
- Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory*. Chicago: Aldine.
- Kessler, G. (2007). Formal and informal CALL preparation and teacher attitude toward technology. *Computer Assisted Language Learning*, 20, 173-188.
- Kuckartz, U. (2007). *MAXQDA 2007* [Computer software]. Berlin, Germany: Verbi Software.
- Lewins, A., & Silver, C. (2007). *Using software in qualitative research: A step-by-step guide*. London: SAGE.
- Tudor, I. (2003). Learning to live with complexity: Towards an ecological perspective on language teaching. *System*, 31, 1-12.
- Yunus, M. M. (2007). Malaysian ESL teachers' use of ICT in their classrooms: Expectations and realities. *ReCALL*, 19, 79-95.
- Zapata, G. C. (2004). Second language instructors and CALL: A multidisciplinary research framework. *Computer Assisted Language Learning*, 17, 339-356.

## Collaborative Development of EFL in Vietnam through Open Source Software

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The University of Aizu, in collaboration with the University of Waikato, has been investigating the use of open source, server-based software for the enhancement of English language instruction in Vietnam. In this paper, we describe recent educational, technical, and English language reforms in Vietnam which have facilitated a new approach to the teaching and learning not only of English, but also Computer Science concepts. The paper concludes with a brief discussion of the efficacy of using open source tools and highly structured instructional approaches for English language teaching in developing nations.

### 1. Introduction

Vietnam is a dynamic, developing country in which educational and technical reforms, coupled with a keen interest in English language teaching have emerged strongly over the past several years. Since 2005 the authors have been collaborating with colleagues in Vietnam to develop web-based approaches to the teaching of English as a Foreign Language (EFL) and more recently to the teaching of Computer Science concepts through the medium of English. This paper describes the Vietnamese context, the current project, and concludes with some overall reflections for integrating language learning and technology in developing nations.

### 2. Educational Reform in Vietnam

In 2001, the Ministry of Education and Training (MOET) introduced the *Education Development Strategic Plan, 2001-2010* (Thang & Quang, 2007), an ambitious strategy for reforming education throughout the country. One of the main objectives of the *Plan* is to substantially improve English language education (Viet Nam News, 2008) so as to increase the competitiveness of Vietnamese education and industry. MOET is developing and introducing new curricula and teaching methodologies at major teacher training colleges and universities so that English can be used in school to teach subject-area content, for example Mathematics or Science. This change is being supported through substantial increases in government funding for education and the training of large numbers of English language teachers. At the same time as education has been changing,

important technical advances have been occurring.

### 3. Technical Change in Vietnam

Inexpensive access to computers and high-speed ADSL (broadband) is available now in most urban centers in Vietnam through Internet cafés and increasingly in homes (InfoBytes, 2007). Between 2000 and late 2007, the percentage of the population using the Internet rose from 0.3% to 20.6%, with the government committed to an Internet penetration of 35% by 2010 (Internet World Stats, 2008). In addition, there is increasing use of computers in education and a growing enthusiasm for e-learning throughout Vietnamese education. However, the fact still remains that access to affordable, flexible software tools and appropriate educational content is needed. Open source software and open educational resources (OER) provide promising solutions.

### 4. Access to Software and Content

Open source software is created by communities of developers who make not only their source code available but who also share bug ‘fixes’. Software costs can be lower in the open source environment, but importantly, people who participate in the development or refinement of open source software become part of a global community of authors and users. One could argue that it is this access to and sharing of knowledge which makes the open source software approach so powerful.

The term “open educational resources” (OER) refers to the international availability and sharing of educational content and expertise (UNESCO,

2002). OER “are digitised materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning and research” (OECD, 2007, p. 131) and can include courseware and content, software tools, material for e-learning capacity building of staff, repositories of learning objects, and free educational courses. The OER has emerged out of a desire to promote equality of access to resources for teachers and learners in developed and developing economies (Downes, 2007; OECD, 2007). It is the integration of these key themes – educational reform, technical change, and the availability of open source/ open educational resources – that has led to our current work in Vietnam.

### **5. FLAX (open source software) Project**

The FLAX software project is based at the University of Waikato in New Zealand. The overall aim of the project is to produce an open source software tool to automate the production and delivery of practice exercises for English-language learners. FLAX uses the Greenstone digital library software (Witten, Loots, Trujillo, & Bainbridge, 2001) to organize authentic texts and multimedia resources as input for genre-specific language exercises. FLAX consists of individual and collaborative language tools which incorporate dynamic content from digital library and Internet sources. Exercise types include, for example, jumbled sentences, matching words, predicting words, image guessing, and content word guessing. Recently a Moodle plug-in for FLAX has been developed with a simple user interface so that teachers can select from different exercise types and develop language learning tasks tailored to specific classroom needs.

### **6. The Project at FPT University, Vietnam**

The FPT Corporation, Vietnam, provides outsourcing services for the Japanese IT industry, which is currently experiencing an acute shortage of qualified software programmers. FPT University requires four years of language study in Japanese and English for all its students. Moreover, FPT wants students to have on-the-job training in Japan and/or to join exchange programs with Japanese universities in order to prepare for management positions in Vietnam or to work for FPT in Japan.

The Japan Society for the Promotion of Science (JSPS) has recently funded a 3-year project at the University of Aizu in which FLAX and Moodle will be used to support and integrate English language learning with computer science content. The project has three major goals: to implement

new language tools that are based on the Greenstone digital library and FLAX; to integrate the language goals of English courses with fundamental computer science concepts in a course called *Logic Circuit Designs* within a blended learning environment in Moodle; and to implement the system locally in Japan before trialling it in Vietnam. Not only are the content schemata relevant to computer science, but also the computer science genre has formal, specific linguistic features that can be dealt with explicitly in FLAX. Additionally, and consistent with best practice online pedagogy (Brine & Turk, 2006; Clarebout & Elen, 2008), a structured, collaborative approach to student work is being used within the Moodle environment.

### **7. Discussion**

The promise of technology to transform learning and the reality of its limitations have been discussed often in academic literature (Goldberg & Riemer, 2006; Johnson & Walker, 2007). Significantly the most persistent constraints within e-learning appear to be at the personal, not technical level (Kopyc, 2006). These insights have led us to develop strategies for the use of open educational resources within emerging e-learning environments that focus on structured, collaborative ‘learning-by-doing’ approaches to instructional design. Even among teachers and students who do possess technical skills, a coherent approach to the interaction of technical, curricular, and pedagogical levels of expertise needs to be developed explicitly and in identifiable stages. We believe that through such coordinated efforts that language teaching and learning within technology-supported environments will achieve success in developing countries.

### **References**

- Brine, J., & Turk, D. (2006). Group work and role rotation using a learning management system in a Japanese computer science university. *Proceedings of the Sixth International Conference on Advanced Learning Technologies (ICALT'06)*.
- Clarebout, G., & Elen, J. (2008). Advice on tool use in open learning environments. *Journal of Educational Multimedia and Hypermedia*, 17(1), 81-97.
- Downes, S. (2007). Models for sustainable open educational resources. *Interdisciplinary Journal of Knowledge and Learning Objects*, 3, 29-44.
- Goldberg, A. K., & Riemer, F. J. (2006). All aboard - destination unknown: A sociological discussion of online learning. *Educational Technology & Society*, 9(4), 166-172.
- Info Bytes (2007). *Telecom doubles subscribers*. Retrieved June 9, 2008, from

<http://vietnamnews.vnagency.com.vn/showarticle.php?num=01INF270107>

- Internet World Stats (2008). *Vietnam Internet usage stats and marketing report*. Retrieved June 9, 2008, from <http://www.internetworldstats.com/asia/vn.htm>
- Johnson, E. M., & Walker, R. M. (2007). The promise and practice of e-learning within complex tertiary environments. In J. M. Spector et al. (Eds.), *Proceedings of the International Conference on Advanced Learning Technologies (ICALT 2007)*, 753-757. Los Alamitos, CA: IEEE Computer Society (0-7695-2916-X).
- Kopyc, S. (2006). Enhancing teaching with technology: Are we there yet? *Innovate: Journal of Online Education*. Retrieved December 5, 2006, from <http://www.innovateonline.info/index.php?view=article&id=74..>
- OECD. (2007). *Giving knowledge for free: The emergence of open educational resources*. OECD Education & Skills. Paris, France: Organisation for Economic Co-Operation and Development.
- Thang, N. N., & Quang, T. (2007). International briefing 18: Training and development in Vietnam. *International Journal of Training and Development*, 11(2), 139-149.
- UNESCO (2002). *Forum on the impact of open courseware for higher education in developing countries (final report)*. Paris, France: <http://www.wcet.info/resources/publications/unescofinalreport.pdf>
- Viet Nam News (07-01-2008). *Education gets dissected*. Retrieved June 6, 2008, from <http://en.moet.gov.vn/?page=6.4&view=3461>
- Witten, I. H., Loots, M., Trujillo, M. F. & Bainbridge, D. (2001). The promise of digital libraries in developing countries. *Communications of the ACM*, 55(5), 82-85.

## A natural-language paraphrase generator for on-line monitoring and commenting incremental sentence construction by L2 learners of German

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Certain categories of language learners need feedback on the grammatical structure of sentences they wish to produce. In contrast with the usual NLP approach to this problem—parsing student-generated texts—we propose a generation-based approach aiming at preventing errors (“scaffolding”). In our ICALL system, students construct sentences by composing syntactic trees out of lexically anchored “treelets” via a graphical drag&drop user interface. A natural-language generator computes all possible grammatically well-formed sentences entailed by the student-composed tree, and intervenes immediately when the latter tree does not belong to the set of well-formed alternatives. Feedback is based on comparisons between the student-composed tree and the well-formed set. Frequently occurring errors are handled in terms of “malrules.” The system (implemented in JAVA and C++) currently focuses constituent order in German as L2.

### 1. Motivation

Certain categories of language learners, at varying levels of proficiency, rely on explicit L2 grammatical knowledge. This raises the question how and when ICALL (Intelligent Computer-Assisted Language Learning) systems should provide feedback on the grammatical structure of L2 sentences students wish to produce—for instance, in an essay writing exercise.

The usual NLP approach to this problem is based on *parsing*. After the student has typed a sentence, the parser evaluates it and provides feedback on the grammatical quality. The more errors a sentence contains, the less accurate the feedback is, due to the many correction options in the parser.

We propose a *generation*-based approach aiming at the prevention of errors (“*scaffolding*”). Students construct sentences incrementally, and the ICALL system intervenes immediately when they try to build an ill-formed structure. We use a natural-language sentence and paraphrase generator with a graphical drag&drop user interface.

The student drags words into a workspace where their grammatical properties are displayed in the form of syntactic treelets as defined in the lexicalized *Performance Grammar* (PG) formalism (Harbusch & Kempen, 2002; Kempen & Harbusch, 2003). In the workspace, the student can combine treelets by moving the root of one treelet to a foot of another treelet (see Section 3.2). In the generator, this triggers a unification process that evaluates the quality of the intended structure. If the latter is licensed by the generator’s syntax, the tree grows and

a larger phrase-structure tree is displayed. In case of licensing failure, the generator informs the student about the reason(s). This feedback follows directly from the unification requirements.

The system presented here focuses on constituent order in German as L2 and checks correctness of attempted orderings. Feedback is based on the (in)correctly applied L2 ordering rules. Additionally, typical errors due to intrusions from L1 (currently English) are handled by *malrules*. The paraphrase generator (briefly *paraphraser*) can provide the student with the correct ordering(s) on demand.

The paper is organized as follows. In the next Section, we outline the state of the art in ICALL systems for essay writing based on natural-language processing (NLP) techniques. In Section 3, we present our generation-based L2-learning system called COMPASS-II.<sup>1</sup> We first sketch the underlying grammatical formalism (PG). Then we describe the generator subserving the sentence construction process and show an example of feedback while the system is at work. In final Section 4, we take stock and discuss present and future work.

### 2. State of the art in ICALL writing tools

Computer-supported learning of how to write essays in L1 and L2 figures prominently in the ICALL literature. Due to space limitation, we cannot review systems working with canned texts. In-

<sup>1</sup> COMPASS is an acronym for COMbinatorial and PARaphrastic ASsembly of SENTence STRucture. “II” refers to an improved version, implemented in JAVA and C++, of the COMPASS system described by Harbusch *et al.* (2007).

stead, we focus the question of how the deployment of *natural-language processing (NLP) techniques*, in particular *parsing* and *generation*, can support students in writing novel sentences that are grammatically correct.

Virtually the entire literature on NLP applications to the syntactic aspects of first- and second-language teaching is based on parsing technology (Heift & Schulze, 2003). A *parser* computes the syntactic structure, possibly in combination with the semantic content of input sentences (provided that all words in the sentence are in the vocabulary, that all grammatical constructions are spelled out by grammar rules, and that the input does not contain any errors). However, all these systems struggle with ungrammatical input. They all have to take measures preventing the parsing quality from getting unacceptably poor. For example, in the *FreeText* system (L'haire & Vandeventer Falin, 2003), the syntactic-semantic analysis is supplemented with *constraint relaxation* and *sentence comparison*. Other systems invoke matches with corpus texts (e.g. Granger, 2004). Yet another option is the addition of malrules to cover frequent errors (e.g. Fortmann & Forst, 2004). Another problem is caused by ambiguities. Hardly any sentence can be parsed unambiguously (cf. the proverbial *Time flies like an arrow*, for which Wikipedia lists no less than seven different interpretations). Hence, it is notoriously difficult to produce highly reliable feedback based on the parsing results.

To our knowledge, currently no *generator-based* software tool exists capable of evaluating the grammatical quality of student output. A generator produces a sentence or a set of paraphrases from an abstract representation of the content, often called *logical form* (see Reiter & Dale, 2000, for an authoritative overview of sentence and text generation technology). In the case of paraphrase generation, the generator delivers all possible ways of linguistically realizing the input logical form, given the lexicon and the grammar rules. However, virtually all natural language generation systems work in a best-first manner and produce only one output sentence rather than the set of all paraphrases. As it is not so easy to change the control structure of such a system, the choice of generators is very limited. Zamorano Mansilla's (2004) project is the only one that applied a sentence generator (KPML; Bateman, 1997) to the recognition and diagnosis of writing errors ("fill-in-the-blank" exercises). Zock & Quint (2004) converted an electronic dictionary into a drill tutor. Exercises were produced by a goal-driven, template-based sentence generator, with Japanese as the target language.

### 3. Incremental sentence production based on natural-language generation

In this Section, we first sketch the grammar formalism of COMPASS-II and its graphical user interface. Then, we describe the paraphraser and run a stepwise demo illustrating the system's feedback for a sentence under construction.

#### 3.1 The Performance Grammar formalism

COMPASS-II is based on the *Performance Grammar (PG)* formalism, which is well suited to express fine-grained word-order rules in Dutch and German. Moreover, these rules can easily be tailored to other languages, in particular English. PG is a declarative syntax formalism where the hierarchical structure of a sentence is kept separate from its linear structure. PG's key operation is *typed feature unification*. Figure 1 illustrates an *elementary treelet* (also called *lexical frame*) for the wordform *Junge* 'boy'. The second layer represents grammatical functions (e.g., "hd" for *head*). Phrasal leave nodes (e.g. "ADJP" for *adjectival phrase* in the function of modifier) can be expanded by an appropriate treelet whose root node carries the same label (Figure 2).

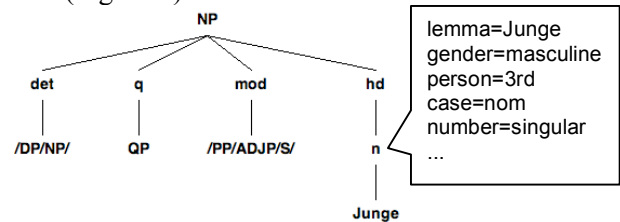


Figure 1. Elementary treelet for the lexical anchor *Junge*. The box associated with the wordclass of the head shows a subset of this node's morpho-syntactic features.

Slashes represent alternative options.

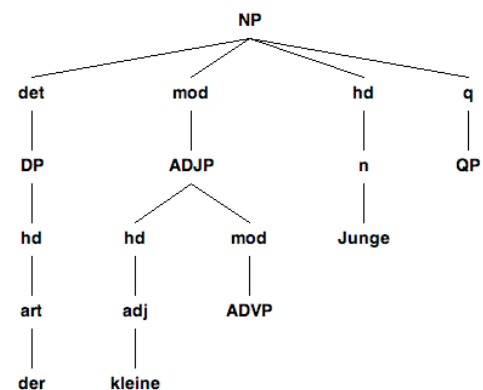


Figure 2. Well-formed tree for *der kleine Junge* 'the little boy': Appropriate DP and ADJP treelets have been unified at two leaves of the *Junge* treelet (cf. Figure 1). The Quantifier Phrase (QP) has no unification partner. Word order is not yet defined (see remainder of Section 3.1).

Associated with every treelet is a *topology*. Topologies serve to assign a left-to-right order to the branches of lexical frames. Here, we only illustrate



the topologies for verb frames (clauses).

- (1) Was will der kleine Junge dass ich sage?  
 what wants the little boy that I say  
 ‘What does the little boy want me to say?’

F1	M1	M2	...	M6	E1	E2
•	will	der kleine Junge				•
↑						↑
Was	dass	ich		sage		

The slot labeled F1 makes up the Forefield (from German Vorfeld), M1-M6 the Midfield (Mittelfeld), and E1 and E2 the Endfield (Nachfeld). Every constituent (subject, head, direct object, complement, etc.) has a small number of placement options, i.e. slots in the topology associated with its “own” clause. For instance, the finite verb of a main clause goes to M2 whereas in subordinate clauses it goes to M6.

How is the Direct Object NP *was* ‘what’ “extracted” from the complement clause and “promoted” into the main clause? Movement of phrases between clauses is due to *lateral topology sharing*. If a sentence contains more than one verb, each of their lexical frames instantiates its own topology. This applies to verbs of any type—main, auxiliary or copula. In such cases, the topologies are allowed to *share* identically labeled lateral (i.e. left- and/or right-peripheral) slots, conditionally upon several restrictions (not to be explained here; but see Harbusch & Kempen, 2002). *After two slots have been shared, they are no longer distinguishable; in fact, they are unified and become the same object*. In example (1), the embedded topology shares its F1 slot with the F1 slot of the matrix clause. This is indicated by the dashed borders of the bottom F1 slot. Sharing the F1 slots effectively causes the embedded Direct Object *was* to be *preposed* into the main clause (black dot in F1 above the single arrow in (1)). The dot in E2 above the double arrow marks the position selected by the finite complement clause (cf. Figure 3).

### 3.2 “Scaffolded” writing with COMPASS-II

The paraphrase generator of COMPASS-II can produce all linear order variants licensed by the most important word order rules of German. The generator takes as input tentative syntactic trees constructed by the student through a graphical direct-manipulation (“drag&drop”) user interface.

The student drags words into a workspace where their grammatical properties are displayed in the form of PG treelets (cf. Figure 1). In the workspace, the student can combine treelets by moving the root of one treelet to a foot of another treelet. In the paraphraser, this triggers a unification process that evaluates the quality of the intended structure. If the

latter is licensed by the paraphraser’s syntax, the tree grows and the resulting larger tree is displayed (cf. Figure 2).

In case of licensing failure, the paraphraser informs the student about the reason(s). This feedback follows directly from the unification requirements. For instance, when a student tries to unify the genitive article *des* with the DP leaf node of the nominative noun *Junge*, the *des* treelet would refuse to be unified, thus warning the student that there is a feature mismatch.

Moreover, the system calculates on demand all possible correct sentences—in particular all word-order variations. This action is triggered when the student orders the branches from left to right—either by dragging nodes around or by editing the leaf string, which appears in a special word-order window. (This also allows, among other things, to agglutinate *zu dem* ‘to the’ to *zum*.) Figure 3 displays the resulting order for sentence (1) in terms of the topological slot positions defined in PG. Currently, we show such trees only to advanced students. In order to tailor the feedback to the level of a beginner, we will revise this window to give more verbose tutoring feedback.

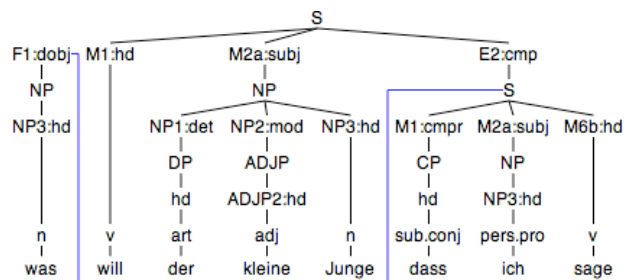


Figure 3. Ordered tree spelling out the topological array positions for sentence (1) (*was* goes to top level F1).

Moreover, COMPASS-II runs a small set of *malrules* that derive from typical errors users make. These malrules can be spelled out for unification and for word ordering. For instance, the erroneous string *der kleiner Junge* is “accepted” by the system but triggers a negative feedback message. (The correct string is *der kleine Junge*; the confusion arises from the correct *ein kleiner Junge* ‘a little boy’).

With respect to word order, malrules refer to typical differences between L1 and L2. For instance, one rule “allows” ungrammatical verb-second word-order in German subordinate clauses (most of which are clause-final rather than verb-second), but it triggers an error message if the student-produced sentence conforms to it. Figure 4 displays the overall system at work for clause (2) where the student uses an English word-order rule.

- (2) Heute Anja baut eine Rakete  
 Today Anja builds a rocket

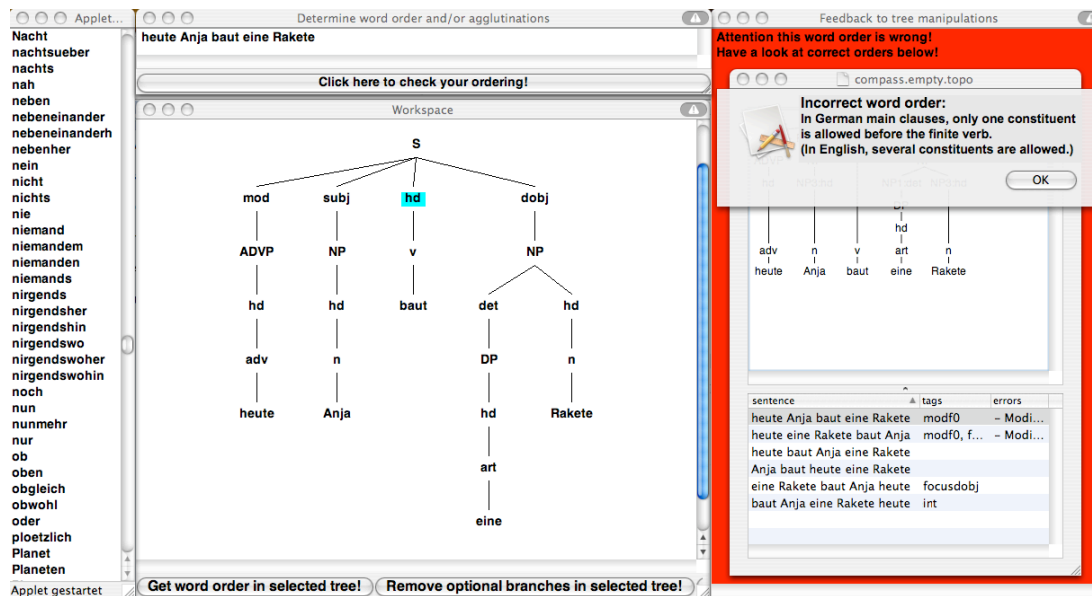


Figure 4. Snapshot of the first system response to the incorrect word order in sentence (2).

The left window shows the system's *word list*. Lexical frames (treelets) corresponding to selected words appear in the big window in the middle column. This window is the workspace where the student can combine and edit the selected treelets. The resulting leaf strings are automatically shown in the small window at the top. The student can edit these strings by typing or cut&paste. A button in this window ("Click here ...") activates paraphraser and word-order checks. The right panel immediately provides the feedback (here in red, signalling an error). The six sentences at the bottom of this panel (currently not shown to students) enumerate all orders (including those yielded by a malrule; cf. (2)).

#### 4. Discussion

We view the current version of the COMPASS-II as the prototype of an "engine" that can drive the automatic evaluation and diagnosis of sentences produced by L2 students of German. Applying the system in the classroom will require tailoring it to the requirements imposed by specific exercises and specific student populations.

In additional future work, we may target another class of constructions that are problematic for L2 students of German: *elliptical forms of coordinate structures*. Most of the linguistic and computational groundwork for a PG treatment of these ellipsis types in German has been laid (Kempen, in press; Harbusch & Kempen, 2006, 2007) and provides a suitable starting point for an ICALL application.

#### References

- Bateman, J.A. (1997). Enabling technology for multilingual natural language generation. *Natural Language Engineering*, 3:5-55.
- Delmonte, R., Delcloque, P., & Tonelli, S. (Eds.) (2004). *Procs. of InSTIL/ICALL2004 Symposium*, Venice.
- Granger, S. (2004). Computer learner corpus research: Current status and future prospects. In Connor, U., & Upton, T. (Eds.). *Applied Corpus Linguistics: A Multidimensional Perspective*. Amsterdam: Rodopi.
- Fortmann, C., & Forst, M. (2004). An LFG Grammar Checker for CALL. In (Delmonte *et al.*, 2004).
- Harbusch, K., & Kempen, G. (2002). A quantitative model of word order and movement in English, Dutch and German complement constructions. In *Procs. of 19<sup>th</sup> COLING*, Taipei.
- Harbusch, K., & Kempen, G. (2006). ELLEIPO: A module that computes coordinative ellipsis for language generators that don't. In *Procs. of 11<sup>th</sup> EAFL*, Trento.
- Harbusch, K., & Kempen, G. (2007). Clausal coordinate ellipsis in German. In *Procs. of 16<sup>th</sup> NODALIDA*, Tartu.
- Harbusch, K., Kempen, G., van Breugel, C., Koch, U. (2006). A generation-oriented workbench for Performance Grammar. In *Procs. of 4<sup>th</sup> INGL*, Sydney.
- Harbusch, K., van Breugel, C., Koch, U., & Kempen, G. (2007). Interactive sentence combining and paraphrasing in support of integrated writing and grammar instruction. In *Procs. of the 11<sup>th</sup> ENLG*, Dagstuhl.
- Heift, T., & Schulze, M. (Eds.) (2003). Error diagnosis and error correction in CALL. *CALICO Journal*, 20.
- Kempen, G. (in press). Clausal coordination and coordinate ellipsis in a model of the speaker. *Linguistics*.
- Kempen, G., & Harbusch, K. (2003). Dutch and German verb constructions in Performance Grammar. In Seuren, P.A.M., & Kempen, G. (Eds.), *Verb Constructions in German and Dutch*. Amsterdam: Benjamins.
- L'haire, S., & Vandeventer Faltn, M. (2003). Error diagnosis in the FreeText project. In (Heift & Schulze, 2003).
- Reiter, E., & Dale, R. (2000). *Building applied natural language generation systems*. New York: Cambridge University Press.
- Zamorano Mansilla, J.R. (2004). Text generators, error analysis and feedback. In (Delmonte *et al.*, 2004).
- Zock, M., & Quint, J. (2004). Converting an Electronic Dictionary into a Drill Tutor. In (Delmonte *et al.*, 2004).

## The Effects of “CALL-alone” and “CALL-plus”: L2 Vocabulary Gains and Learners’ Attitudes

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The present study investigated the effects of CALL-alone and CALL-plus exercises and learners’ attitudinal differences between them. CALL-plus was operationalized by giving learners two types of review tests, original sentence writing and L1/L2 matching, based on the vocabulary they had studied with CALL. CALL-alone was not provided with any review tests. The results for word gains showed that CALL-alone yielded a significant increase in receptive vocabulary as good as CALL-plus, but not for productive vocabulary, suggesting that CALL-alone was not sufficient for developing productive knowledge of vocabulary. There were no significant differences in learners’ attitudinal responses between CALL-alone and CALL-plus except in two questions. Learners in CALL-plus were encouraged to study for a longer time and wanted to challenge higher levels of vocabulary. In contrast, some learners in CALL-alone seemed to lose interest in self-study CALL as time went by.

### 1. Introduction

Several studies have shown the effects of CALL-based vocabulary learning. For example, Kawauchi, Kamimoto, & Nagasawa (2005) showed CALL-based vocabulary learning at a certain level facilitated learning at other vocabulary levels. Kawauchi (2006a, 2006b) also showed that the effects were greater for lower proficiency learners. However, some learners reported in the questionnaire that CALL-alone did not give them a sense of gaining productive knowledge of vocabulary (Kawauchi et al, 2005). In fact, most of the exercises used in CALL are based on receptive types of exercises such as multiple-choice questions and matching questions. In order to develop both receptive and productive knowledge of words, CALL-alone might not be sufficient, and some sort of productive exercises will be necessary in the classroom.

However, developing productive knowledge of vocabulary is not so easy. Laufer and Goldstein (2004) showed the difficulty order of vocabulary knowledge based on Recall and Recognition. They found Active Recall, that is, translations from L1 to L2 words, as the most difficult, and the Recognition type, such as selecting correct L2 or L1 translations, as the least difficult tasks for learners. They also stated that even a small increase in the ability to recall words productively would imply a much larger increase in recognition vocabulary.

According to Hulstijn and Laufer (2001),

productive knowledge, such as writing original sentences with target words, involves deeper semantic processing, hence facilitating vocabulary learning. In fact, Webb (2005) showed some empirical support for the effect of productive exercises. In his study, writing an original sentence yielded higher scores in spelling, meaning, grammar, and association than reading three sentences with the target word included.

On the other hand, Folse (2006) showed another finding. He used three types of written exercises: a fill-in-the-blank exercise requiring the single input of each target word, a set of three fill-in-the-blank exercises requiring a corresponding multiple input of each target word, and a single original-sentence-writing exercise using the target word. The results indicated that the words practiced under the three fill-in-the-blank exercises showed better retention than those tested in either the single fill-in-the-blank exercise or the original-sentence-writing exercise. This finding suggests that the important feature of an L2 vocabulary exercise is not the depth of word processing like writing an original sentence, but how often the word is required to be retrieved. Thus, conflicting results have been shown.

Moreover, little research has been done on how these exercises can be combined with CALL and what effects can be seen. In addition, learner attitudes and perceptions toward CALL need to be carefully examined, since these are one of the

influential factors that make CALL successful and lead students to become autonomous learners.

The present study investigated the following two research questions:

- (1) What are the effects of CALL-alone and CALL-plus exercises on L2 vocabulary gains?
- (2) What are learners' attitudinal differences between CALL-alone and CALL-plus exercises?

## **2. Method**

### *2.1 Participants*

A total of 67 Japanese learners of English participated in this study. They were all first-year non-English major students and were divided into three groups, Groups A, B, and C. They were instructed to study 1,000 words in the period of 10 weeks using the CALL program *PowerWords*.

### *2.2 The CALL-program "PowerWords"*

The program *PowerWords* was developed by a Japanese company, ALC (2001), and is now widely used in Japan. This program consists of the Standard Vocabulary List based on the British National Corpus and several corpora for Japanese learners. There are 12 vocabulary levels in this list, with each level containing 1,000 words. In this study Level 3, or the 3,000-word level, was used. Each word is practiced in 3 ways: translation from L1 to L2, translations from L2 to L1 - both in multiple choice questions, and finally spelling in fill-in-the-blank questions. All the learners were required to practice 100 words each week that the teacher had specified as the words for the week.

When learners made two successive mistakes using a given word, that word was automatically listed on the blacklist for later practice. The number of words on the blacklist will be discussed later in relation to vocabulary gains.

### *2.3 CALL-alone and CALL-plus*

CALL-plus here involved a short vocabulary review test given every week in class. Two types of review tests were made based on 100 words students had studied with CALL in the previous week. One type required learners to write original sentences using 10 target words out of 100 words. The other type asked them to match 20 target words with appropriate L1 translations. Group A was given the original-sentence- writing test, and Group B the matching test.

Group C was a CALL-alone group. Learners were not given any review tests but told to review the words of the week as individual work using CALL. Fifteen to 20 minutes of class time were

given to all the groups for these exercises.

### *2.4 Pre- and post-tests*

In order to examine RQ1, the receptive and productive tests were made from the 3,000-word level to be studied with CALL. The test formats followed the Vocabulary Levels Test (VLT) and the Productive Vocabulary Test (PVT) by Nation (2001). Thirty words were selected: 15 nouns, 10 verbs, and 5 adjectives/adverbs. All these words were also used as part of the review tests in the CALL-plus groups. These 30 words were tested both in the receptive and productive tests. To observe a possible delayed effect, the same test was given 10 weeks after the post-test.

Regarding scoring criteria for the productive test, only correctly spelled words were counted, although morphological errors in tense and singular/plural changes were ignored.

### *2.5 Questionnaire*

Immediately after the post-test, a questionnaire was given. (For details, see the results section). A total of 10 questions were asked to the students in order to see their attitudes and perceptions about vocabulary learning through CALL.

## **3. Results and Discussion**

### *3.1 Effects of CALL-alone and CALL-plus on vocabulary gains*

First of all, it is necessary to examine the equivalence of the learners in the three groups. The results of the pre-tests were used for this. There were no significant differences among the three groups both in the receptive ( $F=0.227$ ,  $p=0.798$ ) or productive ( $F=2.39$ ,  $p=0.10$ ) tests. This implies that all the learners in this study had similar vocabulary levels at the beginning. Thus, it seems fair to compare these groups to see the effects of the vocabulary exercises.

Table 1 shows the results of the post-tests for the CALL-alone and CALL-plus groups. There was no significant difference for the receptive vocabulary between the three groups. This suggests that both CALL-alone and CALL-plus were equally effective in developing receptive vocabulary knowledge. On the other hand, the results for productive vocabulary indicated a significant difference, and the post-hoc test revealed that Group A significantly differed from Group C. This means that to develop productive knowledge of vocabulary, CALL-alone may not be as good as CALL-plus. It seems necessary to provide some sort of additional exercises. There was, however, no significant difference between Groups A and B,

who completed the two types of CALL-plus exercises. In spite of the fact that sentence-writing exercises, such as the one given for Group A, has been claimed to involve deeper semantic processing, and hence, facilitate vocabulary learning, this exercise did not necessarily show a distinctive effect.

Table 1. Results of Post-Tests

	Receptive Post (SD)	Productive Post (SD)
CALL-plus	28.64	12.68
Group A	(2.24)	(6.56)
% Correct	95.5%	42.3%
CALL-plus	27.96	10.65
Group B	(3.22)	(6.11)
% Correct	93.2%	35.5%
CALL-alone	27.45	8.00
Group C	(3.91)	(5.83)
% Correct	91.5%	26.7%
<i>F</i>	1.07ns	3.18*
		Group A>C
		* $p < .05$

As for the delayed test, the results for the receptive test showed no significant difference among three groups ( $F=.117$ ,  $p=0.19$ ), suggesting that receptive knowledge of vocabulary is retained regardless of practice type. The result for the productive test failed to reach the significant level ( $F=3.01$ ,  $p=0.056$ ), but the  $F$  value nearly achieved significance. It can be said that there is a strong tendency that Group A also had better retention than Group C.

### 3.2 Attitudinal differences between CALL-alone and CALL-plus

There were no significant differences in learners' attitudinal responses between CALL-alone (Group C) and CALL-plus (Groups A and B) except in two questions. Learners in CALL-plus responded that they wanted to spend a longer time using CALL ("How long do you think is adequate for CALL at one time?") ( $t=2.31$ ,  $p=.02$ ) and wanted to target higher levels ("Which level do you want to study as a target?") ( $t=2.09$ ,  $p=.04$ ). Thus, learners in the CALL-plus groups seem to have been encouraged to study longer and to challenge higher levels. Moreover, they indicated a significant correlation between the post receptive scores and "a sense of vocabulary increase" ("Do you think your vocabulary increased?") ( $r=.42^*$ ). In contrast, CALL-alone showed negative correlations between the number of blacklisted words and "a sense of vocabulary increase" ( $r=-.59^*$ ) and between the

blacklisted words and the "usefulness of *PowerWords*" ("Do you think *PowerWords* is useful?") ( $r=-.44^*$ ). These results indicate that some learners in this group may lose interest in CALL as time goes by, suggesting that the number of blacklisted words may serve as an indicator of learner motivation level.

## 4. Conclusions

As for developing receptive vocabulary, CALL-alone is as effective as CALL-plus. To put it another way, CALL-alone is sufficient for developing receptive vocabulary knowledge. However, when it comes to productive vocabulary, CALL-alone seems to be insufficient. It is necessary to provide some sort of additional exercises such as original sentence writing and/or matching exercises as used in this study. However, the effects of these exercises are not significantly different. In other words, even recognition types of matching tests seem to be as good as productive types of sentence-writing tests. This finding partly supports Folse (2006) who claimed that the depth of vocabulary processing through writing original sentences is not always better for vocabulary retention.

Learners in CALL-plus seem to be encouraged to become more challenging than learners in CALL-alone. In contrast, learners in CALL-alone may lose interest in CALL unless they receive more incentives. There are two proportionally related factors shared by all the learners: a sense of enjoying CALL and a sense of vocabulary increase. In other words, the success of CALL is dependent upon these two factors.

## References

- ALC (Ed.).(2001). Standard vocabulary list. Available at <http://www.alc.co.jp/goi/>. Tokyo: ALC.
- Folse, K. S. (2006). The effect of types of written exercise on L2 vocabulary retention. *TESOL Quarterly*, 40, 272-293.
- Hulstijn, J. H., & Laufer, B. (2001). Some empirical evidence for the involvement load hypothesis in vocabulary acquisition. *Language Learning*, 51, 539-558.
- Kawauchi, C., Kamimoto, T., & Nagasawa, S. (2005). CALL-based vocabulary learning: The effectiveness of using *PowerWords*. *Kurume University Bulletin of the Institute of Foreign Language Education*, 12, 39-71.
- Kawauchi, C. (2006a). The effects of CALL-based vocabulary learning: Focusing on learners' vocabulary levels, practice levels, and proficiency differences. *Kurume University Bulletin of the Institute of Foreign Language Education*, 13, 107-124.

- Kawauchi, C. (2006b). The effect of CALL-based vocabulary learning as self study: Focusing on proficiency differences. *Language Education & Technology, 43*, 21-38.
- Laufer, B., & Goldstein, Z. (2004). Testing vocabulary knowledge: Size, strength, and computer adaptiveness. *Language Learning, 54*, 399-436.
- Laufer, B., & Nation, P. (1999). A vocabulary-size test of controlled productive ability. *Language Testing, 16*, 35-51.
- Nation, P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.
- Webb, S. (2005). Receptive and productive vocabulary learning. *Studies in Second Language Learning, 27*, 33-52.

## Practical Report on Enhancing English Ability through the Effective Use of CALL

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The present study investigated the effectiveness of CALL in raising student motivation, and improving English skills. The first portion of each class was devoted to self-learning, during which students focused on vocabulary building and improving English skills using pre-installed software. This was followed by teacher-centered activities. Students then searched the Web for texts of interest to them, about which they wrote essays with the aid of Internet dictionary sites. The students' English ability was examined at the beginning and the end of the academic year. Student feedback was also solicited with questionnaires. Considerable improvements were seen in the students' English ability. On the questionnaires the students described a dramatic rise in their motivation to learn English, as well as a sense that their reading and writing skills had greatly improved. Particularly noteworthy was that they reported greater enjoyment in learning English. These results suggest that CALL, employing both self-learning and teacher-centered activities, can heighten student interest in learning English as it increases their actual English-language skills.

### 1. Introduction

This study is a practical report on teaching English skills using the multimedia and CALL classrooms and e-learning system available at Doshisha University.

### 2. Background of e-learning at Doshisha University

In the fall semester of 2006 Doshisha University introduced an e-learning system, the ALC NetAcademy 2 (Super Standard Course and PowerWord Course), making it available through the university web site so that it could be accessed by students both at home and at the university, thereby encouraging and facilitating the study of English. In addition, all English instructors were encouraged to use the system in their English classes.

### 3. Description of the Classroom Situation

The present class was held during 2007, the second year in which CALL was taught at Doshisha using the newly established e-learning system. In 2006, although the e-learning system was accepted positively by most students, a few ignored it or were reluctant to learn it. Consequently a gap developed among the students.

For this reason the teaching plan was revised in 2007, with a compulsory minimum-line system

introduced for the PowerWord Course as an obligatory activity. Another innovation was use of the Moodle. The students were required to open the Moodle page every week and encouraged to complete the week's task—small quizzes—for five units in the PowerWord Course. In this way required activities were increased in the students' self-learning portion to try to attain more balance between compulsory and free activity.

The English workshop was a required class for second year, non-English major students, but students could also elect the class. The class was marked by great diversity, with students coming from various departments and possessing various levels of English and PC skills, and various motivations for taking the class.

### 4. CALL Class Goals

The goal of this class was 1) to increase reading, listening, and writing ability through the effective use of computers, 2) to increase touch typing and writing skills, 3) to foster report writing skills through effective use of the Internet for searching, collecting, and organizing information relevant to the topic taught in class, and 4) to raise English output levels.

### 5. Teaching Materials

Two textbooks were used as teaching materials:

*ABC World News 9* (spring semester) and *Understanding the News in English* (fall semester). For the students' self-learning materials, pre-installed *NetAcademy 2* and *Mika Type* (free ware) were used throughout the year.

### 6. Classroom Content/Activity

Each class consisted of roughly three parts: 1) a ten-minute speed-typing game to teach the students touch-typing skills, followed by learner-centered self-learning time; 2) teacher-centered formal instruction; 3) learner-centered activity (searching the Internet after the students were informed of the homework assignment). The class timeline was ninety minutes, during which the students studied the teacher's instructions and the topic of the week, thought about their approach to the topic, and started searching the Internet. Class time was always up before they could finish the report, hence the actual writing was usually done as their homework for the week.

### 7. Teacher-centered Instruction

This portion consisted of three main parts: 1) content input using videos and introducing subject matter and keywords; 2) form input with instruction on the written report using handouts; 3) assignment of the essay topic based on news reports. During the teacher-centered instruction students were not allowed to use their computers and had to concentrate on the textbook, except when listening to the CD attached to the textbook and doing the dictation part.

The students' essays were returned with the teacher's written responses, which consisted of positive feedback with the emphasis on the organization and the content. The importance of the quantity of information in the report was emphasized. The best report was shown to the class with the OHC to stimulate and encourage the students with good examples.

### 8. Results (1)

The results of the class will be discussed with regard to three criteria. The first is the results of the pre-tests and post-tests in the C-test and the twenty-minute speed-writing activity.

The C-test is a kind of cloz test developed by the JACET Kansai Chapter Research Group on Teaching Writing, and widely used in the Kansai area. In the twenty-minute speed writing activity (a kind of volume practice) the students are asked to write as many words as possible in a twenty-minute period. Below are the results of the tests. The students' mean scores increased over the year in

which the class was held.

Table 1. Change of the mean scores

	Pre-test	Post-test	Gain
C-Test	44.76	53.43	8.7
Speed Writing	81.09	113.45	32.36

C-test: n=21, Speed writing: n=22

Next the change in the students' scores for both the C-test and the twenty-minute speed-writing test between the pre- and post-tests were analyzed by a two-tailed paired *t*-test. The results were as follows.

Table 2. The results of the *t*-tests

	<i>df</i>	<i>t</i>
C-Test	20	-2.271*
Speed Writing	21	-3.899**

\* $p < 0.05$ , \*\* $p < 0.01$

The results show that improvements in both the C-test and speed-writing activity were statistically significant at \* $p < .05$ , \*\* $p < .01$  respectively. Thus the students showed improvement in both their English proficiency level and their writing volume.

### 9. Results (2)

The second criterion was the teacher's evaluation. Compared with the previous year, 2006, an improvement was seen in the bottom line of the students' record in e-learning, that is, no one failed to perform the minimum required activities, which may be the result of effective utilization of the Moodle and the teacher's constant encouragement during the classes. The following were observed: 1) attendance rates were high, 2) the students' papers seemed to improve with each assignment in terms of both volume and quality, 3) the classroom atmosphere was good and students worked hard to increase volume of output in homework, 4) the students seemed to enjoy the class and they stimulated each other through looking at each others' writing (by OHC).

### 10. Results (3)

The third criterion was the students' retrospective feedback, given in open-ended questionnaires that were completed during the last class meeting day in January 2008. Overall their comments were affirmative and most of the students replied that they saw some improvements in their English ability. Some sample comments:

- 1) After instruction in writing English, it became easier to write reports.



- 2) Preparation time for organizing reports become shorter.
- 3) Lots of assignments, but there was more English learning time than before, and the improvement in my English ability was noticeable
- 4) Touch-typing skills improved, and were very useful.
- 5) Moodle was helpful, as my scores rose it became more fun.
- 6) PC skills improved.
- 7) The instruction in effective report writing was helpful for other university work.

- Onoda, S. & Cooker, L. (2007). *BBC Understanding the News in English 4*. Tokyo: Kinseido Publishing Inc.
- Yamane, S. & Yamane, K. (2007). *ABC World News 9*. Tokyo: Kinseido Publishing Inc.
- T. Yoshimura. (1999). Writing Research Group, JACET Kansai Chapter (ED). The Reliability of the C-test. *Teaching Writing in Colleges and Universities: Practical Reports 3*.
- T. Yoshimura, T. Nakata, H. Nishida, & Y. Miwa (2003). *Internet Eigo Gakushucho*. (Learning English through the Internet). Kyoto: Kitaoji Publishing Inc.

### **11. Some Problems**

I noticed several problems, especially in writing. Despite clear instruction by the teacher regarding proper citation of quotes and references, and strong warning against the use of free translation software on the Internet, student behavior on these points did not improve. The worst problem was the students over-reliance on free translation websites.

As their PC skills progressed, they tended to do more copy/paste plagiarism in their homework. I repeatedly warned them against this, but the trend did not change. This might be due to a lack of moral education. There is an urgent need to instruct students on the ethics of scholarship.

### **12. Final Conclusions**

Japanese low-level students can learn a lot in a CALL class with a stimulating atmosphere. The more enjoyable learning experience leads to higher attendance and more enthusiastic participation, raising their motivation to learn. Hence, the CALL class has the potential to become an effective tool for providing a good learning situation. Careful preparation on the part of the teacher is especially important. To summarize my conclusions:

- 1) e-learning system proved useful in increasing student interest in study, and was effective in improving their language skills;
- 2) student self-learning seems to be more effective when the teacher provides appropriate guidance;
- 3) the Moodle was helpful as a tool for encouraging students to complete the activities and other requirements of each class;
- 4) mastering touch typing seems to give students confidence in using computers and writing English, and might be crucial to learn at the first stage;
- 5) free Internet translation sites hinder the students' learning of English.

### **References**

ALC NetAcademy 2 (2006). Tokyo: ALC Education Inc.

## Mobile Technologies and Language Learning in Japan – Learn Anywhere, Anytime

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One of the most significant recent developments in educational technology has been in mobile learning (m-Learning). Since 2002, our group of mobile learning has been doing several projects to investigate the potential of mobile devices for English education. It is one of the projects undertaken by the research center for e-Learning Professional Competency (eLPCO) at Aoyama Gakuin University, which won a 21st Century Good Practice(GP) grant from Japan's Ministry of Education, Culture, Sports, Science, and Technology. In this symposium, we cover a wide range of topics and share the results of our seven-year project on mobile learning: a comparison of mobile learning in the UK, e-Learning courses that enable students to use various mobile devices to facilitate communication and learning, current situation about mobile phone usage of university students in and around Tokyo, and empirical studies of English learning programs by mobile phones at universities in Tokyo.

### 1. Introduction

Considering the growing trends of mobility in our society, it is easy to see that gaining back some of the time we spend at the station, on the train, and even waiting for friends could be a great source of productivity. Such an idea is linked to the concept of the individual as autonomous learner and a life-long learning, to explore in-depth areas of mobile learning, or "m-learning" for short.

m-learning combines the technologies of mobile communications with any electronically delivered material, and it has now been acknowledged as a successful means of raising the consciousness of the importance of "anywhere, anytime" learning in an increasingly connected world (Metcalf II, 2006). However, few studies have reported how integration into the present classroom actually takes place. We would like to show how various mobile devices will support and empower our learning, and foster autonomous learners in a foreign language classroom. We will also shine the spotlight on learning that interfaces with learners' lifestyle and learning strategies, making learning more efficient for them.

Chapter 2 reports on mobile learning in the UK, focusing on e-university, Podcasting, and the social network system, and then comparing them with the campus network system at Aoyama Gakuin University in Japan. Chapter 3 explains the role of eLPCO, emphasizing both performance and learning orientation of wireless technology in relationship to performance support and blended e-learning model. Chapter 4 introduces interesting data regarding mobile phones and its usage of university students in Tokyo area. Chapter 5 elaborates on the results of six-year empirical study on learning by mobile phones.

### 2. Mobile Learning in the UK and Japan

Theme of this chapter is to discuss how a supportive environment for mobile learning can be created with available technology for various tasks ranging from teaching to assessment.

According to Professor Dutton who is the president of Oxford Internet Institute made an inaugural address entitled 'Through the network (of networks)– the Fifth Estate' in October 2007.1. He commented that the rise of the press and

development of radio, television and other mass media has created an independent institution in many nations that had become known as the ‘Fourth Estate’. However, he went on to say “Now we are in the fifth Estate, so Internet creates ‘platforms for new networks of individuals’ and ‘the basis for the pro-social networks.’”

- 1) Medical professionals who could share information with other professionals and patients anywhere in the world;
- 2) Local government officials engaging with individuals on community websites – but also well beyond their constituencies.

Now we are in the ubiquitous age in the Fifth Estate. According to Martin Courtney, Computing, 01, July 2008, some 2.9 million people in the UK regularly access the internet from a mobile device – just six per cent of the adult. It means that mobile learning in UK is not so popular compared with that of Japan. In U.K. instead of mobile learning, Podcasting (Fig. 1) is very popular in many institutes with the integration of Web Learn System (Fig. 2).



Fig. 1. Podcasting Oxford Internet Institute

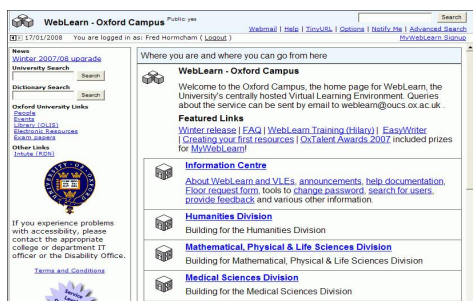


Fig. 2. WebLearn in Oxford

In UK, they often use Social Networking System such as Face Book (Fig.3) and Sakai Learning Management System (Fig.4)

On the other hand, eLPCO of Aoyama Gakuin University has developed its own learning management system (Fig. 5) in collaboration with Japan Unisys. Integration of CCS (Cyber Campus System), CaLabo EX CALL System, and Mobile learning enhanced autonomous learning, and

students made progress in English proficiency. The average test scores of Computerized Assessment System for English Communication (CASEC) improved from 517, pre-test in April, to 573, post-test in January in 24 week lessons.

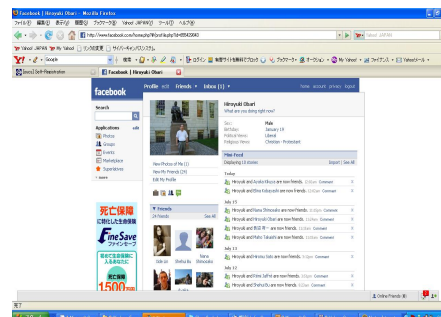


Fig. 3. Facebook: Social networking System



Fig. 4 Sakai LMS

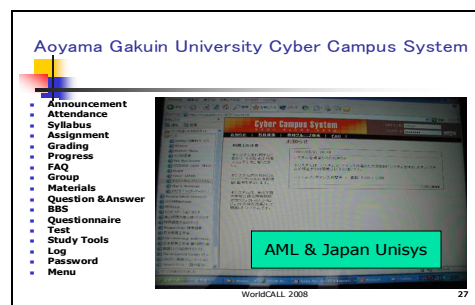


Fig. 5. Cyber Campus System

### 3. e-Learning Professional Competency (eLPCO)

Mobile Learning Study Group (Task Force 26; TF26) belongs to a research center for e-Learning Professional Competency (eLPCO) at Aoyama Gakuin University (Fig. 6). In order to create a flexible learning environment and encourage anywhere, anytime learning, an organizational support system with e-learning professionals is essential for both instructors and students. And we believe such an environment will foster autonomous learners.

eLPCO provides such systematic learning supports to faculties and learners, and manages e-Learning Professional Cultivating Project, which had received the 21st Century Good Practice (GP) grant by Ministry of Education, Culture, Sports,

Science and Technology in Japan (2005-2007). The project aims to cultivate five e-Learning professionals, Instructional Designer, Contents Specialist, Learning System Producer, Instructor and Mentor at the university. Its curriculum consists of 26 courses offered from Liberal Arts, Law, Business, and Economics departments, which is an integrated program of different disciplines. The curriculum had been developed based on the research results of Asia e-Learning Network (AEN) research project from 2003 to 2004.

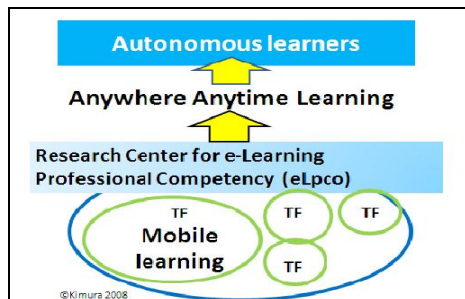


Fig 6. eLPCO and autonomous learning

TF26 developed a course, “Introduction to Mobile Communications,” as a part of the program applying the instructional design theory. Teaching objectives of the course are to support students to be able to (1) identify features and usages of various mobile devices to promote communications, and (2) use mobile devices to learn English. The course provides the latest information on mobile learning based on our research results and hands-on practices of creating mobile learning materials.

#### 4. Current situation about mobile phone usage of university students in and around Tokyo

To investigate the up-to-date environment of mobile learning, our group has conducted research since 2006, and the results of July 2008 are reported. The questionnaire was completed by 684 undergraduate students living in/around Tokyo.

First, the situations of info-communication service usage are notified. 80.7% of the students contract in one carrier, but the rest of them contract plural carriers. This is because each carrier provides different services, and the students use them wisely. With regard to discount service, 95% of the students registered some discount services, and 84.2% contract for unlimited packet use service (flat rate). This implies that infrastructure for mobile learning environments has been established at universities in Japan. The results also indicate that we can develop the contents without considering the students’ financial burden.

Next, comparisons of the preference between

computers and mobile phones are reported. The details are shown in the following tables.

Table 1. Preference in use of email

computers	mobile phones	Almost the same
3.9%	90.5%	5.6%

Table 2. Preference in English vocabulary learning

computers	mobile phones	Almost the same
20.3%	61.8%	17.8%

Table 3. Preference in short training for learning

computers	mobile phones	Almost the same
18.3%	65.1%	16.7%

From the data, it would be possible to say that more appropriate contents of mobile phones for language education are for short training, and for learning English vocabulary. Besides, it would be more effective to use email of mobile phones than that of computers.

Mobile phones have come to be exactly “wearable computers” in Japan. The security of them is now increased as much as that of computers. Furthermore, mobile phones have more convenient functions than those of computers. Mobile phones are always carried about by anyone anywhere at any time.

#### 5. The promise of English Study by mobile phones

Many MP3 devices are developed these days, however, the only device that is really handy and functions for the multiple purposes is the mobile phone. The phone is a ubiquitous platform. We would like to share the results of our four projects; studying English with mobile phones during their commute or in a short spare time.

The first project was to ascertain the effectiveness of TOEIC (Test of English for International Communication) test preparation by mobile phones. It mainly consists of drill-and-practice programs of vocabulary study and grammar practice, and the learning management system provides immediate feedback to the learners. These results were compared between the two groups. We confirmed that both groups improved in their scores (full mark=50) and there was a significant difference between pre-test scores and post-test scores; computer group (P=0.0001), mobile group (P=0.007).

The second project was focused on watching video news programs by multimedia mobile phones to prepare and review the study in class. Flowerdew & Miller

(2005) state that video often promotes the motivation to listen; it provides a rich context for authenticity of language use; the paralinguistic features of spoken text become available to the learners (compared with radio) and it aids learners' understanding of the cultural contexts in which the language is used.

We made many short video clips out of one news program believing that this kind of bite-sized study might attract students too busy to stick to an organized school or Web-based learning course, and made each clip finish in around one minute so that students can concentrate on them easily. We conducted two kinds of test to check the effectiveness; vocabulary and comprehension test. Sample was 38 university students; 27 computer group and 11 mobile group. The result was that mobile groups got higher score than computer groups and show the improvement after one week. And we confirmed that learning by mobile phones was as effective as the one by computers. The third project was adding captioning on the video clip to help low proficient learners understand the content easily. We conducted comprehension test to know exactly how much they actually understood learning by mobile phones.

Figure 7 shows students' understanding increased with captioning and it proved that captioning on mobile phones was useful.

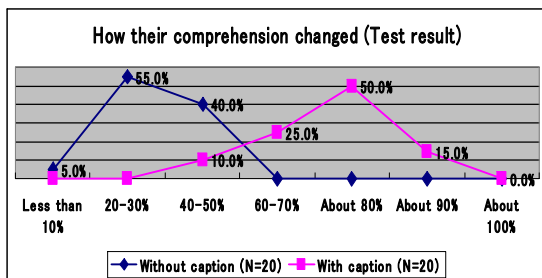


Fig. 7. Captioning and learners' comprehension

The fourth project was focused on English vocabulary learning, which many Japanese students believe to be very important to improving English ability. We prepared three different versions of contents: Version 1. an English word with Japanese translation, which is the traditional Japanese way of learning vocabulary; version 2. an English word with a picture clue, which combines a word with images and helps learners remember vocabulary; and version 3. an English word to memorize is highlighted in red in a sentence and the Japanese translation (Fig. 8).



Fig. 8. An example of the three different versions

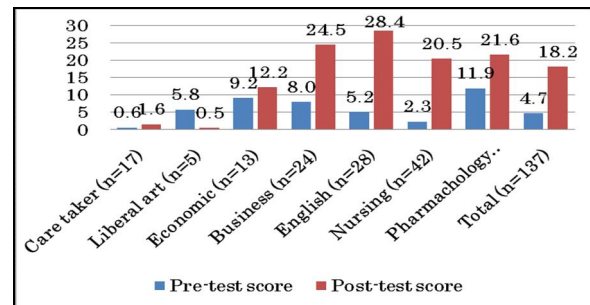


Fig. 9. Test score improvement between pre and post tests

We delivered a set of 50 words of each version to 136 students of seven different majors for three weeks and compared the test scores between pre-test and post-test (Fig. 9). Most groups improved their scores greatly and total scores of pre-test and post-test showed a significant difference statistically ( $P < 0.0001$ ). We also found from the students' feedback that they preferred to learn vocabulary in sentences so that they can understand how the word is used for actual communication. Students are eager to improve communication skills even through vocabulary learning.

## 6. Conclusion

Our research result shows that technologies introduced in our project were effectively integrated in the language learning class to meet the needs of students in the age of ubiquitous. In mobile learning, learners could access to the learning materials when they wanted to learn and studied them at their pace, thereby learner autonomy was encouraged. Finally, we would like to emphasize the key role eLPCO plays in keeping this m-Learning community functioning smoothly.

## Acknowledgments

We express our appreciation for all the support and collaboration we have received from eLPCO at Aoyama Gakuin and Media Lab., and Bizcom Japan Inc. (<http://www.bisicom.co.jp>).

## References

- Flowerdew, J. & Miller, L. (2005). *Second Language Listening: Theory and Practice*: Cambridge
- Metcalf II, D. (2006). *mLearning. Mobile Learning and Performance in the Palm of Your Hand*. HRD Press.MA.USA.

## **Project Ibunka: An International Collaborative Online Project**

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"Ibunka" means "different cultures" in Japanese. Project Ibunka aims to organize a cross-cultural exchange on the Internet among students with various cultural backgrounds. The interaction is carried out only in English. It starts in October and ends in December every year. Since 2000, more than 2,400 students from seventeen different countries have joined it. In Project Ibunka 2007, 459 students from eight different countries made about 2,704 postings. Most of the teachers who join the project are the repeaters. They send their students to the project almost every year. The strong partnership among teachers has always been the key to this success. In this symposium, project partner teachers from Japan, Korea, and Taiwan, are the panelists. All of them have been engaged in the project for more than four years. In the symposium, Mr. Masahito Watanabe makes an overview of the project, Ms. Naoko Kasami, a motivational analysis of the project, Ms. Nam-Sook Chung, a comparative study of students' corpora obtained from the project, and Ms. Su-hsun, Tsai, a quantitative research of Taiwanese students' English vocabulary.

### **1. What is Project Ibunka, an Overview (Masahito Watanabe, Japan)**

'Project Ibunka' is a cross-cultural exchange projects on the Internet. Since 2000, more than 2,400 students from seventeen different countries have joined it. 'Ibunka' means different cultures in Japanese. Students from various countries with different cultural background meet and exchange their views on a specially designed website.

Project Ibunka has three main activities, 1) text-based bulletin board discussion, 2) chat sessions, and 3) video letter exchange. Among them, the bulletin board discussion is the biggest one. It consists of three main themes, 1) school life, 2) cultures, and 3) social issues – world peace. Each theme has a number of sub-themes so that students can choose any topic they like. On the other hand, partner teachers supervise students' postings and interaction. The database management tools that the web-site offers help this. They pick up most excellent postings of the week and put them on the weekly newsletters.

Project Ibunka does not aim to replace a locally

organized face-to-face course with a full-featured online course where everything is processed online. Rather, the project itself constitutes only some part of an existing course. It is totally up to partner teachers to decide how they integrate the project into the curriculum, how often and how much students should make contribution, and how the learning output from the project should be evaluated.

In fact, partner schools can participate in the project with different objectives. For example, in the previous projects, partner schools have joined the project in order to push their students to improve writing skills, to understand different cultures, to use the project as a self-learning tool for communication, to enhance computer literacy, etc. They should take the responsibility for their students, but they do not have to take much responsibility to augment the learning of other partner students.

This type of loose e-moderation contributes to attain the cultural variability of the participants. However, this can also be one of the weak points.

## 2. Motivating Japanese Students to Learn English and Cultures through Project Ibunka (Naoko Kasami, Japan)

### 2.1 Introduction

Motivating students to learn English is one of challenging in university education. Most students do not have opportunities to communicate in English in their daily life. In order to expose Japanese students to English and other cultures, 19 students of junior college in Japan participated in BBS-based intercultural exchange project, 'Ibunka' in the class of Internet English in 2005. The project was looked into in the light of ARCS Model of Motivational Design, and the author indicates what to do for the future improvement and for enhancing students' motivation to learn. .

### 2.2 ARCS Model and the result of analysis

Keller (1983)'s ARCS Model of Motivational Design is well-known as a model for an instructional design. According to this model, there are four essential elements to be considered for motivating students to learn; attention, relevance, confidence and satisfaction.

### 2.3 Questionnaires based on ARCS Model

At the end of the Project Ibunka, a questionnaire was conducted to check whether the project enhanced students' internal motivation based on 4 elements of the ARCS Model (n=18).

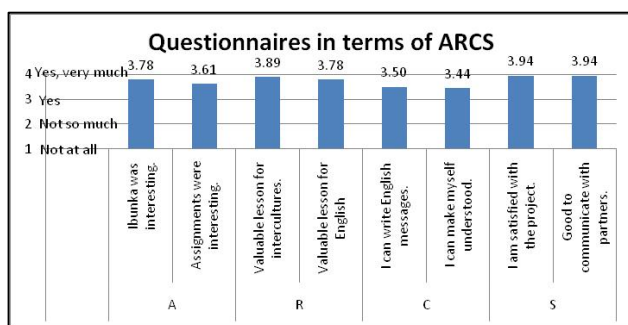


Fig.1. Questionnaires in terms of ARCS

According to the result, it is shown that the BBS-based project was effective to enhance students' motivation to learn. However, the aspect of confidence is lower than other aspects. This is because some slow learners found it difficult to write messages. It is necessary to support them.

### 2.4 The number of posted messages

The posted messages by Japanese students gradually became unique and interesting to attract readers' concerns. However, the number of the

average of posted messages was only three. There are few students who replied to partner students.

Table 1. The number of messages

<i>n</i>	Posted messages	Received messages
Total	61	37
Average	3	2
Max	4	5

In order to enhance proactive interaction among students, it would be useful to set the minimum number to reply, and which is linked to a student's grade. If writing replies has relevance to the grade, students will write more replies and it will promote exchanges, and there will be more possibilities for students to get replies, and it finally leads to more confidence and satisfaction from the project.

### 2.4 Conclusion

Thorough the collaborative learning, many Japanese students were motivated to learn English and cultures. For further improvement, the author suggests to set the minimum number of reply.

## 3. Vocabulary Analysis of Learner Corpora in International E-pal projects (Nam-Sook Chung, Korea)

### 3.1 Introduction

The purpose of this corpus-based study is to describe how vocabulary frequencies differ among the distinct language groups' learners who took part in Project Ibunka from the years 2001 to 2007.

### 3.2 Literature Review

Conrad (2000) argued that corpus linguistics can radically change grammar teaching in the 21st century. Ringbom (1998) found that L1 transfer and its universal features have important effects on learning a foreign language.

### 3.3 Method

Range GSL program and *WordSmith* software Tool were used to compare vocabulary of different countries' texts at the same time.

### 3.4 Result

(1) *What high-frequency words are found in all nationalities?*

The most frequent top 12 words among total corpora are all function words such as *I, the, to, and, is, in, of, a, you, my, it, and that*. This implies that most e-pal students were more conscious of grammar and form than of lexical

meaning.

- (2) *How rich a vocabulary do each different country's learners use in e-pal projects? How much coverage of each different learner corpora of the 12 base lists Range BNC program provides?*

Table 1 shows that students from Taiwan, China, the UAE and Germany are the highest users in high-frequency 2000 words. Students from Burkina Faso, Argentina, and Namibia are the highest users in low-frequency words. It implies that they overuse difficult and rare words more than 2,000 words. Namibia, Korea, and the UAE overused academic words.

Table 2. Percentage of vocabulary distribution

		One & Two	Three
		1-2000 words	Academic words
1	Taiwan	87.26%	2.30%
2	China	89.12	1.20
3	Indonesia	<b>83.15</b>	2.50
4	Korea	83.45	<b>2.81</b>
5	Japan	85.41	2.27
6	UAE	86.77	<b>2.54</b>
7	Argentina	82.1	1.26
8	Brazil	83.26	1.97
9	Burkina Faso	<b>80.18</b>	1.68
10	Mexico	84.58	1.83
11	USA	85.3	2.40
12	Finland	86.04	1.76
13	Germany	86.37	0.95
14	Namibia	<b>83.18</b>	<b>4.67</b>

- (3) *What is the difference of frequent content verb in each of the distinct four language groups learners, compared with NS corpus?*

High-frequency content verbs such as tell, get, go, know, think, see, make and want occur in all learner corpora except for take and come in NS corpus.

### 3.5 Conclusion

This study on word frequencies of learner corpora gives insight into grammar and vocabulary teaching and shows the effects of the structure of the L1.

## 4. An Analysis on Vocabulary Size of Students' Writings in English -- The Taiwan Part of Ibunka Project (Su-hsun Tsai, Taiwan)

### 4.1 Instructions

In Taiwan, the government in charge of education suggests 4,880 words that students have to learn before entering into higher education (MOE, 1995). However, no sufficient studies have been done in the field of authentic context that how many words students have actually performed after six or more years of learning English before entering into colleges. This research focuses on the vocabulary size of English that college students of Taiwan used when they exchanged messages with other students from different countries in Project Ibunka during 2006-2007.

The tool used in this research to compute English vocabulary is CLAN, a program specialized for language analysis developed by CHILDES project (MacWhinney, 2006). All students messages were collected as the research data and vocabulary were further computed by CLAN. The numbers of students joining from Taiwan were 84 and 134 in Year 2006 and 2007.

### 4.2 Findings and Discussions

The students posted 648 and 666 messages in Year 2006 and 2007, and they wrote up to 90,982 and 84,863 words, average from 127.4 to 140.4 words as shown in Table 3.

If taking all Taiwan students as one group, it is found that they used different words ranging from 5,644 to 5,995 words in Table 4. Frankly speaking, this is a quite big number of vocabulary used by college students. In one way, the students nowadays are more competent in English than those in the past.

However, the researcher also found a possible reason for students' high vocabulary size because they frequently used an online bilingual dictionary if they encountered difficulty in getting a word from their mind. They might select the word of a wanted part-of-speech, but they seldom took time to check further if the word used was appropriate.



Table 3. Messages posted by Taiwan students

Groups	N	Total postings	Total word tokens	Average word per posting
2006 Taiwan	84	648	90,982	140.4
2007 Taiwan	134	666	84,863	127.4

Table 4. Different words used by Taiwan students

Groups	N	Total postings	Total word tokens	Total word types
2006 Taiwan	84	648	90,982	5,995
2007 Taiwan	134	666	84,863	5,644

An even more interesting finding pops up if we put Table 3 and Table 4 together for comparison. Students in Year 2007 had more participants and they posted more messages (134>84, 666>648). However, they wrote less, and they used fewer word types in their messages (84,863<90,982, 5,644<5,995). This shows two possibilities here: Are 2007 students less competent in English than 2006 students? Or are they more competent in English since they can use more frequent words to convey their thoughts more freely, which, in term, shows that their English proficiencies are better than that of 2007 students? This would need a proof to support the argument, i.e. a further qualitative analysis.

#### 4.3 Conclusion

From the data, it was found that students used various vocabulary to express their thoughts in the communication. They are also active in using an online bilingual dictionary as it is very useful and convenient in helping them during their writing process.

However, a further training is necessary to teach students how to refine their vocabulary selection or to advise them not to take the first word without checking.

#### References

- Conrad, S. (2000). Will corpus linguistics revolutionize grammar teaching in the 21<sup>st</sup> century? *TESOL Quarterly*, 34(3), 548-560.
- Keller, J. M. (1983). Motivational design of instruction. In Reigeluth, C.M. (ed.): *Instructional design theories and models: An overview of their current status*. Lawrence Erlbaum Associates.
- MacWhinney, B. (2006). *The CHILDES Project: Tools for analyzing talk*. (3<sup>rd</sup> Edition.) Mahwah, NJ: Lawrence Erlbaum Associates. Also available from the World Wide Web: <http://childes.psy.cmu.edu/clang/>
- MOE (Minister of Education). (1995). *Curriculum for senior high schools: English*. Taipei: Minister of Education. Also available at the World Wide Web: [http://www.edu.tw/high-school/content.aspx?site\\_content\\_sn=14506](http://www.edu.tw/high-school/content.aspx?site_content_sn=14506)
- Ringbom, H. (1998). Vocabulary frequencies in advanced learner English: A cross-linguistic approach. In S. Granger (Ed.), *Learner English on computer* (pp.41-52). London: Longman.

## A Software Solution to the Integration of Teaching and Learning in and out of Class

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We have shown software that integrates classroom teaching with individualized learning. The software, *Multimedia Player Mint*, in a classroom, shows a powerful presentation mode adaptable to language teaching, unlike PowerPoint adaptable to business use. That mode offers a synchronous reproduction of text, audio, picture, and movie, with highlighted and colored texts, and drawing tools like a chalkboard. And, in and out of class, *Mint* shows its distinctive feature of automatic quiz creation, which facilitates students' repeated practices, and which reduces a teacher's workload. This multifunctional software will be very effective to use for multimedia language learning integration.

### 1. Introduction

Our showcase offers you a solution to integrate classroom teaching with individualized learning. The solution is a software called *Multimedia Player Mint* (<http://homepage2.nifty.com/mint-ap/>). This soft interfaces to both classroom and individual learning environment. Hereafter we will present you how this program works in both situations in describing multifunctional use of presentation, speed reading, self-created quizzes, vocal training and so on.

### 2. Multiple Functions

First, in the classroom situation, through *Mint*, a teacher can use a wide variety of presentation tools useful for language teaching, unlike business uses in PowerPoint. That is, you can reproduce texts, audios, pictures, and movies at the same time with an easy operation, as shown in the Fig.1, 2 and 4. As a result, you can reproduce learning resources to make a presentation easily and effectively.

### 3. Pinpoint Playing

Then, also in presentation mode, you can pinpoint text and sound by just double-clicking anywhere on the text. As you can see in fig.1 and 2,

text and sound with a chunk underlined was reproduced simultaneously. When you show a movie, you can quickly pinpoint the scene that you want to see. So you can play any text, sound, and pictures at the moment you want.

### 4. Speed Reading Drills

You can train students to read rapidly by some reproduction modes of text. Player Mint can show a text by appearing in order (Fig.1), disappearing in order (Fig.2), or both. And by using these modes, students cannot look back where they have already read. So they cannot help but to read fast.

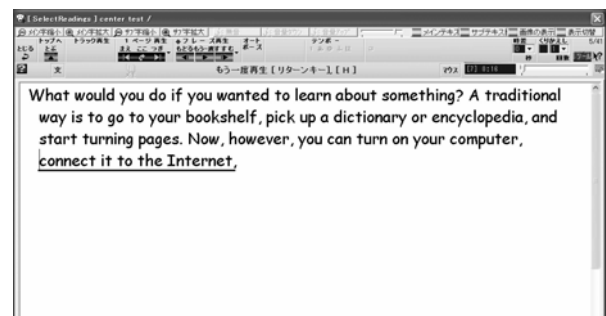


Fig.1. Text appearing in order with a chunk underlined

In Yubune, Kanda, Tabuchi (2007), this mode

helps lower-level learners improve cognitive skills of either reading speed or comprehension, as well as their motivation for reading activity.

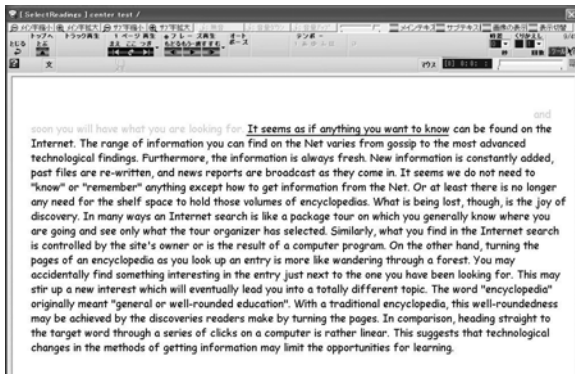


Fig.2. Text disappearing in order with a chunk underlined

### 5. Creating Many Quizzes Automatically

Next, what is most useful for individualized learning is that students can work on quizzes which the software automatically creates: multiple choices, fill-in test, arranging words, dictation, a vocabulary shooting game and so on. This function also helps teachers to reduce their workload of making quizzes.

### 6. Voice Training

Students can also practice speaking with a so-called “Voice Training” function (Fig.3). As you can see, you can record your own voice in a sound file format. And you can also see their own visualized voiceprints. By these functions, students can practice speaking effectively and efficiently. Off course, they can save their voice in ordinary sound file format (WAV).

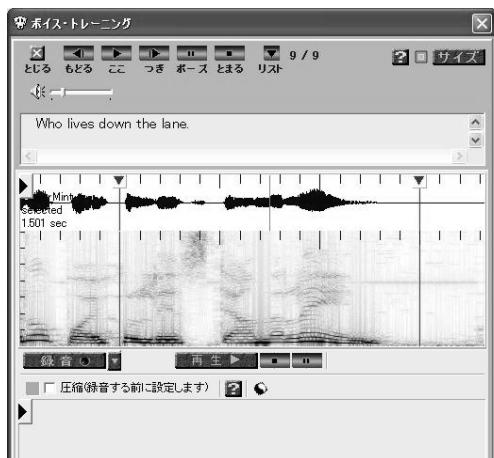


Fig.3. Voice Training mode

### 7. Motion Pictures Corpus / Spoken and Action Database

Then, input one or two keywords and click, and

you can view a list of motion picture scenes related to the keywords. For example, if you input "May I", you can get scenes that involve "May I...?" dialog. If you input "kiss", you can view many types of kissing actions (Fig.4). So learners can know words and phrases in actual scenes.

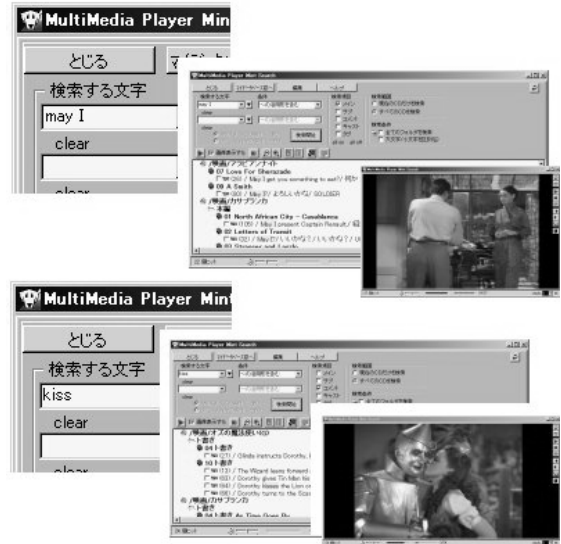


Fig.4. Movie Corpus

### 8. Conclusion

As shown above, you can realize that *Mint*, multifunctional software, can play an integral part of teaching and learning both in and out of classroom. All those functions described above are available, whether *Mint* is installed or not, on any Windows® environment. Although *Mint* does not have an international language support at present, it can develop into more useful software with a request for optimization from all over the world in future.

### Acknowledgment

This software is used in a research supported by Grant-in-Aid for Scientific Research (C) (No. 19520497) by the Japan Society for the Promotion of Science.

### Reference

Yubune, E., & Kanda, A., & Tabuchi, R. (2007). Effects of Different Computer Display Methods of Reading Units on Learners' Reading Efficiency. *Language Education & Technology*, 44, 215-228.

## Sakumon and SakumonChallenge: Semi-automated and Automated Question-making Systems for Grammar and Vocabulary Testing

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We present two applications based on the automatic question generation framework for grammar and vocabulary testing. Sakumon is a question authoring assistance system with an AJAX interface. It helps the user choose an article, highlights grammar targets, suggests candidates for the distractors, and formats the questions in a printer-friendly way. SakumonChallenge is an adaptive testing system which interacts with the learner. It presents the user with questions generated from today's news. The system adapts to the user and administers questions of suitable difficulty. At the end of the session, it summarizes the user's performance and offers a grammatical diagnosis. In this paper, we describe the two systems and report the visitors' responses to our demos.

### 1. Introduction

With the globalization of business and academia, there are increasing needs for ESP (English for Special Purposes). There are new, emerging fields and diversifying needs. On the other hand, we have scarce resources to develop teaching or learning materials to meet such needs. Especially in countries where English is taught by non-native speakers, developing new exercise questions can be a heavy burden.

We provide two solutions for such situations. First, we have developed a question-authoring assistance system which helps teachers create questions from an online news article. The use of NLP enables the user to create grammar and vocabulary questions just by clicking on the screen. Secondly, we present a CAT (Computer-Adaptive Testing) system which interacts with student users. The system administers automatically-generated questions, choosing the next question in response to the user's performance.

The paper is organized as follows. In Section 2, we introduce related work. Sections 3 and 4 describe the two applications. Finally, the questions we took during the courseware showcase<sup>1</sup> and the answers to them are summarized in Section 5. While we describe the applications screen by screen, we do not have space to explain the mechanism behind them. An interested reader is guided to read our paper for the presentation.

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<sup>1</sup> Took place 6<sup>th</sup> August, 2008.

### 2. Related Work

As related work, we introduce HotPotatoes for question authoring and the KDDI/ATR system for a CAT with automatic question generation.

#### *HotPotatoes*

HotPotatoes (from Half-Baked Software <http://hotpot.uvic.ca/>) is a question authoring toolkit, which comes with different applications for each question types (cloze, sort, match, etc). It has the functionality of producing cloze questions by removing every nth word and showing them as a set of alternatives. HotPotatoes comes with a test player which enables students to answer the questions on a software interface.

#### *KDDI/ATR System*

The KDDI/ATR system (Sumita 2005) is, to our knowledge, the only CAT system which utilizes automatically generated questions preceding our system. The questions are presented to the user in an adaptive way, and at the end of session the system predicts the user's TOEIC score. The service is commercialized for au/KDDI mobile phone for a fee of 300 yen per month. The trial (five-minute English test) is available at their website.

### 3. Sakumon: Question-making Assistance

We give a screen by screen description of the Sakumon system, which consists of three major screens: Article Selection, Test Making, and Confirm and Print.

Figure 1. Sakumon's question-making screen

### Article Selection

On the first screen, the system helps the user to choose an article from which she is going to create questions. It shows the list of articles it has preprocessed. An article is shown as a list item with its news source, date, title and number of words. The user can see more information on the article, such as its lead (the first 10 words of the article), vocabulary level (Kincaid score) and grammar targets included with their times of appearance, by moving the cursor to a list item.

The user can narrow down this list of articles with conditions for grammar targets and/or vocabulary levels. The system shows a menu so the user can specify conditions by clicking on the checkboxes or selecting from combo boxes. When the conditions are specified, the system returns a list of (only and all) articles that meet the conditions. The user can choose an article with the grammar targets she wants to test and at a desired difficulty level. For example, in Kincaid the user can choose an article which contains sentences in present perfect tense and with a difficulty level of 5~6.

### Test Making

When the article is selected, the screen moves on to the test-making page. The system assists the user in creating blanks on the passages and deciding the wrong alternatives. The text of the article is shown on the left side and the question-making area is on

the right side. In the article text, the words that have distractor suggestions are clickable and shown in black and the words that have no suggestions (proper nouns, articles, etc.) are unclickable and shown in gray. When the user clicks on a word in the article, the system replaces the word with a blank and shows it in the question-making pane as the right answer, along with three input forms. Simultaneously, the suggested alternatives are shown in the question-making pane, which fills in the forms when clicked. The menu in the question-making pane shows the grammar targets contained in the article. When a target is clicked, the corresponding phrases in the article are highlighted (black turns red and gray turns orange). When a particular phrase is selected by the user's clicking on the article text, the suggestions for grammar distractors appear in the question-making pane. On selecting one grammar distractor, suggestions for vocabulary distractors appear. If the user chooses the second distractor from the vocabulary distractor suggestions, then the distractor fields are automatically filled with a set of symmetric grammar vocabulary distractors.

### Confirm and Print

When the questions are completed and the user clicks the "submit" button, the system shows the resulting questions in a test format.

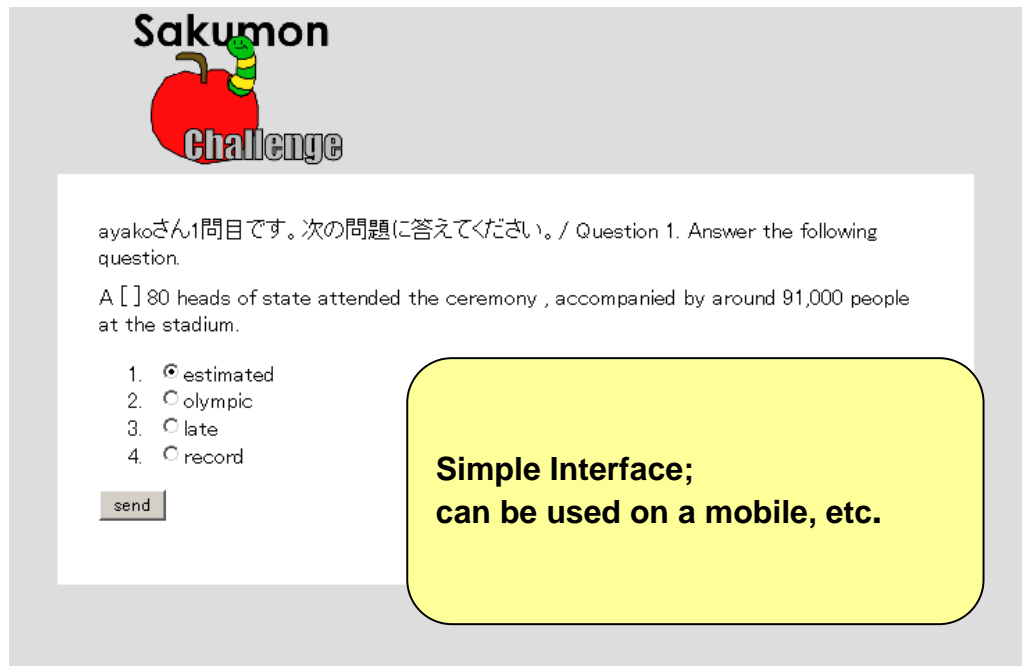


Figure 2. SakumonChallenge Session Screen

On moving to this page from the question-making page, the blanks containing phrases shrink where appropriate. In the example “We are planning [to go] to the theater,” the phrase “to go to the theater” is retrieved on the test-making page. On the next screen, the blank shrinks so it contains only “to go,” since the rest of the phrase “to the theater” is the same in all alternatives. Clicking the “print” button provides forms for the date, the name of the test takers and the answer boxes, in the format of a regular answer sheet.

#### 4. SakumonChallenge: CAT with Automatically Generated Questions

SakumonChallenge is a CAT (Computer-Adaptive Testing) system, which uses a set of automatically generated questions. This system is based on the same framework (the data structure and the method for automatically generating the data, described in the presentation paper). Therefore, the students can test their knowledge by reading sentences from the latest news. In the following part, we describe the application by transition of the screen.

##### *Login*

On the first screen, the system asks the user to log in with a user name. The username is used to recognize the user’s response throughout the session. If the text form is left blank, the system treats the user as an anonymous.

##### *Select the number of question*

When logged in, the system asks the user how many questions she would like to solve. The user can select from three to 15 questions per session.

##### *Question presentation*

In the session, the system presents one question at a time. Below is an example of the questions. The question is preceded by the instruction “Choose the best alternative to fill in the blank.”

Our office space is so limited, and the overhaul of our organizational structure has made it too complicated [ ].

1. to fail    2. failed    3. managed    4. to manage

Users answer the question by choosing one of the radio buttons, and clicking the “send” button to send their answer to the server.

##### *Feedback*

After each question, the system shows feedback, including the right answer and the user’s answer, and tells if it is correct or not. It also shows the original sentence with the right answer in red. When the “next” button is clicked, the system presents the next question.

##### *Summary*

At the end of the session, the system shows a summary of the user’s performance. The summary includes the number of questions the user responded to correctly over the number of questions in total, and a list of grammar targets (such as

“to”+infinitive, passive voice) the user has made mistakes on.

SakumonChallenge is on a very simple user interface and the sessions are not timed. We plan to provide a different interface with a speed function and an immediate answer check and feedback, instead of performing these processes at the server.

### **5. Questions and Comments from Visitors at the Courseware Showcase**

During a one-hour courseware showcase, visitors asked lots of questions and gave us many valuable comments. After classification, there are several main questions and comments.

Q1. Is Sakumon free or toll?

A: Sakumon is open on the Internet. Anyone can access the webpage, but considering the copyrights of the news we use, people need to send us an email to get an account and a password. We have no plan to make it commercial in the future, either.

Q2. Can teachers also submit articles to Sakumon?

A: Not yet. We mainly focus on the technical side of question generation. We will consider adding a function to enable teachers to submit their articles in the future.

Q3. Is the news downloaded automatically?

A: Yes. In addition, Sakumon is highly automated. Users can perform most tasks by clicking.

Q4. How does Sakumon generate the vocabulary questions? How effective are they?

A: We employ a frequency-based method, and teacher users give it a high evaluation. Details of techniques and evaluations will be found in our paper in the proceedings.

Q5. Can Sakumon generate comprehension questions?

A: No. That is far different field which needs some kind of AI technique.

Q6. Which level of students is Sakumon for?

A: Sakumon is appropriate for students who can read basic newspaper up to senior learners. Sakumon can generate 10 kinds of most-used grammar questions which are selectable by teachers. Vocabulary levels of news articles vary, and are shown for teachers to select.

Q7. How is the difficulty of each question of

SakumonChallenge decided?

A: We use TOEIC and TOEFL questions and correction rates as a database to estimate difficulty.

Q8. Can Sakumon create questions for other languages?

A: Yes, but users need to perform some applied changes. This will be mentioned in our paper, too.

Q9. What platform do you use?

A: Sakumon and SakumonChallenge are implemented as a Java Servlet. Sakumon takes advantage of a highly interactive interface with AJAX, which works with most of the browsers on a PC.

Q10. Are Sakumon systems actually used in schools or universities?

A: Not yet. We have issued some accounts, but we don't know whether the users are using it for their classes.

Every visitor said that Sakumon was a very intelligent question-generating system, and thought it could save teachers lots of time in making cloze questions. On the other hand, commercial problems like news-user fees and extensions of some practical functions, are of concern.

### **6. Summary**

In this paper, we have described the two applications, Sakumon and SakumonChallenge, which are based on the framework we have presented. We have summarized the questions we took during the courseware showcase. Contrary to many people's expectation, the applications are non-commercial and available at our website.<sup>2</sup>

### **Acknowledgments**

We would like to thank WorldCALL staff for their support at the demo site.

### **References**

Sumita, Eiichiro & Sugaya, Fumiaki & Yamamoto, Seiichi (2005, June). Measuring Non-native Speakers' Proficiency of English by Using a Test with Automatically-Generated Fill-in-the-Blank Questions. *Proceedings of the Second Workshop on Building Educational Applications Using Natural Language Processing*, 61-68.

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<sup>2</sup> <http://sakumon.r.dl.itc.u-tokyo.ac.jp/>

## **The NDSU Virtual Lecture Series: An On-demand Study Companion**

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Beginning in the 2005 academic year, my colleague (D. L. Smith, now retired) and I began developing a program for computer assisted teaching to accompany classes offered by the Department of English at Notre Dame Seishin University. The goal was to develop learning modules to accompany regular classes that the students could access individually at any time for class preparation or review. The requirements were that the modules should be flexible and easy to prepare requiring a minimal amount of special equipment or expertise in the area of CAI.

### **1. Plan**

Initially we conceived of a series of video-taped mini lectures that teachers could easily prepare that constituted an encapsulated version of the lectures offered on a weekly basis, hence the term 'virtual lecture series.' Students would access the home page for the instructor, log-in, select the class they are taking and then select the particular lesson to be reviewed. Each lesson would be presented in a standard format with links to video presentations to be viewed along with certain added comments and instructions and a log-out button for when they are finished. We also decided that a record should be made for each student in the class showing the dates and times at which they accessed the class page.

To facilitate the computer assisted learning program, a 'maintenance' program was developed with the help of the staff at the Research Institute for Informatics and Science at NDSU (Kato, 2005).

This program provides the basic framework for the preparation and display of lesson materials as well as routines for user registration, login, record keeping, access, display, and logout. Hence, the program enables instructors to manage student registration for the classes in which she is enrolled so that she can access the lessons, and also allows the instructor to monitor usage by individual students and by the class as a whole. In addition the program manages the switches for the display of various video clip 'virtual' presentations for each lesson module whereby the student can review lessons or parts of lessons at will and at the same time consult any notes or comments that the instructor may wish to add to lesson display pages.

The necessary equipment was kept at a minimum. For the video production, we use a digital video camera with a tripod and a remote control so that the person producing the video can do so at their convenience without any assistance. To process the video, we make use of basic movie software commonly available for producing home movies and slide presentations, such as Final Cut Pro (Apple Computer, Inc.) for the Macintosh or Windows Movie Maker 2 (Microsoft Corporation) for Windows machines. Video clips of the presentations are stored in a format that can be viewed on-line. In this case we prepared clips that could be viewed with Real Player (Real Networks, Inc.) because this is readily available at no cost to the user. Other formats such as Quick Time (Apple Computer, Inc.) are also readily available. For preparation of the home pages for access to the lessons, we used software designed to assist users in developing home pages in html. In this case we used Home Page Builder (IBM), although there are any number of programs that could be used as well.

The virtual mini-lectures which are presently available are Listening/Reading comprehension (video view & URL links), English Phonology (video view & URL links), and History of English (URL links).

### **2. Implementation**

In the initial trial we prepared several video clips, each roughly five minutes in length, in phonetics. These were arranged according to the lessons presented on the home page for the phonetics classes, following the order of the topics listed in the syllabus. Subsequently materials were



prepared for other classes. The entire process we developed involves the following steps.

a. The instructor prepares a personal log-on page for his or her classes. This page could contain anything in addition to the log-on button, but ordinarily, it should contain general greetings of some sort and an explanation of the purpose of the page. An example of a Top page is shown in Figure 1. The main purpose of the page is simply to present a log-in button for each instructor on the system but it could also include general announcements, e.g. office hours and the likes since it can be accessed by students in all of his or her classes.



Fig. 1. Top page

b. The next page after login is generated by the maintenance program, and is simply a page where the student scrolls to the class she is taking and enters her student i.d. This completes log-in and the student is taken to the 'index' page for the class she has chosen from the menu.

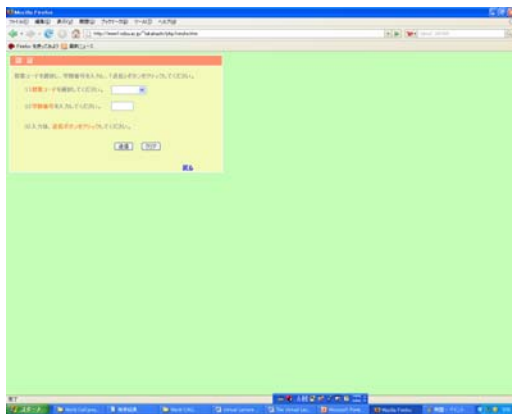


Fig. 2. Log-in page

c. The index page for the class lists the lesson topics that the student can select. These lessons are listed by number and the sequence would normally follow the syllabus for the course, possibly even giving the approximate dates of presentation. The

student can select for each lesson she wants to review, and she is then taken to the specific lesson page she has selected. It should be noted that although the index page is designed to list lesson modules with video presentations, it is in htm format and can be expanded to include links to text files or other pages on the Internet or any additional files that the instructor might wish to make available. A sample index page for the reading/listening is shown in Figure 3.

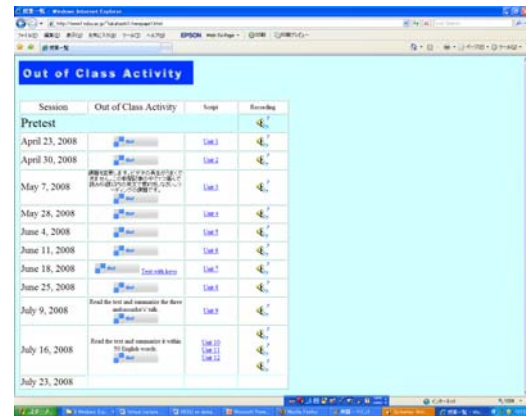


Fig. 3. Contents

d. As we mentioned, each major lesson topic is allowed up to lesson pages with video recordings of virtual lectures prepared by the instructor. It should be noted that since each lesson is presented by a distinct page, there are many additional options the instructor has. A lesson page in listening/reading filmed by a member of the department not only presents a video presentation on a specific topic, but also includes a short quiz with answers that the student can use to check her understanding of the explanation and the accompanying video clip. As was mentioned, in addition to video clips, the instructor can opt for links to other sites on the Internet should these be deemed more useful than a video clip for the topic at hand. This approach has turned out to be quite useful in cases where outside sources may provide valuable supplementary information or even exercises or drills relating to the topic at hand. The links can also lead to materials that can be downloaded and printed out such as reading materials that are often freely available on the Internet.

e. When the student clicks the video option, the video appears on the screen as a Real Player presentation. The student can play this video clip as many times as she likes, and can stop and start it at will. If she chooses to exit the video, she will be taken back to the page where she selected to view the video clip in the first place. Since the source

page remains open in the background, the student can alternatively, move the video presentation to the corner of the screen and simultaneously view the source page, which may contain useful hints or charts or other helpful information. In fact, a transcription of the lecture could even be presented.

f. Each page after the login page contains the logout option, so the student can log out at any time. At the same time, by returning to previous pages, the student can move from lesson to lesson at will.

### 3. Maintenance program

A specially designed maintenance program manages student records and assists in lesson design. The instructor enters student numbers for those students registered for each class. The roles can be modified as needed. Then, the instructor can view the number of times each student has accessed each lesson or the number of hits each lesson has had. Student records can then be downloaded and added to class records. Links to external sites are added to lesson pages with this program as well.

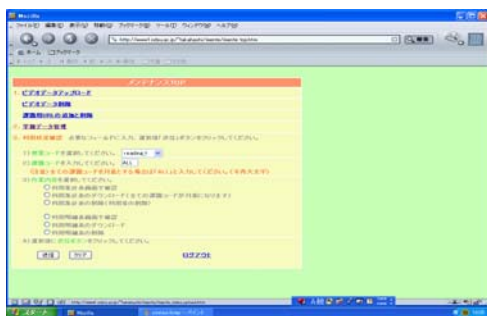


Fig. 4. Maintenance page 1

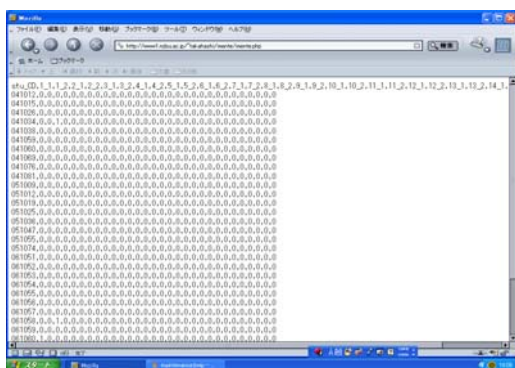


Fig. 5. Maintenance page 2

### 4. Limitations and prospects for the future

The virtual lecture series program holds much promise for improving communication between instructors and students as well as affording practice in understanding class lectures by individual instructors. The intention behind designing the virtual lecture series was to provide

students with reinforcement in their studies.

It is our hope that the virtual lecture format will come into greater use and that it will become an added resource of our department for independent study. We are presently looking into the possibility of creating an archive of successful lessons that can be accessed by all students in the Department for any number of purposes. One use would be for practice in listening comprehension with materials produced by faculty who teach in English. Also, students may find the lectures useful in terms of the content, for review of topics that are covered and materials that are used in Departmental courses that they may wish to take.

The greatest limitation to the broader application of the virtual lecture series framework is in the application. Even though we have attempted to make it as simple as possible to prepare materials in the virtual lecture format, some training and practice will be necessary for the majority of instructors. They will have to know how to operate video cameras remotely, how to prepare digital film clips from video tapes and how to use elemental home page software to present their lesson materials. Only instructors convinced of the merits of such a program are likely to take the time to learn how to implement a virtual lecture series on their own. To work well, a more extensive virtual lecture series program would, at this point, still need the support of something like a funded learning resources center.

We also have self-imposed limitations to our program at NDSU. Students are not allowed off-campus access to the university server. Hence, they can only access the virtual lectures series from on-campus computers. In addition, the University language laboratory (CALL) computers are off-line, preventing any access to either the university server or outside resources. Hence, virtual lecture materials are only accessible from some of the “wired” classrooms and on-campus computer rooms. To overcome these constraints, we are currently considering alternatives, such as CDs or DVDs for student use at home, use of personal accounts maintained by faculty with independent vendors, or possibly download capabilities that would allow students to download virtual lecture materials for personal use on USB memory sticks or I-Pods, but this would make it difficult to confine use to students registered to log-on to the course materials in question and there would be no way to keep records of student usage.

In spite of all the limitations listed above, we feel the virtual lecture series approach that we are currently developing has considerable potential as

an instrument for enhancing communication between students and instructors and for assisting students in their efforts to learn from and to understand the lectures they are attending, whether they be in English or in Japanese.

### **5. Future Applications**

Obviously, we would like to see a wide application of the virtual lecture series approach. The materials offered through this approach have the potential to not only help students prepare for and review lectures for classes they are taking, but also to help them improve their comprehension and understanding of the lectures they are attending, whether given in English or Japanese.

### **Acknowledgements**

We are grateful to Notre Dame Seishin University for the research grant and also to the Research Institute for Informatics and Science of Notre Dame Seishin University for their support in the development of this program.

### **References**

Kato, S. (2005) The construction of a computer assisted learning system utilizing PHP and PostgreSQL. *Journal of the Research Institute for Informatics and Science*, 9, 37-79. Okayama: Notre Dame Seishin University.

## An ESP Program for Pilots and Air Traffic Controllers

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“He probably said what I think he said.” When native speakers speak at natural speed, it might not be so easy to follow for someone whose mother tongue is not English. There would not be much harm if this happened in a casual conversation, but what if it happened with Air Traffic Control? When Japanese pilots or air traffic controllers are exposed to naturally spoken ATC English, even if they use “ATC phraseology” which is prescribed so that all involved parties can understand what is said and have a clear picture of the traffic, listening comprehension can be quite difficult. Getting used to naturally spoken ATC is very important, and for this purpose we have developed an ATC listening training system.

### 1. Objective of the program

The program is designed for people who already have basic knowledge such as flight rules and ATC phraseologies and other necessary vocabulary. The objective of the program is to get the trainees accustomed to naturally spoken American ATC by improving their recognition rate so that they can be comfortable even when they fly into American airspaces or when American pilots fly into Japanese airspaces.

A common problem among Japanese is that when native speakers speak at natural speed, they miss hearing some percentage of even words they know. Our research shows that average college students, for instance, cannot recognize half of the words even if they know every single word (Nitta & Okazaki, 2005). The faster the speaking rate, the lower the recognition rate.

The program is based on the premise that Japanese pilots and controllers have more or less similar listening problems.

The flow of the program is as follows:

- Take an assessment test.
- Use a drill based on the assessment test.
- Take a stage check.
- Use another drill based on the latest stage check.
- Continue drills and checks as needed.

The program runs on the Internet. A browser is the only software needed to use the program. If you want to use the Repeating/Shadowing Manager (see Figure 8), you need a Windows machine with certain specifications.

Registration is required to start using the program. When you finish the registration, you can log in to your page.

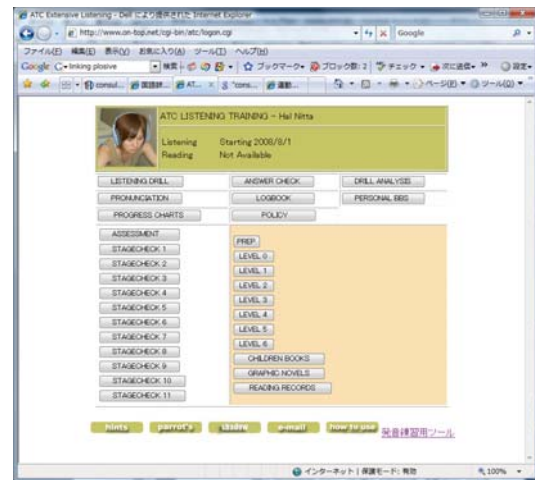


Fig 1. Top page

### 2. Assessment Test

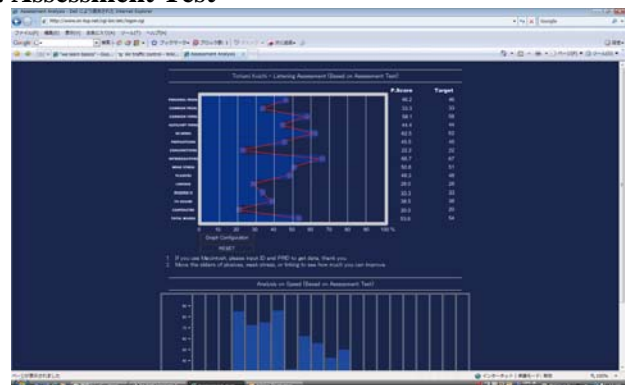


Fig 2. Assessment test analysis

Before starting the listening training, trainees take an assessment test. The assessment test is a dictation test that has 25 sentences including ATC expressions. When submitted, the test is analyzed automatically on the spot. The assessment test analysis tells what kind of acoustic problem the trainee has. The instructor makes a drill for the trainee using this data.

### 3. Generating Drills

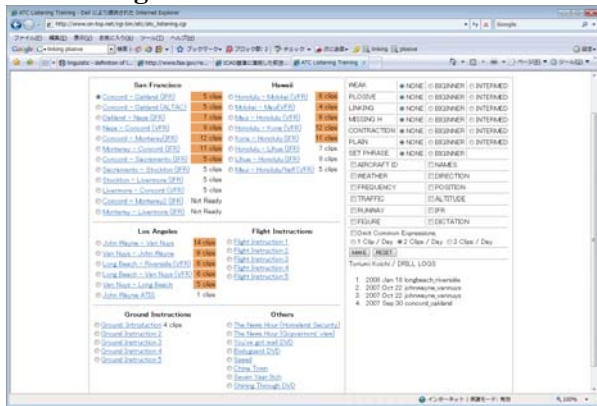


Fig 3. Drill Generator

The Drill generator creates a drill. Listening problems vary among trainees. There is a case where the material that is good for one person might not be so good for another. The Drill Generator makes a drill tailored for each trainee.

The instructor opens the generator, selects the material, checks the necessary items by consulting with the assessment data, and presses the “make” button. A drill is made instantly for the trainee to work on.

### 4. Working on the Drills

The drill has three phases; listening practice, dictation practice and pronunciation work.

#### (1) Listening Practice

Listening practice is to listen to the communications between pilots and controllers with or without visual aids. When trainees do not understand what is being said, they can refer to the script.

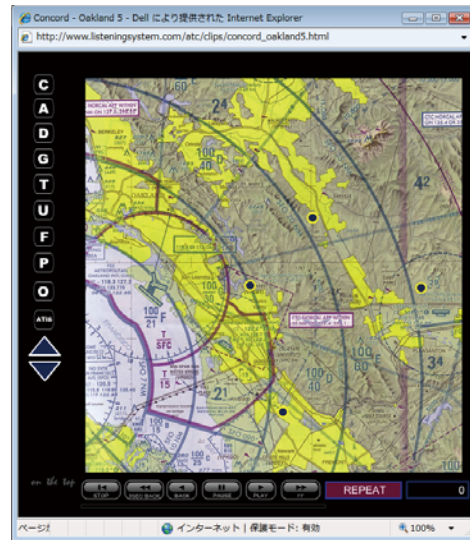


Fig 4. Visual Aid – En Route

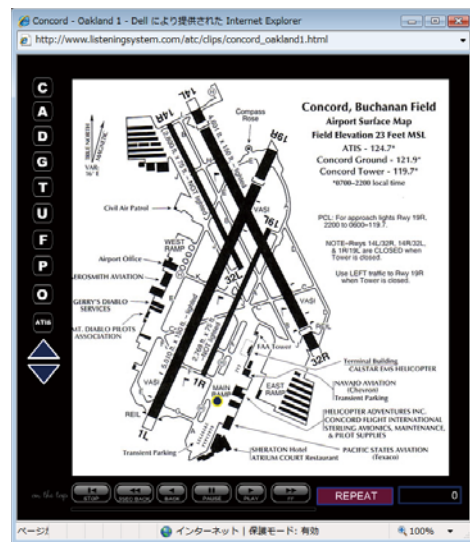


Fig 5. Visual Aid – Airport

#### (2) Dictation Practice

The script has blanks to be filled in. Trainees listen to the sound and put what they think they hear in the blanks. The Drill Generator makes those blanks based on the assessment test. This means the blanks are where the trainee’s listening problem lies. Filling in the blanks is not an easy task because, as is often the case, trainees cannot make out what’s said. The best part of this dictation practice is that trainees need to concentrate on their weaknesses and have to pay a lot of attention by listening to the sound over and over again.

Trainees can check if their answer is right by pressing the button next to the blank.

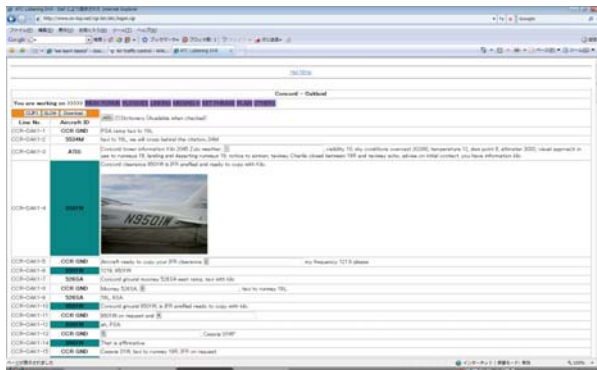


Fig 6. Script with blanks

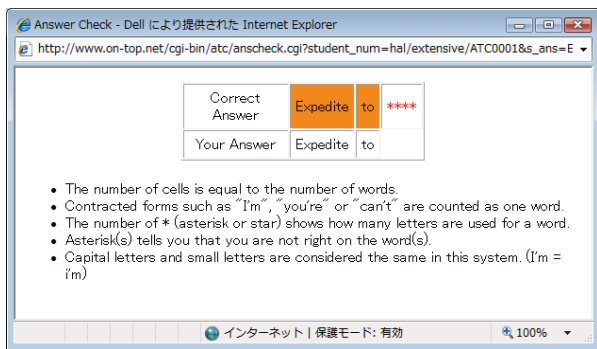


Fig 7. Answer check

(3)Pronunciation Work

For those who cannot recognize the words they know, pronunciation work is the most important part of listening comprehension skills building. Methods such as repeating or shadowing are recommendable. For most ESL students, however, trying to repeat the model sound exactly is not easy, especially when the model sentence is long or spoken fast.

We have developed a tool to help the trainees to do their pronunciation work easier.

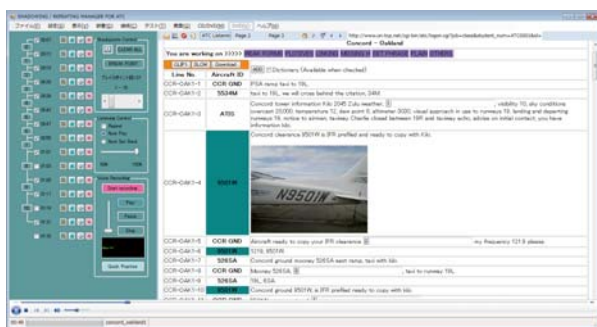


Fig 8. Repeating / Shadowing Manager

This tool is to break a sentence into smaller segments. The idea is that trainees practice segment by segment, with speed control if needed, and when they become comfortable with two or

more segments, they put together the segments into one longer segment and practice. That way, they can handle sentences that are impossible to follow otherwise.

This tool runs on various Windows system such as XP and Vista.

5. Stage Checks

In the course of training, from time to time, trainees take a stage check to see how they are doing. Stage checks are similar to the assessment test. Analysis of the stage check provides the data for the next drill. Stage checks will tell the trainee if their recognition rate is improving or not.

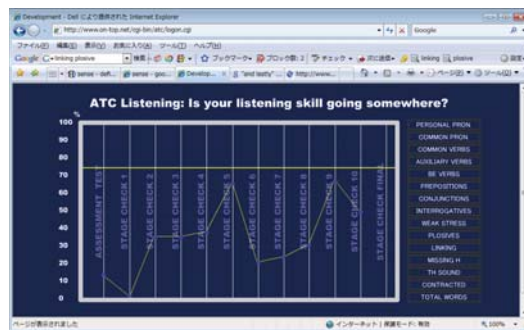


Fig 9. Stage checks

References

Nitta, H. & Okazaki, N. (2005). Internet-based Personal Listening Program: a program for Japanese EFL learners to overcome individual weaknesses. Proceedings of the FLEAT5, 92-99

## A movie-based CALL system to enhance learner motivation and promote EFL learning

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A motivating learning environment is essential for EFL learners who are not exposed to the target language in everyday situations. This research is a case study using Caption Master courseware for a face-to-face teacher-led EFL class of 25 university students in Japan. Over ten weeks, the students were assigned listening exercises related to scenes from *Toy Story* (1995, Disney). These could be done both during and outside of class. They were also given comprehension, summary writing, and dictation tasks. The results of the questionnaire after the sessions indicated that the students were motivated by and interested in the activities using Caption Master.

### 1. Introduction

A motivating learning environment is essential for EFL learners who are not exposed to the target language in everyday situations. One promising way to raise motivation is by using movies that include useful conversations and cultural background.

Through analysis of text, we are shown the lives, life commitments, and life projects of people are deeply embedded. In turn, we are going to understand a language by observing the reverse side of the external language. This incorporation of text and context is expressed as a new genre "textography" by Swales (1998).

### 2. Learning Method

#### 2.1 Learning Procedure

##### *Simultaneous learning*

EFL learners watch a DVD movie with Japanese (or English) subtitles on a screen in the classroom in order to acquire an overall schema.

##### *Individual learning*

The learners are assigned exercises related to syntax and important phrases. They also do a time-code task by clicking on a worksheet (using "Caption Master").

#### 2.2 Time-code Task

After much discussion about how to get students to listen carefully to movie dialogues, an easy task was devised. We call it the "Getting the time-code

task." Basically, students click a mouse button when they hear the start of a dialogue while watching a DVD. This makes them listen very carefully to synchronize their time coding with the movie. They can repeatedly view the scene to catch the dialogue. The time-coding is done using "Caption Master" which is technically based on MS Excel.

### 3. Developing Caption Master

#### 3.1 Overview

Okura (2004, patent application) developed a "study support system" in which a movie script can be shown next to a video screen on a client PC, with synchronization of the script presentation and the DVD. The registered trade-name of this system is "SMILE for ME (Synchronized Multimedia Interactive Learning Environment for Multi-modal Education)", and "Caption Master" is one of the products of this system (Okura, 2006). The user-interface is shown in Fig. 1.

#### 3.2 Using Caption Master

(1) An instructor loads the script into the second column in the specified worksheet.

(2) Students receive the worksheet as an electronic file via the network or from a memory device.

(3) Students open the file in the macro-enabled mode, and watch the DVD video in another window.

(4) When the student hears the target dialogue, he/she clicks the right button on the second column to the left of the script cell.

(5) The elapsed time code of the video appears in the cell and the video pauses.

(6) After repeating operations (4) and (5), simply clicking on the time code cell will make the DVD video jump to the time-coded position and the script will be displayed in the caption area.

### 3.3 Technological Issues

Media Player ActiveX module was chosen for this version because it can be used with Windows OS XP and Vista. This module has, however, few DVD control functions. Thus, the original Japanese subtitles on the DVD cannot be removed. This problem should be improved further.

## 4. Experiment

### 4.1 Subjects

Subjects in the experiment were 25 undergraduate students at a university. According to an evaluation of their English proficiency by the instructor, and the result of a 45-item cloze test given to them in advance, they were considered to be false beginners.

### 4.2 Procedure

First, the subjects watched the movie *Toy Story* (1995, Disney) with Japanese subtitles on a screen in the classroom. While watching the movie, they were asked to plan the writing of a summary in

order to comprehend the plot. This screening, including the explanation by the instructor, took about 150 min. and required two academic periods.

The subjects were next assigned fill-in-the-blank exercises related to syntax and important phrases in the movie. Listening comprehension quizzes were also given. After these assignments were done, they did a time-code exercise for all captions by clicking on a worksheet (using “Caption Master”). This task was done both during and outside of class.

Lastly, the subjects were divided into small groups and studied the rhythm and intonation of the words in the movie through role-play exercises.

After all the tasks were accomplished, a 16-item questionnaire was administered to assess their impressions of the entire task procedure related to the movie.

## 5. Results and Discussion

In the questionnaire, the subjects rated their impressions on a scale of one to five, with five meaning that they completely agreed with the description of the item. Overall, favorable responses to the tasks were observed. Sample responses included: “*The class activities I did were really interesting for me (M = 4.12)*” “*I wanted to study not only Toy Story but other movies in the class (M = 4.20).*” These answers show that the students’ liked the courseware they used and wanted to study more using other movies, despite the fact that they were assigned a heavy workload both during and outside of the class.

This indicated that the students were motivated by and interested in using the Caption Master courseware.

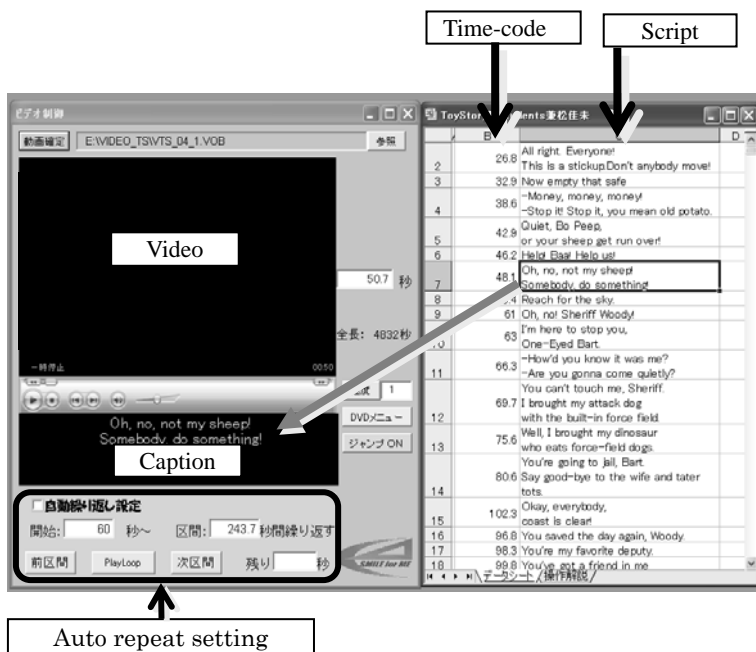


Fig.1. User interface of Caption Master

## References

- Okura, T. (2005). International Patent application No. WO2005/12206
- Okura, T. (2006). Active subtitling content creation tool, the development of Caption Master. *Proceedings of Japanese Society for Information and Systems in Education 31st National Conference*. 157-158. (in Japanese).
- Swales J. M. (1998). *Other floors, other voices: A textography of a small university building*, Lawrence Erlbaum Associates



## **Disintegration of Online Courseware and Mobile Communication**

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Most of the elaborated commercial online course ware packages are for self-study and ‘self-contained:’ everything is neatly arranged and incorporated. Not only the linguistic material of the target language, but also the translation of the texts, hints and the answers for the exercises, sound scripts, etc. are accessible from learners. However, these supportive materials are usually omitted from the textbooks for the classroom use. Therefore, if the materials are not reorganized systematically for the class, they cannot achieve sufficient learning objectives. This explains the current rise of CALL researches on ‘blended learning.’ I’d like to overview the online auto-marking system using mobile phones and suggest that this advances not only the reasonable disintegration of the tools and enriched the activities, but also the comfortable integration of all the activities in classroom.

### **1. Blended Learning—a Theoretical Survey**

As the educational technology advances, various media have been integrated. The online course wares contain almost all of the electronic media currently available, such as texts, sound, graphics, videos, etc. Not only the media, instructional contents, such as sound scripts, tips, hints, answers, translation in the native language, etc., are also integrated. If learners can afford a high-speck PC, plenty of learning time, and the strong will to maintain motivation through the course, they are sure to learn everything online. However, this theory often fails, especially in the second/foreign language learning.

This is mainly because the basic four skills of language learning require different tools or equipments according to learners’ achievement levels. Lower-level speaking and conversation are better practiced in the socially accommodated face-to-face classroom sessions. Reading materials for the advanced level are printed on paper. E-mail writing and academic thesis writing cannot be learned with the same procedures. Both multiple-choice quizzes and dictation exercises are effective for listening. Integrating all of these tools in one online course ware might spoil the natural flow of language learning.

We cannot think little of learners’ emotional factors, either. When learners make challenges, they meet various insecure feelings. This is especially the case in the self-learning. These feelings cannot be predicted easily. They might come from the mismatch between the learner and the material,

from the lack of confidence in their learning, from the unfamiliarity with the new technology, etc. The automated replies of the system are not customized enough to overcome most of the anxiety that learners might have.

The face-to-face class room sessions can be one of the best solutions for the tool disintegration and the emotional support for the learners. Teachers can encourage learners to use various educational tools both in and out of the classroom. Learners can ask their queries directly to instructors and they can get the prompt feedback in their class room.

If some part of learning goes online and is coupled with the traditional face-to-face sessions, this is called ‘blended learning.’ Garrison & Vaughan (2008) defines an ideal form of blended learning as follows:

Blended learning is the thoughtful fusion of face-to-face and online learning experiences. The basic principle is that face-to-face oral communication and online written communication are optimally integrated such that the strengths of each are blended into a unique learning experience congruent with the context and intended educational purpose.

Blended learning does not imply a simple juxtaposition of online learning and face-to-face lectures. The two should be carefully and efficiently integrated. Garrison & Vaughan (ibid) suggests the following key assumptions for a blended learning design:

- Thoughtfully integrating face-to-face and online learning
- Fundamentally rethinking the course design to optimize student engagement
- Restructuring and replacing traditional class contact hours

More specifically, Thorne (2003) proposes the following eight criteria for the successful blended learning:

1. Identifying the core learning need
2. Established the level of demand/timescale
3. Recognizing the different leaning styles
4. Looking creatively at the potential of using different forms of learning, ie matching the learning need to different delivery methods and identifying the best fit
5. Working with the current providers, internal and external, to identify the learning objectives and to ensure that the provision meets the current need
6. Undertaking an education process and developing a user-friendly demonstration to illustrate the potential of blended learning
7. Being prepare to offer follow-up coaching support
8. Setting up a monitoring process to evaluate the effectiveness of the delivery

The complete implementation of Thorne's criteria would be quite challenging. Blended learning seems quite simple and promising in concepts, but the practical implementation is quite complicated. However, the recent rise of CALL researches on blended learning clearly shows that a number of language instructors feel some limitation on their previous unprincipled integration of online learning and face-to-face sessions. In Macdonald (2006), we can see the researchers are challenging to describe a series of blended learning practices so that the ordinary instructors can rehearse the process and duplicate almost the same educational outputs. However, either Thorne (ibid) or Macdonald (ibid), discusses the blended learning from a general e-learning stand points. They are not taking the second/foreign language learning into consideration so much. We should reformulate their findings suitable for EFL/ESL.

## 2. Using mobile phones for language drills

The 'collaborative constructivist' view of learning is one of the trends in the current CALL studies. It recognizes 'e-learning's unique ability to bring together a community of learners, unrestricted by time or place.' E-learning is not just a tool for

the autonomous learning or information access, but as a tool for 'collaborative asynchronous learning.' (Garrison & Anderson (2003)) The more this view prevails, the less attention has been paid to the language learning drill activities, where learners tackle with a number of instructionally designed language targets repeatedly. The drills are rather mechanical private processes and do not contribute to build knowledge collectively so much. However, the drills cannot be negligible from the language learning. They constitute the solid bases for the communicative language performances. The two, i.e. the drills and the communicative performances, are complementary, not contradictory.

Yokohama National University requires all of the freshmen to take a PBT (Paper Based TOEFL) preparation course. They are evaluated only by the score of TOEFL ITP (Institutional Testing Program) they take at the end of the term. It is inevitable to help students drill TOEFL-type questions as many as possible.

To ensure learners' sufficient drill activities, we launched a web-based auto-marking system accessible from mobile phones. They easily beat PCs at the popularity and manageability. Using a mobile phone as a drill tool makes the learning "ubiquitous." Students can access to the drill almost anytime and anywhere.

On the system, students can answer only twice, i.e. the first try and the second try. In the first try, they have to submit all of the multiple-choice type of answers for one practice. In the second try, they answer all of the incorrect questions of the first try. After the second try, they cannot challenge the same practice any more. Thus, all of the questions are classified into three, i.e. those that are solved correctly at their first try, those at their second try, and those cannot be solved even at the second try. All of their performances are recorded in the database and shown in one chart from the administrative web-site. See the following for the operation:

### First Try



1. Key in the login information.

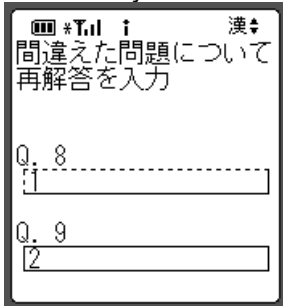


2. Choose the practice.

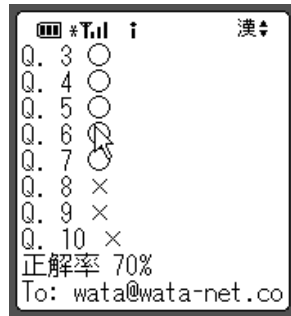


3. Submit the answers for all of the questions.

Second Try



5. By choosing the same practice, only incorrectly answered questions appear. Submit the answers.



4. Test results are given immediately.



6. Feedback for the second try appears.

Administrative survey of the drills

partHistory0723-02.xlsx		Questions				
	A	EY	EZ	FA	FB	FC
1		Q.102	Q.103	Q.104	Q.105	Q.106
33		○	×	△	○	×
34		△	○	△	△	○
35		○	○	○	○	○
36		○	○	○	○	○
37		○	○	×	×	×
38		△	×	○	○	○
39		○	○	○	×	○
40		△	△	○	×	○
41		○	△	○	○	○
42	Student names	△	△	△	○	○
43		○	○	○	△	○
44		○	○	○	○	○
45		○	○	○	○	○
46		○	○	○	○	○
47		×	○	○	○	○
48		○	×	○	○	○
49		○	○	○	○	○
50		○	○	○	△	○
51		未	未	未	未	未
52		○	○	○	○	△
53		○	×	△	○	○
54		未	未	未	未	未
55		○	△	○	○	○
56		○	○	○	○	○
57		△	△	○	○	△
58		○	○	○	○	○
59		△	○	○	○	○
60		×	×	○	○	○
61		○	○	○	○	○
62		○	○	○	○	○
63	number of answers	65	65	65	65	65
64	average score	1.6	1.12	1.66	1.65	1.69

Fig.1. A system operation overview

3. Designing Blended Learning

With this system in our hands, we gradually refine all of the classroom activities suitable for the blended learning. Specifically, under the permission of a publisher, I made the following preparation:

1. Divide the original textbook for self-study into a student book and a teacher's manual. A student book does not contain tape scripts or answers, whereas a teacher's manual does.
2. From the original cassette tapes, sort out the audio information for students and that for teachers. Digitize each on a PC and create a student CD and a teacher CD. A student CD has all of the listening practices, whereas a teacher CD has only diagnostic tests and quizzes. Bundle the student CD with the textbook for free.
3. Set up an LMS (learning management system) for the class. Students can access to various electronic documents and bulletin boards for their collaborative work.

With the information teachers have acquired from students' drill performances and the bulletin board discussion, they can focus on the sections that the students feel more difficult and anxious. They can also find which students need more support. Thus, this helps teachers a lot customize classes and negotiate with their students.

4. Conclusion

Through this designing process, the materials and the tools/equipments are disintegrated. Further, the related language learning activities have enriched a lot. The following tables compare how the system has changed:

Table 1. Materials

Original	Revised
Textbook	Student book Teacher's manual
Cassette tape	Student CD Teacher CD

Table 2. Tools/equipments and related main activities

Original	Revised	Main activities
● Textbook ● Cassette tape player	● Textbook ● CD player ● PC ● Mobile phone ● Classroom	● Reading ● Listening ● Online collaboration ● Auto-marking ● Personal tutorial

In order for multiple things to be 'blended' together, they should be appropriately 'separated' in advance. Mobile phones are not powerful enough to integrate various media as an internet terminal. Most of them are still confined to the text. Using mobile phones as a tool of auto-marking presupposes the refinement of both text and audio media. This enhances not only the reasonable disintegration of the tools for enriched language activities, but also the comfortable integration of all the activities in classroom.

### **References**

- Garrison, D. R. & Anderson, T. (2003). *E-Learning in the 21<sup>st</sup> Century: A Framework for Research and Practice*, London: RoutledgeFalmer, 12.
- Garrison, D. R. & Vaughan, N. D. (2008). *Blended Learning in Higher Education*, San Francisco: Jossey-Bass, 5
- Macdonald, J. (2006). *Blended Learning and Online Tutoring: A Good Practice Guide*, Hampshire: Gower House.
- Thorne, Kaye (2003). *Blended Learning: How to Integrate Online & Traditional Learning*, London: Kogan Page, 35

## Creating Cloze Exercises Easily and Effectively

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Teachers can use cloze tests to help students develop proficiency in reading, vocabulary, grammar, and listening. Our software *Cloze Generator* (CG) inserts blanks automatically in a text for each n-th word, for a certain part of speech, or for a certain level of vocabulary based on the JACET8000 word list. It is possible to make blanks of certain words, or words specified manually, too. It produces cloze exercises, either as printed material or html files for e-learning. There is a Windows version and a Mac version. CG can be downloaded from <http://www.oit.ac.jp/ip/~kamiya/mwb/mwb.html> for free. In this paper, we will explain how to use CG, and make the cloze tests. We hope teachers find an easy and efficient way to make and use cloze tests.

### 1. What is Cloze and Why Use It?

A cloze test was originally developed as an English passage with every n-th word blank, in which testees fill in those blanks with the original words. Taylor developed this procedure in 1953 to measure reliability and difficulty levels of reading materials for native speakers and named it “cloze.” Later it was found to have high correlations with other tests, and cloze tests have been used as reading comprehension tests.

Oller (1971, 1972, 1973) tested cloze tests, and his research indicated that cloze tests are useful for second language learning. Adelberg & Razek (1984) claimed that if the students can obtain more than 44 percent correct answers, the passage is appropriate material for those students. Bachman (1982, 1985) claimed that cloze with blanks for certain purposes are effective.

Brown (1988, 1993) highly evaluated cloze tests as fast and economical procedures. Cloze with n-th word blank or blanks for certain purposes are useful for not only testing overall proficiency but also for reading and listening comprehension exercises or grammar exercises.

Though cloze tests are much easier than other tests, making blanks with certain purposes can be a lot of work. Considering vocabulary difficulty levels or certain parts of speech when making blanks makes the task almost impossible.

### 2. Overview

The purpose of this project is to make blanks in reading passages easily and effectively. We have

developed easy-to-use software, *Cloze Generator* (CG), not only to make blanks automatically for every n-th word, but also to make blanks 1) on manually-chosen specific words, 2) on words with certain vocabulary levels, or 3) on specific parts of speech. Teachers can make cloze tests with the list of answers in random order beneath the reading passage, and also in the order of the blanks. These tests can be printed out and used for exercises in class.

CG also enables teachers to export these tests in an html format for an e-learning material. Using a JavaScript program we provide, students can time themselves and get immediate feedback for correct and incorrect answers.

### 3. Downloading *Cloze Generator*(CG)

CG is compatible with Windows XP/Vista and Mac OS X. Following the instructions on <http://www.oit.ac.jp/ip/~kamiya/mwb/mwb.html>, you can download CG. The software is zip compressed.

To make e-learning materials, two separate files downloadable from the same page are necessary. One is a JavaScript program called *anaume.js*, and the other is a style sheet called *main.css*, which have to be in the same folder with an exported html file by *Cloze Generator*. You can see how they work together at the following web page. <http://kkitao.e-learning-server.com/javaS/blank/cloze/>

### 4. How to Use *Cloze Generator*(CG)

CG is largely self-explanatory. You double click

mwb\_tool.exe (or mwb\_tool.app on Mac OS X) to start CG. The following are instructions on how to use CG.

#### 4.1 Ordinary procedures to make blanks

1) On the main screen, click “Basic Cloze automatic n-th / manual.”



Fig. 1. Main screen

2) Copy and paste your passage into the box.



Fig. 2. Basic Cloze (automatic n-th/manual)

3) For making each n-th word blank automatically, set configuration in the auto n-th section (lower left).

- Specify Index number (n), for example, 5, 6, or 7. The default is 8.
- You can choose whether you make blanks in the first sentence or not.
- Click “Preview” to see how the cloze looks. Words to be deleted are indicated with @.

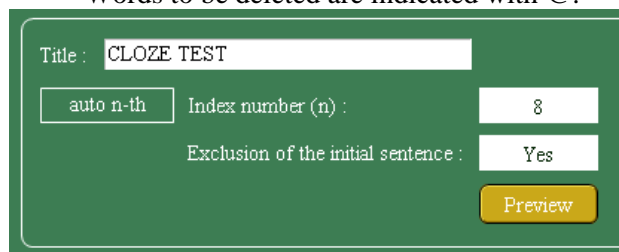


Fig. 3. Configuration in the auto n-th section

The following is a preview of a sample sentence with every 8<sup>th</sup> word automatically replaced with a blank.

Cloze Generator makes cloze exercises from English @passages you provide, which can then be used @for a test or an exercise. And remember, @it's FREE!

If you wish, you can move “@” to change the words to be blank. In the next step, the same sentence is shown as follows.

Cloze Generator makes cloze exercises from English 1. ( ) you provide, which can then be used 2. ( ) a test or an exercise. And remember, 3. ( ) FREE!

4) For making blanks manually with the specific words you want, set configuration in the manual section (lower right).

- To enlarge the font size, so as to work adding @ efficiently, select the size and click the next “Change font size” button.
- In the passage, add @ without any space in front of the words you want to make blanks.
- You can specify certain words, which will be replaced with blanks throughout the passage. Click “Choose words.”
- To erase all the @ from the passage, click “Reset.”

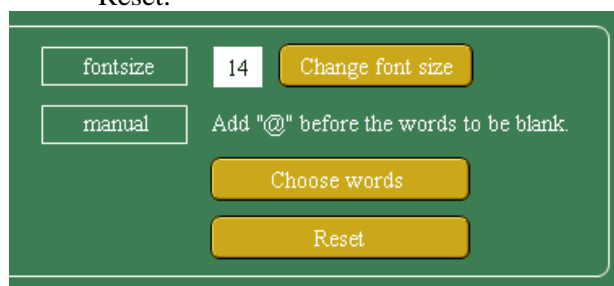


Fig. 4. Configuration in the manual section

5) Click “Send.” The result is shown in another window very shortly.



Fig.5. Result

6) Choose “Text file” or “HTML format” at the bottom of the page. To get the file, click “Export” and save it with the extension of “.txt” or “.html”

#### 4.2 Considering vocabulary difficulty levels

- On the main screen, click “Cloze Vocabulary Level.”
- Copy and paste your passage into the box.

Check all levels (Level 1 to Level 8) and click “send” below the box.

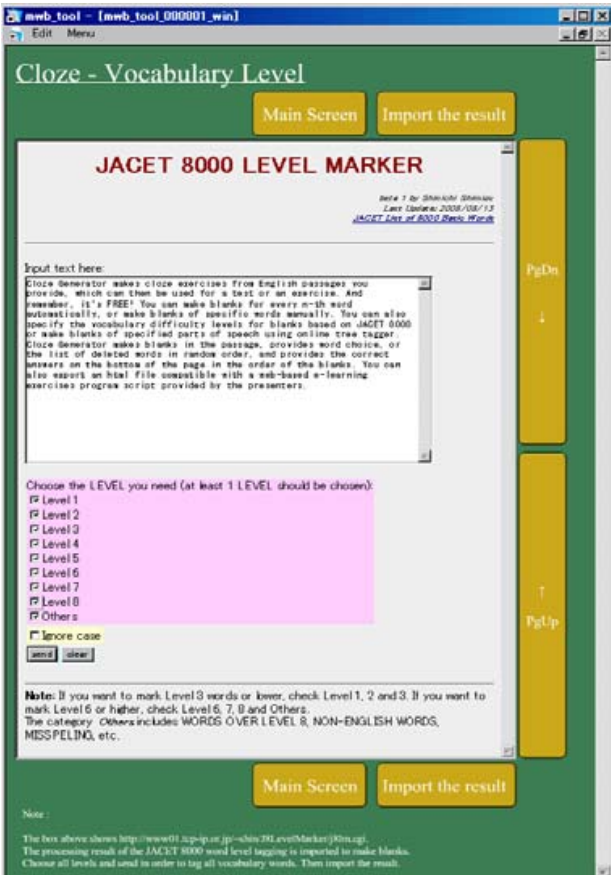


Fig. 6. Cloze – Vocabulary Level

3) After a few-second processing, click “Import the result.”



Fig. 7. Processing result of vocabulary level tagging

4) Choose “Low Level Threshold” (to indicate the lowest level you want) and “High Level Threshold” (to indicate the highest level you want) and the Index number (n).



Fig. 8. Configuration of vocabulary level threshold

5) Click “Send.”

### 4.3 Considering parts of speech

- 1) On the main screen, click “Cloze Part of Speech.”
- 2) Copy and paste your passage into the box. Click “Submit.”



Fig. 9. Cloze – Part of Speech

3) After a few-second processing, click “Import the result.”



Fig. 10. Processing result of POS tagging

4) Choose POS, then click “Generate POS Tag List.” The tags of chosen POS are shown in the box below.

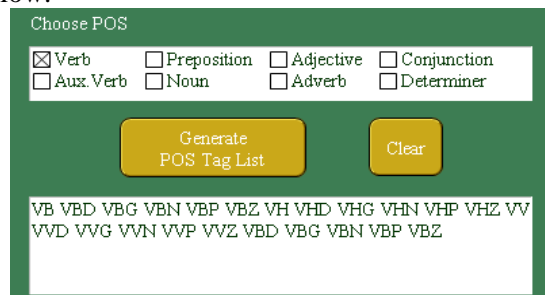


Fig. 11. Configuration of generating POS tag list

5) Specify Index number (n) and click “Send.”

### 5. How to Use E-learning Materials

The result of each function looks much the same, as shown in Fig. 5. If you choose “HTML format [for E-learning material compatible with anaume.js],” the content in the window is converted into HTML. Click “Export,” and save the file with the extension of “.html.” Distribute this file together with anaume.js and main.css to your students, or upload the files to the web in the same directory/folder.

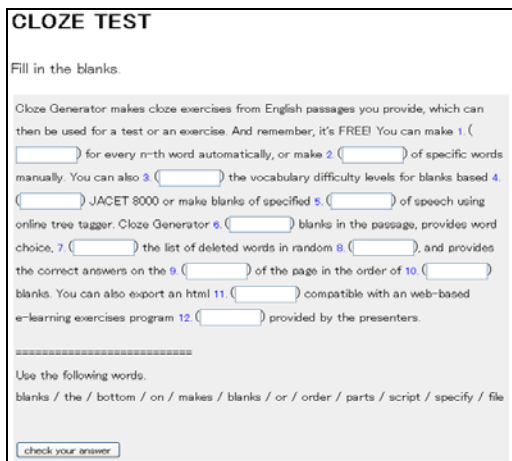


Fig. 12. Sample file of e-learning material

The internal timer starts counting as soon as the HTML file is opened in a web browser. After writing in the answers, click “check your answer.” The accuracy rate and elapsed time are shown below, and the wrong answers are indicated in red. Students can correct the wrong answers and check them again in the same way. The accuracy rate and the total elapsed time are shown, and the “check your answer” button disappears, which means the test is done.



Fig. 13. Result of Cloze

### 6. Conclusion

A cloze test is easy to make but it still takes time and effort. Using *Cloze Generator*, it is easy to make blanks with n-th word or any words manually or automatically. CG also makes it possible to choose words at a certain vocabulary level or specific parts of speech, which is almost impossible to do by hand.

CG creates html files easily for e-learning, and students can study English using a computer and obtain immediate feedback of correct answers and time.

Free software we provide will contribute to making learning materials easily, and it will make learning more efficient.

### References

- Adelberg, A. H. and Razek, J. R. (1984). The cloze procedure: A methodology for determining the understandability of accounting text-books. *The Accounting Review*, 59, 109-122.
- Bachman, L. F. (1982). The trait structure of cloze test scores. *TESOL Quarterly*, 16, 61-70.
- Bachman, L. F. (1985). Performance on cloze tests with fixed-ratio and rational deletions. *TESOL Quarterly*, 19, 535-556.
- Brown, J. D. (1988). Tailored cloze: improved with classical item analysis techniques. *Language Testing*, 5, 19-31.
- Brown, J. D. (1993). What are the characteristics of natural cloze tests? *Language Testing*, 10, 93-116.
- Oller, J. W. J. (1971). A cloze test of English preposition. *TESOL Quarterly*, 5, 315-326.
- Oller, J. W. J. (1972). Scoring methods and difficulty levels for cloze tests of proficiency in English as a second language. *Modern Language Journal*, 56, 151-157.
- Oller, J. W. J. (1973). Cloze test of second language proficiency and what they measure. *Language Learning*, 23, 105-118.
- Taylor, W. (1953). Cloze procedure: A new tool for measuring readability. *Journalism Quarterly*, 30, 415-433.
- Taylor, W. (1956). Present developments in the use of the cloze procedure. *Journalism Quarterly*, 33, 42-48.



## E-Assessment System for Young Learners (EASY)

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While more e-learning systems are emerging, for follow-up and revision purposes there exists little on evaluating the learning in these systems. This paper presents a framework for an Electronic Assessment System for Young learners (EASY), which not only generates the results at the end of the assessment but also provides revision and a follow-up stage by making use of the records of the answers. The proposed e-assessment framework uses mainly AI devices (neural network, decision tree) and inference engines (rule base, forward and backward chaining), which allow appropriate questions to be created and also keep track of students' learning/development. The specific methods used are: 1) clustering techniques, which enable the system to group the characteristics of the objects; 2) forward chaining which on the basis of the answers predicts what the learners are thinking and 3) backward chaining, which checks the answers and uses them for revision. The knowledge database thus derived provides material for the e-assessment.

### 1. Introduction

The construction of e-learning systems for young learners has specific requirements, which are different from those applied to e-learning systems for adults. The same holds for electronic assessment, which is also a growing area of research; little has so far been investigated with regard to the e-assessment of young learners' learning outcomes.

Electronic assessment (e-assessment) is an alternative form of assessment, which can be used to evaluate students' learning development. According to JISC, e-assessment is defined as follows:

The end-to-end electronic assessment processes where ICT is used for the presentation of assessment activity and the recording of responses. This includes the end-to-end assessment process from the perspective of learners, tutors, learning establishments, awarding bodies and regulators, and the general public. (JISC, 2006)

Assessment in this domain can be related to recognition and motivation (formative assessment), recording the learners' achievements (summative assessment), helping students to understand their development needs (diagnostic assessment), defining levels of achievement (standard setting), and enabling employers and teachers to recognize what young people have achieved (differentiation and selection) (Duckett and Jones, 2006; Jones, 2005). Theoretically, an e-assessment should be uninfluenced by the way in which the learning has been carried out, i.e. whether through face to face learning, blended learning or e-learning.

The process for developing e-assessment

components with multimedia elements comprises the following stages (developed from Barrett, 2002):

- Investigating the needs of the potential audience
- Planning for and designing the e-assessment components
- Developing the necessary parts and reusing/re-organizing existing parts for the presentation
- Recording and implementing the materials
- Evaluating the system

In the first phase, the investigation concentrates on the potential users of the e-assessment system, which identifies the users and the needs of different target groups. This leads to the design phase, in which basic elements of the system are designed and organized. This phase includes a planning component, comprising a search for components which can be reused in the system and need not be designed from scratch. In the development phase, the necessary components are gathered and constructed, for example, organized into a sequence. The record and implementation phase leads to the actual materials used for the system. Here the materials are produced, by, for instance, recording audio and video sequences and editing the necessary textual passages. These phases are used not only for e-learning applications but also for almost all the other areas in which multimedia play an important role.

As computer technology evolves, more and more

sophisticated approaches can be adopted to develop a user interface. In learning environments which use conversation as a means of assessment, the user interface should be based on learning theory, in particular, learning through conversations (Harri-Augstein and Thomas, 1991; Brockbank and McGill, 1998). For young learners the types of question are related to the learning of a particular subject domain, such as objects expressed in their native language. Since we do not expect higher level thinking and critical and reflective questioning, the types of questions are more limited than they would be in an advanced conversation, where Why and How questions would be asked, not only on the topic of the assessment but also about the previous learning phase (Harri-Augstein and Thomas, 1991).

In this paper, we propose a framework for the e-assessment for young learners (EASY). We start this by examining e-assessment for young learners, e-learning and e-assessment in section 2. Section 3 provides an overview of the system framework. In the last section some conclusions and further development of the work are discussed.

## **2. Young Learners, E-learning and E-assessment**

As has been mentioned, while the available e-learning programmes are mostly for higher education, so far those for young learners are still being developed. Available applications of e-learning in teaching young learners can be seen in first language education (e.g. remote education by e-learning), mostly concerned with English as a foreign/second language (EFL/ESL).

In related areas of research, i.e. computer assisted language learning (CALL), its effectiveness in teaching vocabulary has been reported (e.g., Takefuta 1999; Chujiyo and Nishigaki 2005) on the basis of the importance of vocabulary knowledge in understanding any language (e.g., Wilkins 1972, Nation 1990; 2001, McCarthy 1990, Laufer 1997). In the EFL environment, above all, language learning is generally more challenging, because of the scarcity of input. Moreover there is little in the way of L2 (second language) mental lexicons, which “[consist] of a core vocabulary of known words”, readily available to EFL learners, least of all at the early stage of learning, when they tend to rely heavily on their L1 (first language) knowledge (Singleton, 1999). For instance, when learners are learning the names of objects (such as fruits and vegetables), it is hard for them to conceptualize the meaning and characteristics if they have not already encountered the objects in their L1. Moreover, motivation is in general one of the important factors to consider in the teaching of young learners, since

they tend to be less intrinsically driven than adult learners.

In the case of teaching EFL to young learners, through e-learning materials, Chujiyo and Nishigaki (2005) identify the need to teach young learners everyday vocabulary via an e-learning course. Their structure for the proposed learning process has three steps: 1) presentation; 2) practice; and 3) performance. But despite the presence of such systems, which are targeted at young learners, little attention has been given to evaluating and checking the learners’ understanding or identifying the areas needing revision. There seems to be a tendency to avoid the concept of ‘assessing’ learners, for such reasons as that the result, if negative, could be discouraging. In the case of evaluating young learners in general, the formative and summative distinction is often overlooked (Rea-Dickins and Rixson 1997). However, it is important to consider ways of checking and evaluating learners’ understanding in any pedagogy. Moreover, it enables educators to monitor the learners’ learning as well as the effectiveness of the techniques and approaches, for in the end it provides material for the follow-up and revision phases. The points raised above (i.e. the development of the understanding of lexical concept, motivation and the learning environment) should be fed into the design of the interface for the assessment, which will be discussed in the next section.

## **3. System Framework**

Nowadays, user interfaces can be designed and implemented with a wealth of technical opportunities, which may lead to important points being overshadowed. For young learners, the user interface must be entertaining and more attractive than that for adult learners, without distracting the young users from the intended conversation (Aust and Isaacson, 2005).

The software development of the user interface in this project has been carried out using rapid prototyping (for an overview of the various rapid prototyping paradigms for the implementation of user interfaces, see Hardtke, 2001).

The system is designed according to the needs of young learners, as outlined in the previous section. Fig. 1 shows how the e-assessment component is embedded in the instructional process and which paths a learner can take, depending on the assessment results. In EASY, the assessment of learning development is independent of the type of learning phase. Students from classroom instruction can be assessed, as can students from blended learning and e-courses.

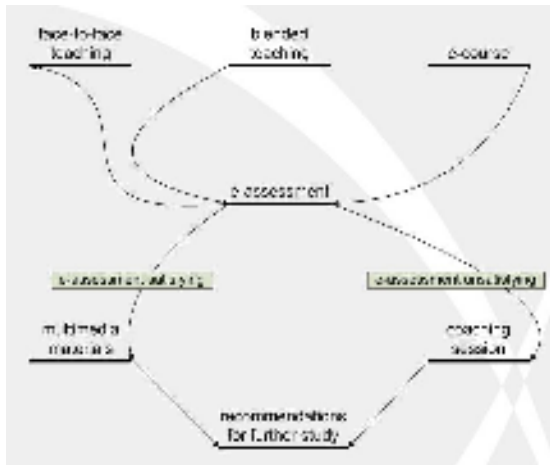


Fig. 1. Embedded e-assessment

The system design of EASY has to take into account several considerations, outlined below:

- Reliability of the system
- Types of assessment needed
- Generating questions which are appropriate for young learners to understand
- Matching the assessment procedure with individual learning styles
- Information security

The framework is developed using Artificial Intelligence and an inference engine with rule based forward and backward chaining. This framework can work as follows:

- Manage knowledge about things/objects, e.g. fruit, animals
- Provide yes/no questions for learners
- Search and ask reasonable questions and lead them in the right direction
- Display questions which learners have answered already in the session
- Predict what thing/object the learner is thinking of
- Suggest answers for each question if learners are in need
- Assess learners' style of learning, e.g. recognition, understanding, analysis
- Give marks to student after assessment
- Add/Edit/Delete data of objects, pictures, multimedia and knowledge related to the learning material.

To implement EASY the following methods are used (Fig. 2):

- A clustering technique is used to group objects or things which have similar or the same characteristics, e.g. shape, taste, smell or colour.
- Inference engine tools: forward chaining (data driven) is used for finding what thing or object the

user is thinking of when using the system. The tool considers and examines all the information and data from the answers provided by the learners, e.g. after learners have chosen what things/objects they want to learn and revise, such as fruit. Then the system asks learners about the shape, taste, smell, etc. of the fruit. The learners are required to provide answers (yes or no), so that the system can be guided by these previous learner answers, in order to provide further appropriate questions to follow. This process, at the same time, predicts the answer which the learners have in mind.

• Backward chaining is used to recheck and trace the answers to the questions, e.g. if the answer is 'an elephant' (animal section) then the system rechecks all the questions and the answers which the learners have provided, for instance, as answering yes for 4 legs, big size, has trunk and tusks, etc. From this, the learners can get full marks if they provide all the correct answers to the questions generated by the system; and fewer marks if they have answered incorrectly. There are no more than 20 questions in each assessment.

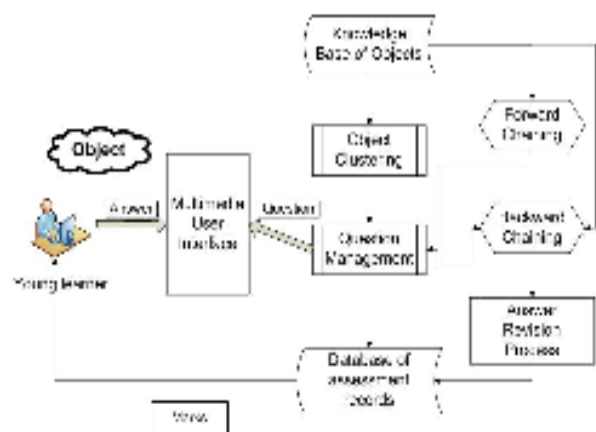


Fig. 2. EASY Framework

#### 4. Conclusion and Further Work

This research has led to a structure for an E-Assessment System for Young learners (EASY), which comprises an appropriate multimedia-enhanced user interface and a neural network for intelligent questioning and answering. The decision tree is used to arrange the questions and answers automatically.

The system has the advantage of providing summative assessments, which are related to the learning of concepts of objects in the native or in a foreign language. The system can be used as a tool for guided assessment and also for self-assessment. Furthermore, EASY can be usefully set up as a distance assessment system; for instance, through the implementation of a web-based user interface.

There is an ongoing project of further development of EASY (Snae, et al, forthcoming), which enables learners to ask questions. The advanced version of this framework further uses a word-matching algorithm which is used to match keywords in the knowledge base about the characteristics of an object with words from learners' questions. The detail of the matching algorithm is described in Snae (2007); Snae and Brueckner (2007).

Another area of further work is the recommendation of further studies and the outline of an individual study plan for the student who has been assessed, incorporating the assessment session into an e-portfolio of learning. This is an "electronically-based portfolio, i.e. a file store and information management system which is modeled on the working method used for paper portfolios, but which takes advantage of the capabilities of ICT, notably allowing learners to store digital artefacts and streamlining the process of review and moderation for learners, tutors, moderators and verifiers" (JISC, 2006).

### **Acknowledgments**

We appreciate all the comments received at the WorldCALL conference in Fukuoka, August 2008, which gave new insights into the further development of this project.

### **References**

- Aust, R. & Isaacson, R. (2005). Designing and Evaluating User Interfaces for eLearning. In G. Richards (Ed.) *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education*, Chesapeake, VA: AACE, pp 1195-1202. Retrieved November 10, 2007, from [http://elearndesign.org/papers/eLearn2005\\_Aust.pdf](http://elearndesign.org/papers/eLearn2005_Aust.pdf)
- Barrett, HC (2002). *Introduction to electronic assessment portfolios*. Retrieved November 15, 2007, from <http://electronicportfolios.org/ALI/intro.pdf>
- Brockbank, A. & McGill, I. (1998). *Facilitating reflective learning in higher education*. Buckingham: SRHE and Open University Press.
- Chujyo, K. & Nishigaki, C. (2005). Creating E-Learning Material to Teach Essential Vocabulary for Young EFL Learners. *Proceedings of IWLeL 2004: An Interactive Workshop on Language e-Learning*, pp.35-44.
- Duckett, I. & Jones, C.A. (2006). *Personalised learning: meeting individual learner needs*. London: Learning and Skills Network.
- Harri-Augstein, S. & Thomas, L.F. (1991) *Learning conversations*. London: Routledge.
- Hardtke, F. (2001) Rapid prototyping for user-friendly and useful human machine interfaces. *Proceedings of SIMTECT 2001, Simulation Industry Association of Australia, Canberra, Australia*. Retrieved November 3, 2007, from <http://www.siaa.asn.au/get/2395363450.pdf>
- JISC (2006) E-assessment. Retrieved November 3, 2007, from [http://www.jisc.ac.uk/uploaded\\_documents/eAssess-Glossary-Extended-v1-01.pdf](http://www.jisc.ac.uk/uploaded_documents/eAssess-Glossary-Extended-v1-01.pdf)
- Jones CA (2005) *Assessment for learning*. London: Learning and Skills Development Agency.
- Laufer, B. (1997). The lexical plight in second language reading. In J. Coady & T. Huckin. (eds.). *Second Language Vocabulary Acquisition*. (pp. 20-34). Cambridge: Cambridge University Press.
- McCarthy, M. (1990). *Vocabulary*. Oxford: Oxford University Press.
- Nation, I.S.P. (1990). *Teaching and Learning Vocabulary*. Boston: Heinle & Heinle Publishers.
- Nation, I.S.P. (2001) *Learning vocabulary in another language*. Cambridge: Cambridge University Press.
- Rea-Dickins, P. & Rixson, S. (1997) Assessment of young learners of English as a foreign language. In C. Clapham & D. Corson (eds.) *Encyclopedia of Language and Education. Vol.7: Language Testing and Assessment*. (pp. 151-161). Amsterdam: Kluwer Academic Publishers.
- Singleton, D. (1999). *Exploring the Second Language Mental Lexicon*. Cambridge: Cambridge University Press.
- Snae, C. (2007) A Comparison and Analysis of Name Matching Algorithms. *International Journal of Applied Science, Engineering and Technology, Vol 4 no. 1*, pp. 252-257.
- Snae, C. & Brueckner, M. (2007) A semantic web integrated searching system for local organizations with Thai Soundex. *The 4th International Joint Conference on Computer Science and Engineering (JCSSE 2007)*.
- Snae, C., Brueckner, M., & Hirata, E. (forthcoming). Distance online learning and evaluation framework. *Journal POLIBITS: Computer science and computer engineering with applications*. (2008, in press).
- Takefuta, J and Takefuta, O. (1999). Three types of CALL courseware developed for teaching vocabulary to EFL students. *The IALL Journal of Language Learning Technologies*, Vol. 31, No. 3, 8, pp. 59-68.
- Wilkins (1972). *Linguistics in language teaching*. London: Edward Arnold.

## Fostering Global Teacher Training: the Design and Practice of a Web-based Discussion Forum as a Knowledge Building Community

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It is our purpose to design a system to construct a platform for a discussion forum which offers a good opportunity for future ALTs (assistant language teachers) all over the globe to undergo pre-training and join the teachers' community in advance. The actual knowledge building can be seen in the comment box, under a certain topic which has been visualized as a tree in the Forest Forum constructed with the aid of CSCL (Computer Support for Collaborative Learning) technologies. The results of the anonymous online questionnaire and interviews indicate that both groups of teachers demonstrated greater gains for their professional development.

### 1. Research Background

Most ALTs are young people who come from English speaking countries through the national project, the JET programme. They assist with English classes taught by Japanese teachers of English. The problem is that their professional preparation is insufficient. ALTs have little job training on a practical level in the orientation sessions offered at present, and virtually no individual preparation occurs for the profession before coming into the classroom (Kushima & Nishihori, 2006). The Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan, announced in 2002 that the number of ALTs should be increased to the unprecedented number of over 8400. Taking the expansion of recruitment and dispatch into consideration, Web-based training can complement the present training available and offer pre-training to future ALTs throughout the world. We have developed an online discussion forum which is a system to help future ALTs prepare for their profession. They can build professional knowledge and conceptualize the qualities as a teacher interacting with JTEs and experienced ALTs through online discussion before starting to work at school.

### 2. Forest Forum

Much focus is placed on interaction (Ferry et al.,

2000; Schon, 1987; Vygotsky, 1978) in the discussion forum, since it offers learners an opportunity to analyze information, explore ideas, and share feelings among learners and instructors in an e-learning environment (Khan, 2005). A number of studies have been carried out concerning knowledge building communities (Bermejo, 2005; Li, 2004; Scardamalia & Bereiter, 1994; Shinohara & Miura, 1999). In our research, we applied collaborative space ontology (Takeuchi et al., 2006), and developed a global online discussion forum, which was named "Forest Forum."

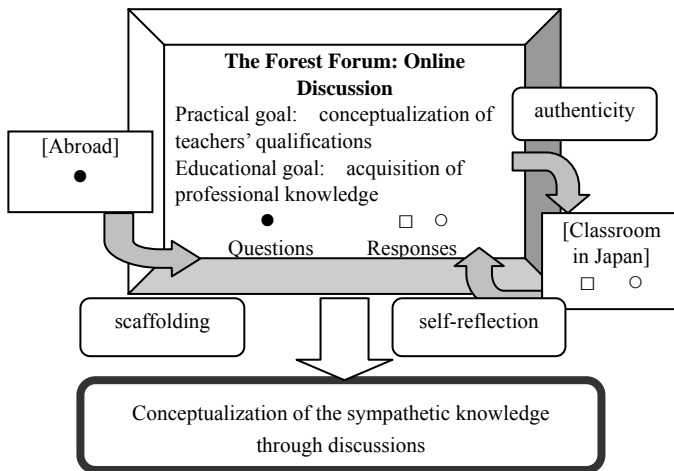
#### 2.1 Paradigm

Several viewpoints have been taken into consideration with the design of the platform of the Forest Forum (Fig. 1) as follows:

1. The Forest Forum is an online discussion forum which develops a 'knowledge building community' (Bereiter & Scardamalia, 1993) as a group of people who work on team-teaching lessons in English classes in Japanese schools or are going to;
2. The discussions center on vocational education for ALTs;
3. Future ALTs will gain comprehension from discussions among JTEs and experienced ALTs as mentors;
4. The level of ALTs' understanding of their

profession is evaluated;

- The discussion level and the degree of contribution of mentors are visualized.



- Future or novice ALT □ JTE (Japanese teacher of English)
- Experienced ALT

Fig. 1. Paradigm of the Forest Forum

In the Forest Forum, future or novice ALTs ask questions about their jobs, while JTEs or experienced ALTs answer the questions. Future or novice ALTs can develop an understanding of the values, norms, and habits of the teaching profession in Japan through interaction with experienced teachers. In addition, all the participants come to share the ideas of their profession and conceptualize teachers' qualifications. Through discussions, they can build professional knowledge and conceptualize sympathetic knowledge. Moreover, it is said that a good online discussion forum offers three functions: authenticity, scaffolding, and self-reflection (Miyake, 1997), and these qualities are certainly included in the Forest Forum.

### 2.2 Design

Contribution from each member can be visualized in this forum which takes the form of an easy-to-understand display of the actual community at work (Fig. 2). Trees, Flowers (designed in a variety of colors), the Blinking Flower, and the Butterfly show the argument level and the degree of contribution of the mentors. When a topic is posted, a tree comes out on the screen. The newest tree appears on the upper-left. When a reply to the topic is posted, a flower comes out in the topic tree on the screen. The color of the flower is decided according to the status of a member. The more trees and flowers there are on the screen, the more active the discussion within the community is.



Fig. 2. Visualization of the discussion level

### 2.3 Visualization of the Discussion and the Degree of Contribution

The actual knowledge building can be seen in the comment box, under various topics which have been visualized as trees in the Forest Forum (Fig. 3). When the reply to a topic is posted, a flower comes out in the topic tree on the reply screen as well as on the home. Whenever a reply to the same topic is posted, the comment boxes extend downward in order of posting. The color of the comment box is the same as that of the flower. Pink represents JTEs; yellow, experienced ALTs; and blue, future ALTs except the questioner. We can see the degree of members' contributions at a glance. Consequently, we can witness this creation of knowledge once we are in this forum.

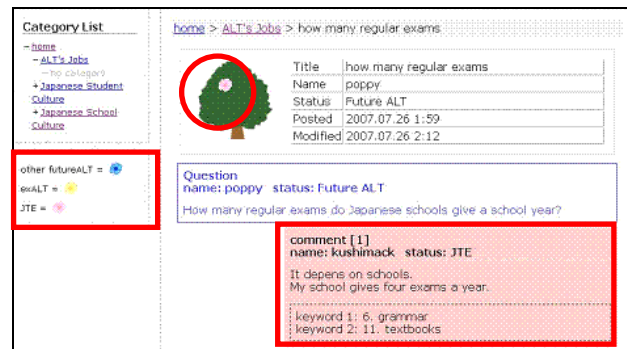


Fig. 3. Visualization of the discussion and the degree of contribution

Moreover, questioners can evaluate the reply to their own question by clicking the "good" button.

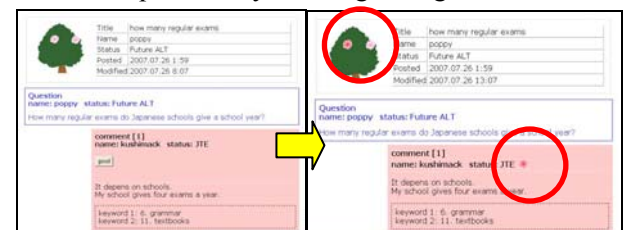


Fig. 4. Evaluation of the reply to the question

Then, a “blinking” flower appears on both the tree and the comment box in the question (Fig. 4). They can also evaluate the whole discussion when they close the topic.

### 3. Research Questions and Method

In order to measure the effectiveness of the Forest Forum, the following questions were posted:

1. Do future or novice ALTs develop a sense of belonging to the community as they develop an understanding of the professional role of ALTs?
2. Do future or novice ALTs develop a sense of belonging to the community as JTEs and experienced ALTs contribute ideas about their profession and the culture of Japanese schools to the discussion?
3. Does the development of discussions enable future or novice ALTs to further understand their profession, and help experienced teachers cultivate fresh new ideas and viewpoints regarding their profession?

The Forest Forum was established in August, 2007, and a variety of discussions were observed for 68 days. 16 ALTs and 14 JTEs enrolled in the Forest Forum, most of them accessing the forum from their own computers. Data was collected by an anonymous online questionnaire and interviews to the participants. Face to face interviews were partly conducted. Following this, the results were analyzed based on the above points.

### 4. Results and Discussions

The results indicate that both groups of teachers demonstrated greater gains for their professional development. The findings will encourage the researchers in refining the knowledge building community for future professional development.

Table 1 shows correlation analysis of future or novice ALTs’ “comprehension of keywords,” “satisfaction with response,” and “sense of

Table 1. Correlation analysis of “comprehension of keywords,” “satisfaction with response,” and “sense of belonging to the Forest Forum”

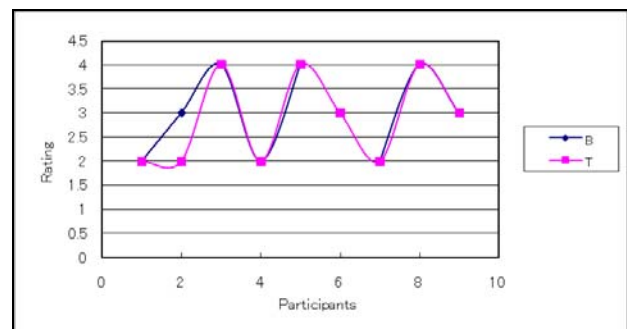
	N	r	t	P	t(0.975)
C X S	7	.90*	4.10	.01	2.78
C X B	7	.78*	2.75	.04	2.78
S X B	7	.92*	4.67	.01	2.78

Note. C = degree of comprehension of keywords, S = degree of satisfaction with response, B = degree of sense of belonging to the Forest Forum.

\*p < .05.

belonging to the Forest Forum.” “Keywords” means important words regarding ALTs’ work such as “ALTs’ role,” “team-teaching,” and “Japanese school culture.” We can see that the three factors correlate with one another. Namely, future or novice ALTs became satisfied with the responses, and at the same time they developed an understanding of the nature of teachers’ work. Consequently, they were able to develop a sense of belonging to the community. However, the correlation coefficient in the middle line is a little smaller than the others. This implies that ALTs are likely to be satisfied with the whole reply even though they have not sufficiently understood their profession yet.

Fig. 5 shows each future or novice ALT’s “degree of sense of belonging” to this community and any changes in their ideas or behavior after participating in the Forest Forum. From this figure we can observe a strong correlation between their sense of belonging to the community and these changes. Accordingly, it follows that ALTs enhanced their sense of belonging to the Forest Forum, and, as a result, they developed a sense of professional identity.



Note. Blue line = degree of sense of belonging to the Forest Forum, red line = degree of change in ideas or behavior.

Fig.5. Level of the sense of belonging to the community and the degree of change after participating in the Forest Forum

The following participants’ comments demonstrate that they realized growing awareness of their profession, and deepened their sense of belonging to the community through interaction. Anyone who offered these comments was extremely satisfied with the community. A future ALT who offered the comments shown in 4-1 expressed her appreciation for the responses.

4-1:

- I would like to thank ... for very enriching and enlightening comments. It will really help me to be an effective future ALT teacher.
- Thank you for the information about detailed

*information about ALTs. I really appreciated it.*  
(an ALT's comment in the questionnaire thread about "an effective and efficient ALT")

Furthermore, the participants who offered the comments in 4-2 realized that they had built professional knowledge, and then enhanced their sense of belonging to the community.

4-2:

•... *By conducting lessons with JET people as partners, ALT teachers could learn something. So I think that co-constructing the lessons with the ALT encourages me to develop as a language teacher.*

(A JTE's comment in the questionnaire thread about "ALTs and JTEs role")

•*I agree with ... because TT helps each one of us to learn, develop and make the most out of what we have, especially in teaching language. When you incorporate TT in the classroom it makes an individual more relaxed, comfortable and confident in teaching.*

(an ALT's comment in the questionnaire thread about "ALTs and JTEs role")

The comments from the face-to-face interview in 4-3 went on to show that future ALTs gained professional knowledge and developed an emotional attachment to the community.

4-3:

•*I actually, personally, find it interesting to look at, to find out about, like behavior of the students in Japan, and it helps me to imagine what schools are like in Japan. That's interesting .*

•*I've taught Japanese students in Australia the last couple of years. I haven't actually ever been to Japan before, so that's why I found it very interesting for me to gain some inside, about the school in Japan, Japanese school culture.*

## 5. Conclusion

On the basis of these observations, we can conclude that the Forest Forum has offered a good opportunity to help future or novice ALTs make professional preparations for their jobs. They came to realize the development of the knowledge needed to become a suitable ALT with the help of other members of the forum, and also their sense of professional identity. JTEs and experienced ALTs contributed to the future of novice ALTs' professional development, and they themselves

gained a deeper awareness of their professional knowledge or identity. Moreover, both groups of teachers demonstrated attachments to the Forest Forum even though it was still a community in the early stages. All in all, we suggest that a global online discussion forum can work as an effective pre-training system offered to prospective ALTs.

## Acknowledgments

This study is supported by Grant-in-Aid for Scientific Research ( B ) No. 18320086 from Japan Society for the Promotion of Science ( JSPS ) .

## References

- Bereiter, C. & Scardamalia, M. (1993). *Surpassing ourselves*, Illinois: Open Court.
- Bermejo, S. (2005). Cooperative electronic learning in virtual laboratories through forums. *IEEE Transactions on Education*, 48 (1), 140-149.
- Ferry, B., Kiggins, J., Hoban, G., & Lockyer, L. (2000). Using computer-mediated communication to form a knowledge-building community with beginner teachers. *Educational Technology & Society* 3 (3).
- Khan, B. H. (2005). *Managing e-learning strategies*. Hershey: Information Science Publishing.
- Kushima, C. & Nishihori, Y. (2006). Reconsidering the role of the ALT: Effective preparation for ALTs based on the questionnaire survey. *ARELE (Annual Review of English Language Education in Japan) Journal*, 17, 221-230.
- Li, Q. (2004). Knowledge building community: Keys for using online forums. *Research & Practice to Improve Learning*, 48 (4), 24-28.
- Ministry of Education, Culture, Sports, Science and Technology. (2002). A strategic plan to cultivate "Japanese with English abilities".
- Miyake, N. (1997). *The Internet children*. Tokyo: Iwanami Shoten.
- Scardamalia, M. & Bereiter, C. (1994). Computer support for knowledge-building communities. *The Journal of the Learning Science*, 3 (3), 265-283.
- Schon, D.A. (1987). *Educating the reflective practitioner*. San Francisco: Jossey-Bass/Pfeiffer.
- Shinohara, K. & Miura, A. (1999). The formation process of electronic community on WWW bulletin board. *Research in social psychology*, 14(3), 144-154.
- Takeuchi, M., Hayashi, Y., Ikeda, M., & Mizoguchi, R. (2006). A Collaborative Learning Design Environment to Integrate Practice and Learning based on Collaborative Space Ontology and Patterns. *Proc. of the 8th International Conference on Intelligent Tutoring Systems*, 187-196.
- Vygotsky, L. S. (1978). *Mind in society*. Cambridge: Harvard University Press.





## E-mail Requests of Elementary School Students in Japan

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The purpose of this study is to investigate English “request structures” in e-mails which Japanese elementary school students write to strangers. The e-mails, asking to begin e-mail exchanges, were compared with those between native English speakers (adults and children). It was found that e-mails written by native English-speaking adults always had supportive moves, but 46.1% of those written by native-speaking children did not. Also, the e-mails of young English learners in Japan had no supportive moves. It was found that the structures of e-mails written by Japanese children were simpler than those of native English-speaking children. It is suggested that the Gre-SI-Q-R-CI type is not only the typical structure of e-mails by learners, but also it is the distinctive type of letters in textbooks for young English learners.

### 1. Introduction

This study aims to investigate the pragmatic linguistic structures used in the e-mails of young Japanese English learners who ask strangers to begin doing e-mail exchanges. In recent years, about 94% of elementary schools have been implementing English activities (Ministry of Education, Culture, Sports, Science and Technology, 2006). Also, the Internet is being used in elementary schools as a useful pedagogical tool. It may be thought that it is beneficial to combine English activities and the Internet, however they remain mostly separated today. It is probable that most learners of English have difficulty in writing because the writing and reading skills are not focused on at elementary school at present (Ministry of Education, Culture, Sports, Science and Technology, 2001). It has been suggested that writing English e-mails improves children’s English writing skills (Kunimoto, 1998). Thus, it is important to investigate the characteristics of Japanese children’s e-mails before teaching English writing at elementary school.

With respect to children’s acquisition of request structures, it has been reported that English learners (10 and 11 year-olds) in the classroom fail to acquire a full range of request types and forms and develop only a limited ability to vary their choice of request strategies in accordance with situational factors (Ellis, 1992). A supportive move is known as a unit placing before or after a request, which modifies its impact by either aggravating or mitigating its force (Blum-Kulka, House, & Kaspar, 1989). Also, a supportive move supports the actual request in order to gain the cooperation of the addressee and lead him or her to perform the

desired action (Achiba, 2003). With respect to the use of supportive moves by a 7-year-old second language learner, it was reported that the use of formula, which is simple, helps social interactions, and is associated with games and repeated play, was frequent in the early stages of second language development, while the use of supportive moves increased gradually (Achiba, 2003).

Although studies have been made on the oral responses of requests in children learning second languages, there is a little agreement concerning written language. Thus, we have the following research questions.

1. What are the typical structures used in the e-mails of native English speakers who are making requests?
2. What are the characteristics of the e-mails of young English learners in Japan?
3. How do the above two groups compare?
4. Are there any commonalities between the e-mails of learners and example letter correspondences published in textbooks for young learners in Japan?

### 2. Comparisons Between Adults and Children

#### 2.1. Methods

Participants were 13 adults (teachers and parents, 19-44 year-old) and 13 children (7-15 year-old), all native English speakers. They sent e-mails to Kodomo Eigo (an after-school English class) as part of an e-mail exchange program.

E-mails were classified by the following coding categories.

Greeting (Gre) e.g., Hello Apple Class.

Self-Introduction (SI) e.g., I am 10 years old and I am in the fifth grade.

Supportive move (SM) e.g., I am studying

Japanese at school but am not very good at it.  
 Questioning (Q) e.g., Do you have fast food restaurants in Japan?  
 Request (R) e.g., I was hoping we could become friends and exchange email.  
 Closing (Cl) e.g., Bye!

2.2. Results

The average length of e-mails written by children (32.2 words, *SD* = 22.2) was shorter than those by adults (51.9 words, *SD* = 34.2). Table 1 shows the comparisons of e-mail structures between adults and children. Though 100% of adults' e-mail included supportive moves, only 53.9% of children's e-mails did. The typical structure of adults' e-mails was the Gre-SI-SM-R type (46.2%) and the Gre-SI-R-SM type (23.0%). Supportive moves were placed before or after requests. The typical type of e-mail by children was the Gre-SI-R type (23.0%) that was not seen in adults' e-mails. Children also wrote the adults' typical structure, the Gre-SI-SM-R type (15.4%) and the Gre-SI-R-SM type (7.7 %).

Table 1. Comparisons between adults and children

	Structure	Adults	Children
1	Gre-SI-SM-R	46.20%	15.40%
2	Gre-SI-R-SM	23.00%	7.70%
3	Gre-SI-SM-Cl	7.70%	7.70%
4	Gre-SI-SM-Q-SI-R-Cl	7.70%	0%
5	Gre-SI-SM-R-SM-Cl	7.70%	0%
6	Gre-SM-R	7.70%	0%
7	Gre-SI-R	0%	23.00%
8	Gre-R	0%	7.70%
9	SI-Q-R	0%	7.70%
10	Gre-SI-R-SM-SI-SM	0%	7.70%
11	Gre-SI-R-SM-R-Cl	0%	7.70%
12	Gre-SM-SI-R	0%	7.70%
13	Gre-SI-Q-SI	0%	7.70%

Compared to adults, children's e-mails had a diversity of types. From the analysis, it is assumed that the types of children's e-mails when requesting develop in the following way. First, children write the most direct and simple type, the Gre-R type. In the next stage of development, they are able to use self-introductions, and the Gre-SI-R type emerges. Finally, supportive moves can be put before or after requests, and the e-mail

type which children first use changes to those of the adults' type: that is, the Gre-SI-SM-R type and the Gre-SI-R-SM type. In the next section, the e-mails of young English learners in Japan are analyzed.

3. The E-mails of Young English Learners in Japan

3.1. Methods

Participants were nine young English learners (3-6 graders, 8-12 year-old) who wrote 15 e-mails. They studied English once a week at after-school English class, and had over one year of experience exchanging e-mails prior to this research. They consulted their textbooks and dictionaries while writing. With regards to requests, in the classroom they could say some formulaic request expressions, such as "Can I have one?" and "May I use this computer?" Learners could refer to some expressions (e.g., "Be my friend." "Can you write to me?") and add to their e-mails if they wanted. They were instructed to write e-mails which request strangers exchange e-mails with them. The e-mails of learners were analyzed along the coding categories in the second section of this paper.

3.2. Results

The average lengths of the e-mails written by Japanese learners (31.2 words, *SD* = 11.0) were almost the same as those written by the English-speaking children. Table 2 shows the e-mail structures of learners. Figure 1 shows the use of requests and supportive moves by adults, children, and learners.

Table 2. E-mail structures of learners in Japan

	Structure	Percentage
14	Gre-SI-Q-R-Cl	60.0%
15	Gre-SI-Q-R	6.7%
16	Gre-SI-Q-Cl	33.3%

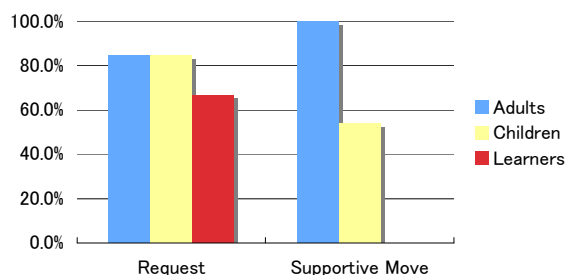


Fig. 1. The use of requests and supportive moves

Although the typical e-mail type of English-speaking children was the Gre-SI-R type, that of learners in Japan was the Gre-SI-Q-R-CI type (60.0%). One-third of all e-mails did not include any requests, but 100% of those included self-introductions. Also, none of the Japanese e-mails included supportive moves, while 53.9% of native English-speaking children's e-mails did. It is suggested that the structures of e-mails by learners are simpler than those of native English-speaking children. In the next section, the type of request expressions and verbs are analyzed in order to clarify the characteristics of learners' e-mails.

#### 4. Verbs in E-mails of Japanese Children

##### 4.1. Methods

The types of request expressions and the types of verbs in 15 e-mails written by learners were counted.

##### 4.2. Results

Table 3 shows the types of requests, and Table 4 shows the frequency of verbs in the 15 e-mails.

Table 3. The frequency of the request expressions

Type of requests	Frequency
Be my friends.	5
I wait for your e-mail.	4
I wait for your reply.	2
Can you write to me?	2
I'm looking forward to your reply.	2
I want to be your friend.	1
I want to get your e-mail.	1
Please write to me.	1

Table 4. The frequency of verbs in the 15 e-mails

Verbs	Frequency
is	21
am	16
like	11
have	8
wait	6
are, be	5
go, live, look	4
play, write	3
run, want	2
do	1
Total	95

Learners were preferential to using the most direct request, "Be my friend", an imperative form. Less direct expressions, such as "Can you write to me?", and "Please write to me." were not chosen by many learners. Only 15 types of verbs were used, and words such as 'is', 'am', and 'like' were prominent.

Why were the structures and the uses of verbs so simple and monotonous? Do teaching methods cause the simplicity and monotonousness of e-mails? In the next sections, the structures of letters in textbooks are analyzed to investigate the effects of teaching materials.

#### 5. Structures of Letters in Textbooks

##### 5.1. Method

The structures of letters in five textbooks were analyzed, using the coding categories in the second section of this paper. LET'S GO 4 Student Book (LG4), Keypals 1 (K1), and Learning World 3 (LW3) are textbooks for students of elementary school level. LG4, K1, and LW3 are intermediate level textbooks for students in elementary schools, instructing how to write letter correspondences. Both NEW HORIZON English Course 1 (NH1) for 7<sup>th</sup> graders and 2 (NH2) for the 8<sup>th</sup> graders are authorized textbooks of the Ministry of Education, Culture, Sports, Science and Technology.

##### 5.2. Results

Table 5 shows the structures of letters in textbooks.

Table 5. The structure of letters in textbooks

Elementary school level	
LG4	Gre-SI-Q-R-CI
K1	Gre-SI-Q-R-CI
LW3	Gre-SI-Q-R-CI
Junior high school level	
NH1	Gre-SI-CI
NH2	Gre-SI-Q-R

It was found that the structure type of letters of 3 textbooks at elementary school levels was of the Gre-SI-Q-R-CI type, and the structures used by 60.0% of learners were of this type. On the other hand, in the textbooks for junior high school students, the structure of a letter (a card from a native English speaker on her trip) in NH1 was of the Gre-SI-CI type, and it was simpler than letters written by elementary school students in this study, because NH1 is a textbook for beginners to write and read English, and the authors of NH1 chose the

structure. The structure of a letter (an e-mail from a Korean junior high school student) in HN2 was of the Gre-SI-Q-R type, and 6.7% of learners used this type. It seems that many textbooks for young English learners adopt the Gre-SI-Q-R-CI type of letters. It is probable that most instructors of young English learners in Japan assume that the Gre-SI-Q-R-CI type letters are ideal, and so they teach learners how to write letters of that type. Also it is likely that learners are attempting to write the Gre-SI-Q-R-CI type letters.

## 5. Discussion

Though the average lengths of the e-mails written by the two children groups were almost the same, the characteristics of the two groups of e-mails were different. First, learners knew that they were supposed to make e-mails requesting the commencement of e-mail exchanges, but 33.3% of e-mails did not have requests while 100% of e-mails consisted of self-introduction messages. It is probable that instructors feel successful when their young learners can express their own self-introductions. It is thought that the limited variation in request e-mails is caused by the lack of request situations in classrooms. To avoid this, there is a need for instructors to use different kinds of teaching methods and materials to give learners rich communication situations. Second, learners did not use supportive moves in their e-mails. It is probable that learners need to be exposed to more situations in which they can think and express the reasons for their requests. Third, the structures of e-mail by learners were simpler and less diverse. Learners had a limited vocabulary and their e-mails tended to be monotonous. The limited vocabulary in e-mails is the result of low numbers of words used in the classrooms.

Regarding the analysis of textbooks, it was impressive that the structures of learners' e-mails and letters in textbooks were of the same type: the Gre-SI-Q-R-CI type. Learners should know that letters give receivers emotions and impressions. Also, instructors should try to show various types of letters, not just show textbook-type ones. Finally, the authors of textbooks should take into consideration children's unique situations when communicating in written words.

## 6. Conclusion

The overall results indicate that the correspondence letters of young learners tend to be plain. For example, young learners engaged in predictable tasks, games, songs, and role-plays.

These tasks are very common, but they do not give learners enough time to look inwardly. It is possible that writing activities help to enhance the inner psychological worlds of young learners.

Lastly, this study has addressed only the question of e-mails when making requests of strangers to exchange e-mails. Further research on children's letters for other purposes would clarify the reasons for the simplicity of learners' written correspondences.

## Acknowledgments

I thank Ms. Marie Tsuruda, emeritus president Hiroshima YMCA School of Languages, and Prof. Joe Lauer, Hiroshima University, for their valuable comments.

## References

- Achiba, M. (2003). *Learning to request in a second language: A study of child language pragmatics*. Clevedon: Multilingual Masters.
- Blum-Kulka, S., House, J., & Kaspar, G. (1989). (Eds.) *Cross-cultural pragmatics: Request and apologies*. Norwood, NJ: Ablex.
- Ellis, R. (1992). Learning to communicate in the classroom: A study of two language learners' requests. *Studies in Second Language Acquisition*, 14, 1-23.
- Fraizier, K. & Nakata, R. (1994). *LET'S GO 4 Student Book*. New York: Oxford University Press.
- Kasashima, J., Makino, T., Asano, H., Ikeda, M., & Shimomura, Y. (2002). *NEW HORIZEN English Course 2*. Tokyo: Tokyo Shoseki.
- Kasashima, J., Makino, T., Asano, H., Ikeda, M., & Shimomura, Y. (2007). *NEW HORIZEN English Course 1*. Tokyo: Tokyo Shoseki.
- Kunimoto, K. (1998). Using e-mail to improve children's writing skills in and knowledge of a foreign culture. *JASTEC Journal*, 17, 79-90.
- Matsuka Phonics Institute. (1995). *Keypals 1*. Tokyo: Matsuka Phonics Institute.
- Ministry of Education, Culture, Sports, Science and Technology (2001). *Practical handbook for elementary school English activities*. Tokyo: Kairyudo.
- Ministry of Education, Culture, Sports, Science and Technology (2006). *Handouts for the 14<sup>th</sup> meeting*. Retrieved September 11, 2006, from [http://www.mext.go.jp/b\\_menu/shingi/chukyo/chukyo3/siryo/015/06032708/003.pdf](http://www.mext.go.jp/b_menu/shingi/chukyo/chukyo3/siryo/015/06032708/003.pdf)
- Nakamoto, M. (1995). *Learning World 3*. Tokyo: Apricot.

## Development of a CALL Program to Improve Learner's Analytical Approach to the Polysemous Senses of L2 Adjectives

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Japanese and English are regarded as distant languages. Even if two languages have zero relation, however, there are underlying similarities in human perception, and Aotani's previous studies (2003, 2004, 2007) show an obvious fact that Japanese average learners of English do not perceive the existence of such similarities. The aim of this study is to develop a learner-led learning environment that enables the learners to conduct their own detective work to find the underlying common schema of the metaphorical expansion of word meanings between Japanese and English. The program consists of three stages, the stage of perceiving, the stage of deeper processing, and the stage of new association. The program is aiming to provide the learners' heuristic approach to consciously engage in a psychological (hypothesis-making) process of noticing metaphorical uses of the language, and to help encourage the learners to develop the necessary confidence in constructing TL mental lexicon.

### 1. Introduction

It is a general rule of any kind of learning that we associate new elements with ones already stored in our memory (Neuner, 1992). Second language learning, like other learning, is usually facilitated by using existing linguistic knowledge. When learners try to understand the structure of unknown language, it is an automatic attempt for them to make use of the knowledge of the language they already have. If the learner's first language (L1) is closely related to the target language (TL), applying the knowledge of L1 to TL might make the learning of TL easier, and reduce the learning time. However, if the distance between L1 and TL is large, L1 knowledge is not very useful. And the situation in which Japanese learners of English are placed is the latter.

Ringbom (2007) defines the relation of distant languages as a zero relation, which means that items and patterns in the TL at an early stage of learning appear to have little or no perceptible relation to the L1 or any other language the learner knows. The zero relation does not mean there is nothing relevant between two languages, since there are always some linguistic universals common to all languages. It is a question of the level of abstraction, since the abstraction level of these universals is too high for an average learner to easily notice features that a totally different TL has in common with L1.

If we turn to the world of meanings that involves the way humans perceive the world, most words especially adjectives and verbs are polysemous in all languages. Their meanings have been

metaphorically expanding throughout their long history. Some expansions are culturally oriented, and others are more general whose underlying concepts are universal. For example, both the Japanese adjective *nagai* and its English equivalent *long* can be used to express both physical length and the notion of time. Also other adjectives such as *omoi* and its English equivalent *heavy* have a similar metaphorical expansion of the meaning.

Studies by Kellerman (1977, 1978) provide some interesting evidence regarding the judgments about the distance between Dutch and English vocabulary. Dutch and English have many cognates, and the Dutch word *breken* and *break* is one of them. Kellerman (1978) found that senses of *breken* that are closer to the 'core meaning' of the verb were seen as more transferable into English than other forms. This study suggests that even if formal similarity exists between two languages, it does not always provide the subsequent assumption of associated translation equivalence. Kellerman (1977) stated that cross-linguistic similarity relates to what the learner perceives to be similar between the target language and another language, and which is not the same as 'objective' similarity. If a learner's perception could be different from the objective similarity between two languages, how do Japanese learners of English actually perceive the distance between Japanese and English? Aotani (2003, 2004, 2007) investigated the results of the language transferability tests regarding pair adjectives *omoi* (*heavy*) and *karui* (*light*)

administered to Japanese high school and university students. The overall results showed similar evidence to Kellerman's study. Even though 23 Japanese expressions out of 30 that were given to students were transferable into English, they tended to judge the transferability as acceptable only when an adjective, *omoi* or *karui*, was used in its literal sense, and they regarded most of the metaphorical expansion as language-oriented expressions.

Even if Japanese and English have zero relation, there are underlying similarities in human perception, and it is obvious that Japanese learners of English do not perceive the existence of such similarities. Littlemore & Low (2006) state the importance of understanding figurative language for foreign language learners. In their book, they mainly focus on idiomatic expressions such as *fighting the tide* as examples of figurative expressions; however, in the broader sense, figurative expressions include typical expressions that native speakers do not acknowledge as metaphorical expressions such as *heavy responsibility*. Such expressions that are sometimes called dead metaphor, however, also originally derived from the core meaning of the word through in a metaphorical way of thinking. If language consists of full of metaphorical expressions, it is impossible to produce the TL with only the knowledge of the literal use of words.

## 2. Aim of This Study

Danesi (1992) stated the importance of including the study of metaphorical competence on the agenda of second language acquisition in the classroom environment. However, if we look at the learning situation in Japan, it might be difficult to spare time for this kind of activity. As a result, the typical classroom Japanese learners of English have virtually no access to the figurative meaning of the TL even after six years of study at junior and senior high school.

Japanese students are always under pressure to study a second language, which has zero relation with their L1, where they perceive no similarity, and are reluctant to make use of their L1 knowledge. What is important is if similarities can be found across wholly unrelated languages, they need to be pointed out to the learner in an explicit way.

The aim of this study is to develop a learner-led learning environment that enables the learners to conduct their own detective work to find the underlying common schema of the metaphorical expansion of word meanings between Japanese and English.

## 3. The Concept and Format of the Program

### 3.1 Overall concept of development

Fig. 1 illustrates the world of meaning in L1 and TL, and their relations. Expressions which are peculiar to L1-speaking people are categorized in

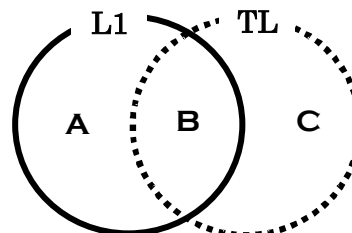


Fig. 1. A model of the L1-TL relations

*Area A*. Expressions which are peculiar to TL-speaking people are categorized in *Area C*. *Area B* is a cross-linguistic area, and expressions which are common in L1 and TL are categorized in this area. As described above, *Area B* for Japanese average learners of English is unnecessarily small.

This program, we named '*Adjective Sommelier*', is developed based on the following concepts:

- To expand a learner's *Area B*, which simultaneously shrinks his/her *Area A*.
- To expand a learner's *Area C*, which means perceiving the difference.

### 3.2 Stage 1 – the stage of perceiving

At this stage, learners are given, one by one at random order, 20-30 Japanese phrases that contain an adjective such as *omoi* and are instructed to make a judgment as to whether the English equivalent adjective (*i.e.* in the case of *omoi*, *heavy* is an equivalent adjective) could be transferable as a translation (Fig. 2). Some of the given phrases are literal (core) usage of the adjective such as *omoi*

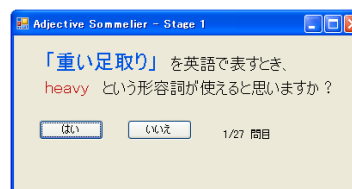


Fig. 2. Analogical judgment test at Stage 1

*nimotsu* (*heavy luggage*), and others are metaphorical usage such as *omoi sekinin* (*heavy responsibility*). Some phrases are transferable, and others are nontransferable. When learners finish the analogical judgment for all the given phrases, their

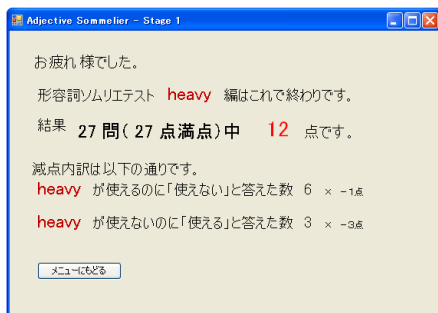


Fig. 3. Result showing at Stage 1

grade is given according to the number of correct answers (Fig. 3). The purpose of grading is encouragement by giving learners the thrill of the game.

The ultimate aim at this stage is to give learners the opportunity to acknowledge that there is a metaphorical expansion of the meaning in L1, and there may also be a metaphorical expansion in TL, whether similar to or different from their L1's.

### 3.3 Stage 2 – the stage of deeper processing

At this stage, learners are given English sentences with the target adjective blanked out. Japanese translation of the sentences is also given. They are instructed to fill the blank by either putting the direct translation of the Japanese adjective or a different adjective of their choice (Fig. 4). When a question shows up on the screen, a direct translation adjective is already given in the

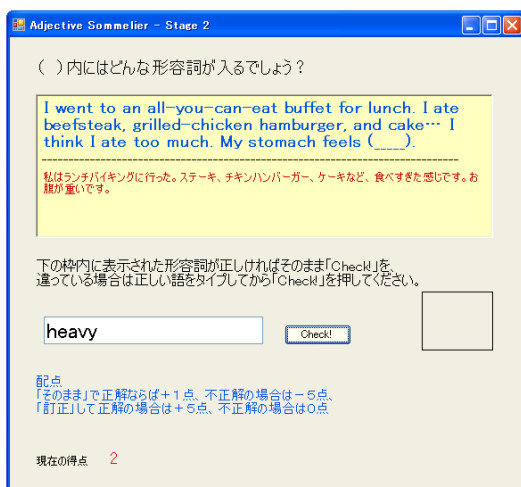


Fig. 4. Gap-fill exercise at Stage 2

answer box as a default answer. If a learner thinks the direct translation is the right answer, he or she can just click the 'check' button to see if his or her choice is right. If correct, 1 point is given, and if incorrect, -5 points is given. If he or she thinks the

direct translation is not appropriate, he or she can type whatever adjective he or she thinks right in the answer box, and click the 'check' button. Then the result and the points obtained are shown; 5 points for the correct answer, and 0 points for the incorrect answer. This differential point system was invented to allow the learners to be more deeply involved in the questions. The procedure is rather conventional, but the aim at this stage is not for the evaluation of the learners' vocabulary abilities as a lot of conventional gap-fill tests aim to do. Aotani (2004) shows that analogical judgments are made based on the notion of semantic categories and schematic knowledge of the L1. So when a learner proceeds to the next question, he or she must try to utilize the result of the previous questions.

The ultimate aim at this stage is to encourage learners to experience a hypothesis-making process, which makes them deeply involved in the world of metaphorical expressions. This stage is also aiming to let learners develop confidence in the production of the TL. If they can start noticing underlying common schema of the meaning, the distance they perceive to exist between Japanese and English will be shortened.

In stages 1 & 2, we focus on the first point of the developing concept described above. In stage 3, the focus shifts to the second point.

### 3.4 Stage 3 – the stage of new association

At this stage, learners are presented with several drawings one by one that illustrate the situation that a certain adjective can express (Fig. 5). The first shown drawing is always the image that does not have any overlapping similarity between L1 and TL, that is something from *Area C*. An expression such as *heavy traffic* is one example, since its Japanese



Fig. 5. Mental image exercise at Stage 3



translation is *ooi kotsuuryou*, whose direct translation is 'a lot of traffic'. This stage lets learners who encounter something from *Area C* guess what adjective is appropriate to express the concept. Even if a learner fails to make a correct answer for the first drawing, the next drawing that is something from *Area B* appears. Drawings continue to appear until they input an appropriate adjective common in all drawings shown.

The aim at this stage is to let learners expand the scope of meaning by developing a mental image. If learners are encouraged by the success of abstracting underlying schema, we believe that spontaneous association of the new senses in TL would be facilitated.

#### **4. Conclusion**

Some findings (Danesi, 1992; Kumaravadivelu, 1988) suggest that even if learners may claim to be suspicious of TL's metaphorical expressions that resemble metaphorical expressions in the L1, when they are faced with a task where they have to produce the TL, they occasionally fall back on translations of L1 metaphorical expressions. This finding may imply that learners try to make use of their L1 anyway, whether they believe it or not. That, however, does not mean we can just leave learners making trial and error without any appropriate guidance. A continuous process of random trial and error does not lead to the productive approach to language learning.

Kumaravadivelu's study (1988) suggests the importance of the 'creative transfer strategy'. The strategy suggests that an accidental production of creative-sounding utterances as a result of straightforward transfer from the L1 does not sound like a particularly creative process in itself. The creativity is more likely to lie in the hypothesis-making process that the learner needs to engage in, in order to decide which idiomatic usages are likely to be acceptable in the target language culture, and which are not. With a creative mind, if some expression a learner created does not exist in the TL, every expression could become 'poetic and original', which is totally different from just making errors.

Littlemore and Low (2006) regard the advantage of the figurative thinking as a powerful heuristic function in general educational contexts. Heuristic approaches to education involve learners discovering solutions for themselves, by a process of trial and error. We believe our program can provide learners with a heuristic approach to consciously engage in the psychological process of noticing metaphorical uses of the language.

This study proposed a prototype of the learner-led learning environment for learning metaphorical expressions in the TL. The development of this program has just started and needs to be assessed by the feedback from the users. Though we have only targeted the metaphorical expansion of adjectives so far, we will extend our study to verbs and also more idiomatic expressions.

#### **Acknowledgments**

This work was supported by KAKENHI (Grant-in-Aid for Scientific Research (C); No. 20520535).

#### **References**

- Aotani, N. (2003). A Psycholinguistic Analysis of the Expansion of Semantic Network of ESL Learners: A Questionnaire Survey of the Japanese Adjective *omoi*. *The Bulletin of Chubu English Learning Education Society*, 33, 9-16.
- Aotani, N. (2004). An Analysis on the Analogical Semantic Network of the Japanese Adjective *omoi*. *The Bulletin of Tokai Gakuen University*, 9-2, 67-80.
- Aotani, N. (2007). A Comparative Study of Transferability between 'Measure' Adjective Pairs, *omoi* and *karui*. *The Bulletin of Tokai Gakuen University*, 12-2, 1-12.
- Danesi, M. (1992). Metaphorical Competence in Second Language Acquisition and Second Language Teaching: The Neglected Dimension. In J.E. Alatis (ed.) *Language Communication and Social Meaning* (pp. 489-500). Washington, DC: Georgetown University Round Table on Languages and Linguistics.
- Kellerman, E. (1977). Towards a Characterization of the Strategy of Transfer in Second Language Learning. *Interlanguage Studies Bulletin*, 2/1, 53-145.
- Kellerman, E. (1978). Transfer and non-transfer: where we are now. *Studies in Second Language Acquisition*, 2, 37-57.
- Kumaravadivelu, B. (1988). Communication Strategies and Psychological Processes Underlying Lexical Simplification. *International Review of Applied Linguistics in Language Teaching*, 26(4), 309-319.
- Littlemore, J. and Low, G. (2006). *Figurative Thinking and Foreign Language Learning*. Palgrave Macmillan.
- Neuner, G. (1992). The Role of Experience in a Content- and Comprehension-Oriented Approach to Learning a Foreign Language. In P. J. L. Arnaud and H. Bejoint (eds.) *Vocabulary and Applied Linguistics* (pp. 156-166). London: Macmillan.
- Ringbom, H. (2007). *Cross-linguistic Similarity in Foreign Language Learning*. Multilingual Matters Ltd.

## A Corpus-based Analysis of Cross-cultural E-pal Projects

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The purpose of this study is to report the e-pal projects based on a web-based BB system, and describe how vocabulary frequencies differ among the distinct learners who took part in classroom-based cross cultural e-pal projects for seven years. *WordSmith* software tool and Range BNC program were used to compare the vocabulary of up to 12 different countries' texts. The results show that (1) regardless of nationality, the most frequent top 12 words are *I, the, to, and, is, in, of, a, you, my, it, and that*. (2) as for vocabulary distribution, learners from China, Taiwan and the UAE are the highest users in high frequency words. Learners from Burkina Faso, and Argentina are the highest users in low frequency words. (3) high-frequency content verbs are *tell, get, go, know, think, see, make* and *want*. A corpus-based research can offer more reliable and authentic guide to vocabulary teaching and grammar.

### 1. Introduction

The focus of second language learning and teaching has been promoting communicative ability and creative self expression through interaction in a social context. However, it is fairly difficult to find enough interactive opportunities to promote communicative ability in EFL contexts. These e-pal projects have made it possible to expand the scope of interaction to computer-based interaction. In addition, corpus-based research was possible on the basis of learner corpora. The data of all students' electronic written texts was stored into host University data base automatically. Many corpus-based linguistic studies have been presenting a new and different perspective in terms of frequency, phraseology and collocation. Recently, the fields of using corpora are grammar-related reference books, ideology and culture, translation, stylistics, forensics and plagiarism.

The purpose of this study is to describe how vocabulary frequencies differ among the distinct language groups who took part in cross cultural e-pal projects for seven years. I divided the learners into four different language groups which are Asian, Western European, Central American and African learners. This study can give insight into grammar and vocabulary teaching and provide realistic information about high-frequency words found in the e-pal projects.

### 2. Literature Review

Corpus-based studies have been conducted since the first language corpus, the Brown corpus which was begun in 1964. Representative corpora are Lancaster-Oslo/Bergen (LOB, 1978), the bank of English (Cobuild Corpus, 1980-1997), the British National Corpus (BNC, 1991-1994),

Longman Spoken and Written English Corpus (LSWE). Conrad (2000) argued that corpus linguistics could radically change grammar teaching in the 21st century. Mint (1996) reported that the most frequent 10 irregular verbs cover 45 % of total English irregular verbs.

Ringbom (1998) made use of seven Western European learner corpora from the International Corpus of Learner English (ICLE), comparing them with each other and with the native speaker corpus. The study shows that a seemingly simple word frequency count may provide a perspective on the general characteristics of advanced learner language. The finding is that L1 transfer and its universal features have important effects on learning a foreign language. High-frequency verbs are *be, have, do, can*, and the most frequent main verbs are *think, get, make, want, take, find, know, use, go*, and *live*. *Make* is the most frequent verb form to NS (native speakers), followed by *use, believe, feel*. On the other hand, NNSs tend to use other verbs, especially *think, get, find, want*, and *know*.

### 3. Method

Range BNC program was used to find the coverage of 12 different countries' texts by word lists Range program provides. It was designed by Prof. Paul Nation and Linguistics Studies at Victoria University in Wellington, New Zealand. There is no need to seek permission for its use or for its free distribution to others ([www.lex tutor.ca](http://www.lex tutor.ca)). *WordSmith* software Tool was applied to create the high frequent wordlists.

#### 3.1 Research Questions

1) What high-frequency words are found in all nationalities?

2) How rich a vocabulary do each different country's learners use in e-pal projects? How much coverage of each different learner corpora of the 12 base lists Range BNC program provides?

3) What is the difference of frequent content verb in each of the distinct four language groups learners, compared with native speakers' corpus (LSWE)?

### 3.2 Research Environment

Data collection period is from the years 2001 to 2007. Students from 14 different countries including Y, S and H Korean University students joined in classroom-based international e-pal projects via emails. The host University was Meikai University in Japan, where an ibunka project organizer Prof. Watanabe taught. The features of the project are anonymous and password-protected group-based discussion. (Fig.1)

Fig.1. The Bulletin board of e-pal project

<http://kite.meikai.ac.jp/wbb/login.htm>



### 3.3 Participating schools

#### Asia Region

**Korea:**Yongin Songdam College, Sookmyung Women's University, Hanyang University

**China:** Hubei Polytechnology University Shanghai Institute of Physical Education

**Taiwan:**National Taipei Teachers College, National Chiayi University

**Japan:**Meikai University, Yokohama National University, Obirin University

**UAE:**American University of Shariah, Shariah Womems College

**Indonesia:**24 High school Bandung, 8 Senior High School at Yogyakarta SMA Negeri 8 Yogyakarta

#### Central and North America Region

**Mexico:** Colima University

**USA:** Houston University, Wilcox High school of Santa Clara

#### South America Region

**Argentina:** Federal University

**Brazil:** Universidade Federal de Minas Gerais

#### Western Europe Region

**Germany:** Berufsschule Schongau,  
**Finland:** Malmi School of Business

#### Africa Region

**Burkina Faso:** YAMMAYA high school

**Namibia:** Polytechnic of Namibia

### 3.4 Writing Topics

1) School Life (Sep.17-Oct.13)

: A short self introduction and school life

2) Daily Life (Oct.14-Nov.3)

: Various aspects of students' domestic culture such as local festivals, local towns, local food.

3) Social Issues (World Peace) (Nov.4-Nov.24)

: Various domestic and international issues, such as environmental issues, regional conflicts, war.

## 4. Result

4.1 What high-frequency words are found in all nationalities?

Fig.2. High-frequency top 12 word

N	Word	Freq	%
1	I	58,766	3.41
2	THE	58,582	3.40
3	TO	43,978	2.55
4	AND	38,879	2.26
5	IS	36,061	2.09
6	IN	33,903	1.97
7	OF	29,073	1.69
8	A	29,021	1.68
9	YOU	21,122	1.23
10	MY	21,086	1.22
11	IT	18,573	1.08
12	THAT	15,200	0.88

Fig.2 shows the most frequent top 12 words among total corpora by the wordlist. They are all function words (pronoun, conjunction, article, and preposition) rather than content words. *I* is the most frequent word in all corpora, followed by *the*, *to*, *and*, *is*, *in*, *of*, *a*, *you*, *my*, *it*, and *that*. This implies that most students who took part in the e-pal projects were more conscious of grammar and form than of lexical meaning. *And* seems to be somewhat highly used by NNS, while *that* is used less relatively. *The* is used more than *a* by NNS.

4.2 How rich a vocabulary do each different country's learners use in e-pal projects? How much coverage of each different learner corpora of the 12 base lists Range BNC program provides?

Fig.3 shows the percentage of vocabulary distribution for each of the 12 different countries.

The words in a text of each different country were compared with the words in 12 base lists. In the word list column, one, two, three refer to each of the base lists. One wordlist includes the most frequent 1,000 words, two wordlist includes the most frequent 2,000 words, and 12 wordlist includes the most frequent 12,000 words. The sources of these lists are *A General Service List of English Words* by Michael West (Longman, London 1953).

Fig. 3. Percentage of vocabulary distribution

Wordlist	Taiwan	China	Korea	Japan	Indonesia	UAE	Argentina	Brazil	Mexico	USA	Faso	Finland
One	83.44	85.47	80.18	81.41	79.55	84.29	79.48	81.35	82.20	82.55	77.19	83.04
Two	5.88	5.18	5.76	6.82	5.87	5.06	3.68	4.50	4.74	5.93	5.46	5.78
Three	1.90	1.26	1.99	1.90	1.86	1.34	1.67	1.55	1.38	2.10	1.26	1.83
Four	1.25	0.94	1.41	1.24	1.15	1.06	1.01	1.04	1.31	1.11	1.09	1.25
Five	0.70	0.47	1.85	0.78	0.80	0.77	0.57	1.43	0.55	0.79	0.76	0.51
Six	0.62	0.25	0.62	0.68	0.48	0.54	1.35	0.52	0.51	0.71	0.68	0.48
Seven	0.30	0.10	0.36	0.38	0.30	0.27	0.44	0.19	0.20	0.22	0.49	1.27
Eight	0.75	0.06	0.18	0.24	0.70	0.12	0.22	0.24	0.10	0.25	0.09	0.08
Nine	0.22	0.14	0.20	0.17	0.16	0.13	0.09	0.17	0.17	0.15	0.08	0.13
Ten	0.12	0.09	0.10	0.10	0.16	0.15	0.09	0.05	0.11	0.17	0.08	0.15
11	0.15	0.11	0.08	0.07	0.07	0.04	0.03	0.08	0.12	0.06	0.06	0.08
12	0.07	0.03	0.06	0.10	0.06	0.05	0.03	0.07	0.06	0.05	0.01	0.05

One and two wordlists imply high-frequency words which are common and easy words. The higher the percentage, the higher the ratio of frequent words. The lower the percentage, the higher the ratio of low-frequency words. Students from Burkina Faso, Argentina, and Indonesia are the highest users in low-frequency words. On the other hand, students from China, Taiwan, the UAE, and Finland are the highest users in high-frequency 2,000 words. Students from Taiwan, Japan and Finland are high users in 4,000 words. Students from Korea and Brazil are high users in 5,000 words. Argentina students are high users in 6,000 words.

4.3 What is the difference of frequent content verbs in each of the distinct four language groups learners, compared with native speakers' corpus (LSWE)?

Table 1 shows high-frequency top 10 content verbs out of total corpora. Learners from Asia, Western Europe and Central America used more the verb *think* than native speaker (LSWE). Asia and

Central America learners used more the verb *think* than Western European learners. *Think* and *want* are overused by Asian learners. *Go*, *get* are relatively overused by Western European learners.

This shows that overused or underused words have a clear relation to the structure of the L1. The most high-frequency verb by NS is *say* while *tell* is used by NNSs from Western Europe, Central America, and Africa region. *Make* is overused by only Asian learners and Ns. The words of *Live*, *study*, *visit*, *call*, and *love* may be related with the topic. All the frequent verbs except for *take* and *come* in NS corpus also occur in all learner corpora. Consequently, vocabulary teaching on the verbs of *come* and *take* in EFL context should be considered in the future.

Table 1. High-frequency content top 10 verbs

Rank	Asia	Western Europe	Central America	Africa	LSWE (NS)
1	Think	Go	Think	Know	Say
2	Want	Work	Know	Want	Get
3	Know	Know	Go	See	Go
4	Go	Think	See	Go	Know
5	Make	Get	Want	Think	Think
6	See	Tell	Live	Hope	See
7	Live	Want	Get	Tell	Make
8	Get	See	Take	Live	Come
9	Study	Call	Tell	Learn	Take
10	Hope	Visit	Love	Wish	Want

5. Conclusion

E-pal projects corpora can shed more light on the characteristics of learner corpora. This study on vocabulary frequency of different countries can help a teacher decide which items emphasize in the classroom with regard to grammar. In addition, it can contribute to developing course materials and textbooks based on more accurate and empirical information about vocabulary frequency. This study expands our understanding of vocabulary acquisition process and the nature of L1 transfer itself. Therefore, finding ways to use of the L1 in interactive language learning tasks and activities in the classroom is our teachers' challenge in the future.

The limitation of this study is the small size of each learner corpus. Thus, it would be difficult to make global generalizations about the result of the

study. Lexical density measuring the percentage of lexical words or content words or research to calculate the ratio of lexical tags to the total number of words should be examined more detail in the future research.

The internet is a useful tool for global communication and language learning, and a tremendous source for the application of corpora in applied linguistics.

## **6. Implications**

This study can give pedagogical implications for vocabulary teaching. First, this project is helpful for Learners to expand their vocabulary knowledge and enhance vocabulary practice. Second, English learner corpora can be used to the Error Analysis. Unlike previous error analysis, natural learner data from different L1 backgrounds gives us access not only to errors but also to learners' total inter-language.

## **Acknowledgments**

I am deeply grateful to an organizer of project, Professor Masahito Watanabe of Yokohama National University who distributed the comprehensive record of e-pal projects. His great guidance and thoughtful support enabled me to achieve significant growth academically.

I would like to express my sincere thanks for partner teachers, Ms. Su-hsun Tsai of Taipei Municipal University of Education, Ms. Vera Menezes of Universidade Federal de Minas Gerais and Ms. Naoko Kasami of Oberlin University. WorldCALL 2008 Fukuoka happily allowed me to meet these four partner teachers in person for the first time. In addition, our meeting led me to insights and introspection which will greatly enhance my teaching progress in the future.

## **References**

- Conrad, S. (2000). Will corpus linguistics revolutionize grammar teaching in the 21<sup>st</sup> century? *TESOL Quarterly*, 34(3), 548-560.
- Mindt, D. (1996). English corpus linguistics and the foreign language teaching syllabus. In J. Thomas and M. Short, eds., *Using Corpora for language Research: Studies in Honour of Geoffrey Leech*, 232-247. London: Longman.
- Ringbom, H. (1998). Vocabulary frequencies in advanced learner English: A cross-linguistic approach. In S. Granger (Ed.), *Learner English*

*on computer* (pp.41-52). London: Longman.

## Web 2.0 in and out of the Language Classroom

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### Abstract

This poster aims to provide the concept of Web 2.0 and its relevant tools in language teaching and learning. An online blog is served as an information kiosk and indicate possible instructional design and applications to language education. By experimenting with the Web 2.0 tool in a participatory community, we are hoping language teachers will learn about appropriate tools ready to be used and further think about the relationship of Web 2.0 and the four skills (listening, speaking, reading and writing) and 5 Cs (communication, culture, connections, comparisons, and communities) as well as the Wallace's framework for assessing its effectiveness.

### 1. Introduction

The purpose of this poster is to investigate Web 2.0 and to understand users' perspectives of its application in language teaching and learning. As discussed by O'Reilly (2005), an important principle of Web 2.0 is the web as a platform that facilitates the building of web-based communities and the contribution from collective intelligence. Web 2.0 has a multitude of good features (Amol Deshpande & Alejandro Jadad, 2006; O'Reilly, 2005; Skiba, 2006). It: 1) presages a freeing of data, 2) permits the building of virtual applications, 3) is participative, 4) has applications that work for the users, 5) has applications that are modular, 6) is about sharing, 7) is about community and facilitating community, 8) is about remixing, 9) is smart, 10) opens up the Long Tail.

Given the fact that Web 2.0 is such a new concept, many language teachers and learners may still not be aware of this revolutionary progress in designing language curriculum. By forming an online participatory community, we expect to examine three major questions proposed and six types of tools in language teaching and learning. (Blogs vs. Wikis, Myspace vs. Facebook, Podcasting vs. Vodcasting, Mindmeister vs. Mindomo, Mashups, and Second Life vs. Quest Atlantis). This online blog community (<http://chungkaii.blogspot.com>) is used as the information kiosk during the poster session.

### 2. Creation

This online exploratory blog is both text and audio based, so users can engage in the tasks with the aid of multimedia. In order to let participants familiarize themselves with the blog coordinator, the

coordinator's personal information (e.g., education, teaching experience, research interests) are posted so that a collaborative and trust relationship can be built and thus promote responsive feedback. The major topics discussed are as follows:

[Topic 1: Web 2.0, 4 Skills and 5 Cs](#)

[Topic 2: Web 2.0 and Tools](#)

[Topic 3: Web 2.0 and IT support](#)

[Interview: ESL/CSL Language Teachers and Learners](#)

[Topic 4: Blogs and Wikis](#)

[Topic 5: MySpace and Facebook](#)

[Topic 6: Podcasting and Vodcasting](#)

[Topic 7: MindMeister, Mindomo, Freemind](#)

[Share. Bubbl.us](#)

[Topic 8: Mashups](#)

[Topic 9: Second Life and Quest](#)

[Atlantis](#)

### 3. Marinate

This blog was conducted on a voluntary basis; participants are mainly student bloggers from the university settings. In order to make this blog easy to understand, instructions and themes were clearly stated to guide the first-time users to read the posted prompts in reverse chronological order. Concerning the sporadic participation at the beginning, the topics were also extended to incorporate Xuite, Web 1.0 vs. Web 2.0, YouTube, Slideshare, CMC vs. CBL and World Wide Web vs. Language Learning Center to elicit better responses. In addition, adding a Picasa photo album to the slideshow and a music box in support of a non-profit organization in Taiwan helped to

build a strong connection with the bloggers as well. The following session selectively summarizes the reflection worthy of reporting based on the experience of investigating Web 2.0.

#### **4. Analysis**

*What assumptions about the nature of knowledge and learning does this innovation make?*

Before explaining the assumptions of Web 2.0, the features of Web 1.0 should be examined. According to MacManus and Porte (2005), Web 1.0 focuses more on the creation of the content of a site. Web users obtain information by going directly to the source such as BBC.com for news and utexas.edu for the University of Texas at Austin. However, with the evolution of the Web, Web 2.0 has provided a new set of tools to aggregate and remix Web components in an innovative way. Web 2.0, as Cornor (2007) indicated, enables different types of tools to create, aggregate and share dynamic content in an emerging social environment. Web 2.0 provides learning in a creative and interactive way via online social interaction, collaboration and collective intelligence.

The concept of Web 2.0 emphasizes the characteristics of “Web as a platform” and users subsequently can share knowledge and blend information with new or unknown information. Web 2.0’s social dynamic consists of peer production of content, asynchronous interaction, and a high level of trust. Applying this to language teaching and learning, we can foresee the potential of Web 2.0 in creating a new era for language teachers and learners (Anderson, 2007). The key markers that distinguish between the industrial age and information age in instructional design lie in the customization, cooperative relationships, shared decision-making, initiative, diversity, networking, being process-oriented, and the idea of the customer as a king (Reigeluth, 1999). Web 2.0 is user-centered and geared towards learner-centered teaching. These key markers provide insights into the core ideas that guide the design of Web 2.0 in the language classrooms.

*What unique role does technology play in facilitating learning?*

Traditionally we converse with someone in person or over a communication tool (e.g., phone, computer) and process the information we receive individually in our brains. Web 2.0 clones and elaborates on the conventional communication by sharing our knowledge and understanding of a topic with others and maximizes the benefits of this to

compensate for the limitation of the human brain. That said, Web 2.0 plays a facilitative role in fostering language teaching and learning. In terms of the four skills, the direct relationship to Web 2.0 tools is observable. For example, Wiki, Google docs, and MindMeister are helpful for writing; YouTube, Podcasting and Vodcasting can be used as supplementary input for listening; Skype and MSN provide a medium for speaking, and Blogs, Mashups, Slideshare, and Quest Atlantis may be good for reading. The incorporation of Web 2.0 tools has great potential to enrich the language learning classrooms.

Concerning the 5 Cs (communication, culture, connections, comparisons, communities) proposed by National Standards in Foreign Language Education (1996), theoretically, Web 2.0 also provides a niche in achieving each C. With the increase in online interaction, creating online communities that engage students in cross-culture communication is no longer impossible. From these communities the interpersonal connection can be built and the evolved communication patterns can be observed. In addition, Web 2.0 will be able to offer tasks for students to practice the different cognitive levels (knowledge, comprehension, application, analysis, synthesis, evaluation) on Bloom’s taxonomy (Lorin W. Anderson & David R. Krathwohl, 2001). Nonetheless, there is still little empirical research about Web 2.0 and language teaching and learning, so we do not plan to overstate Web 2.0 without evidence.

The original purpose of this blog was to elicit teachers’ perspectives of Web 2.0. However, the teacher population seems to be too busy to join this type of online discussion, and thereby not many responses have been posted. Another possible reason is that language teachers cannot explicitly anticipate the benefits of Web 2.0 in language, and that is why they are not as active as expected. In the future we would like to explore how to motivate teachers and provide incentive to encourage the participation. Some related research questions could be 1) what kind of prominent significant linguistic features does Web 2.0 promote? , 2) what opportunities does Web 2.0 give to learners to fully participate in the language learning tasks? , 3) what modifications of linguistic input does Web 2.0 provide? , 4) what opportunities does Web 2.0 provide for both written and spoken comprehensible output? , 5) what opportunities does Web 2.0 offer for learners to notice errors in their output? , 6) what

opportunities does Web 2.0 include to prepare learners to correct their linguistic output, 7) what interaction does Web 2.0 foster among learners and computers? These questions were inspired by the book, *Education and Technology* (Ann Kovalchick & Kara Dawson, 2004).

*How is this innovation seen to fit with existing school curriculum?*

The answer to this question will depend on the setting (primary/middle/high school or college) and level of language classes (basic, intermediate, or advanced) or college advanced level students in Asia or the US, Web 2.0 will be easier to implement when teachers have the freedom to integrate Web 2.0 tools into the main curriculum and when students have the computer literacy to utilize the tools to finish the assigned tasks, as well as when the schools have enough number of computers. For primary/middle/high schools in Taiwan, the curriculum is centralized and there is usually pressure from tests. Language teachers may feel hesitant to use Web 2.0 tools because it invisibly increases the burden on teaching and learning due to the time spent on understanding and implementing innovative technology tools. If students' academic performances do not improve significantly, stakeholders (parents, school administrators) may feel worried about it and jump to the conclusion that the technology does not facilitate but hinder learning. The 9<sup>th</sup> grade World Geography Culture Exchange project at Anderson High School in Austin, TX (<http://www.edb.utexas.edu/edc385g/fall2007/chuang/wgc/starter.html>) can be a good example of Web 2.0. Students from the US and Taiwan are using blogs, wiki, vodcasting, and online platforms to exchange their ideas about a concept and compare the differences and similarities among each population group. Consequently students develop their cultural awareness and knowledge of World Geography. Without the application of Web 2.0 concepts and tools, this goal would never be achieved easily.

Furthermore, the issues of boundaries, limitations and user ages contribute to the interwoven pros and cons of using the Web 2.0 tools in teaching and learning. Wallace's (2004) framework provides five major elements (authority, boundaries, pedagogical context, disciplinary context, stability) that teachers should take into consideration. Her article can be retrieved via the hyperlinked resource on the blog.

*What demands does the innovation place on the knowledge of teachers or other "users"? What knowledge supports does the innovation provide?*

idea of Web 2.0 from O'Reilly.

Teachers need to experiment with each tool, learn from their trial-and-error, and conceptualize Web 2.0 through their user experience. Teachers may not be able to transform the concept of Web 2.0 to their practical teaching when first hearing of it. That is why this poster showcases some Web 2.0 tools during the conference. We expect that teachers will gradually come to understand the significance of knowledge sharing and social interaction as well as the learner-centered teaching that Web 2.0 promotes. This will place teachers in a position to value acquiring knowledge to bridge the gap between learners and technology as well as to have the background to understand how to customize each tool for each meaningful learning task.

*How does the technology fit or interact with the social context of learning?*

As mentioned above, Web 2.0 creates and provides social interaction for language teaching and learning. Teachers can incorporate Web 2.0 tools in different instructional settings such as instructional programs, tutorials, supplementary exercises, simulations and so forth. Students who are engaged in the Web 2.0 network not only react to the information presented by working with a mouse and keyboard but also take initiative control over their learning at their own pace while interacting with their peers on line. That said, the social context of learning is contextualized or situated and is constructed through the individual interaction in a situation.

## **5. Summary**

This poster reflects on the potentiality of Web 2.0 tools and the difficulties as well as barriers of applying technologies into language classrooms. The complexity of foreign language teaching still requires teachers to further think of how Web 2.0 technologies can be utilized for their instructional design and mobilize their students' learning in and out of the language classrooms.

## **References**

- Amol Deshpande, & Alejandro Jadad. (2006). Web 2.0: Could it help move the health system into the 21st century? *jmhg*, 3(4), 332-336.
- Anderson, P. (2007). "What is Web 2.0? Ideas,



- technologies and implications for education."* Retrieved July, 22, 2008, from <http://www.jisc.ac.uk/media/documents/publications/web2bp.pdf>.
- Ann Kovalchick, & Kara Dawson. (2004). *Education and Technology: An Encyclopedia*. Santa Babra, CA: ABC-CLIO, Inc.
- Connor, E. (2007). Medical Librarian 2.0. *Medical Reference Services Quarterly*, 26(1), 1-15.
- Lorin W. Anderson, & David R. Krathwohl. (2001). *A Taxonomy for Learning, Teaching, and Assessing — A Revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman.
- MacManus, R., & Porter, J. (2005). *Web 2.0 for designers*. Retrieved May, 2, 2008, from [http://www.digital-web.com/articles/web\\_2\\_for\\_designers/](http://www.digital-web.com/articles/web_2_for_designers/)
- National Standards in Foreign Language Education. (1996). *Standards for Foreign Language Learning: Preparing for the 21st Century*. Retrieved Dec, 1, 2007, from <http://www.globalteachinglearning.com/standards/5cs.shtml>
- O'Reilly, T. (2005). *What Is Web 2.0*. Retrieved Nov, 30, 2007, from <http://www.oreilly.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>
- Skiba, D. (2006). Web 2.0: next great thing or just marketing hype? *Nursing Education Perspectives* Retrieved Dec, 10, 2007 from <http://www.lib.utexas.edu>
- Wallace, R. M. (2004). A Framework for Understanding Teaching With the Internet. *American Educational Research Journal*, 41(2), 447-488.

## Outcomes of Secondary Education Interactive e-learning Systems

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Integrated e-learning systems can have a significant impact on English teaching in secondary education settings. With this in mind, the authors present two e-learning applications which have played significant roles in action research projects. The first is an approach to presenting content and facilitating in-class student understanding; the second is a system for facilitating teacher-student interaction. Through an enhanced e-learning environment, the high school teachers involved in the projects are now better able to 1) understand student comprehension levels and processes and 2) establish empathetic and collaborative teacher-student relationships.

### 1. Background: Setting the stage

Many English teachers in secondary school settings find it difficult to identify and reflect on their student's learning processes. Barriers to reflection on action (Schön, 1987) include limited time and administrative support for data collection and discussion. A narrow perspective of ICT's potential is another obstacle to professional development; many teachers use CALL only as a self-study tool for students (Gaynor, 2004). Tokai University's Research Institute of Educational Development (RIED) has been developing online communication systems since 2002 (Gaynor, Suzuki & Odaira, 2002; Suzuki & Fujieda, 2004) so that junior and senior high schools can take advantage of them to promote English education. Some schools currently use the system as a tool for promoting T-S communication, as well. This paper will outline the structure of the Classpage component, and clarify the roles and effectiveness of the ICT applications. Data collected demonstrates how ICT promotes and supports teacher-student relationships.

### 2. e-learning Systems: Setting up an ICT environment

The ICT environment set up by RIED for use by high schools consists of four types of servers: First is the teachers' file-server, which enables them to share their teaching materials and data with each other. Second is the students' file-server, where students save their materials and data in preparation for undertaking extended activities. Third is the web-server where class pages are set (Fig.1) to

promote T-S interaction and cultivate student autonomy. The web-server also features a Teacher Homepage. The final component is the mail-server, used primarily for T-T interaction, both within in the English department, and with outside advisors.

### 3. Classpage: Supporting Learner Autonomy

Students and their teacher can access this page, using their own ID and password, both inside and outside class. The Classpages (see Fig.1) have significantly enhanced both T-S and S-S interaction as seen in the Writing Journal, cgi Questionnaires and on the BBS.



Fig.1. Top page

#### 3.1 Writing journal page: Promoting S-S interaction

The main purposes of this system are 1) for students to exchange and share ideas on line, and 2) to develop their writing skills through the resulting S-S interaction (Saeki, 1999). A key consideration

is that the students should have a target audience in mind when posting. Though linguistic accuracy is a secondary consideration, students are expected to type their message into a Word file and do a spell- and grammar-check before posting.

Topics are generally set by the teacher, with students responding by expressing their own opinions. Additionally, students are encouraged to set their own topics and post their writing. Teachers have found that with easier topics, most students write freely, though the content tends to be shallow. On the other hand, while setting relatively difficult topics results in fewer postings, students tend to think carefully about the topic and write more in order to express their thoughts precisely and in detail (see Table 1).

Topics	Postings (%)	Words (AVG)
My Self-Introduction	73	71.3
My Favorite Color	86	37.5
My Free Time	80	62.7
For or Against Smoking	60	89.5
Similarities and Differences	47	115.4
Classifying Things	33	117.6

Table 1. Writing Journal Participation Rate

Student postings are easily transferred into a Word file for printing out and distributing to the students (see Fig.2). Seeing the outcome of their work in printed form helps students understand the concrete nature of their effort, and stimulates higher motivation for future activities.

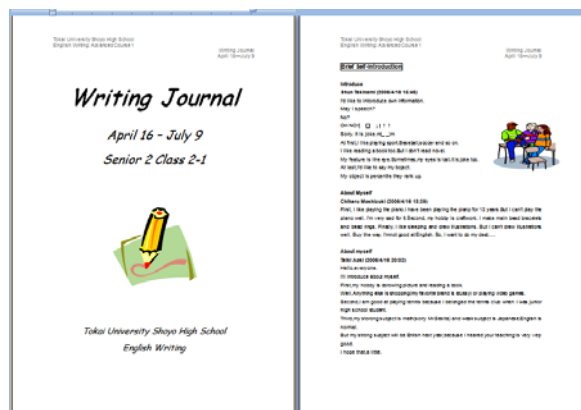


Fig.2. Printout of Writing Journal contents

3.2 cgi questionnaires: Processing student feedback

Students are required to answer both multiple choice and open-ended questions in order to clarify and reflect on 1) their learning and experiences in each lesson or project and 2) their teacher’s support throughout. By compiling and summarizing student answers, teachers are also empowered to reflect on

student learning and ways to advance their own teaching practices.

The value of the cgi questionnaires lies in the teachers’ enhanced perspectives of their students’ learning. The resulting data helps teachers empathize with their students, and adjust their own future expectations of their learning.

3.3 BBS: Interacting meaningfully in / outside class

The Group Activity BBS (see Fig.3) is used by both students and teachers to keep track of their group’s progress. Through the BBS, students can also interact with their teacher about their group projects. In one project, for example, groups created pages for a guidebook. The target audience was foreign people living in Japan who would need to know important information such as emergency earthquake procedures or how to use the public transportation systems. Teachers were able to monitor each group’s progress, offering necessary advice. Because of this enhanced communication and awareness, teachers could then better adjust their teaching schedule for the next lesson.



Fig.3. Writing Journal

3.4 Student work: Upgrading learner outcomes

The process of identifying and targeting an audience for their message has helped students search for and select appropriate information on the Internet. This decision-making process, in turn, has enhanced their student autonomy. Additionally, the fact that all student work (see Fig.4) is created and shared digitally, gives it a look and feel which is both more sophisticated and authentic than



Fig.4. Student work

paper versions would have. Since digital files can be easily accessed and sent, students are able to get real responses from the outside world, again resulting in higher motivation for future activities.

#### 4. Teacher Homepage: Facilitating T-T collaboration

The Teacher Homepage enables teachers to share and unify a wide range of materials (see Fig.5). In addition to uploading and accessing planning, teaching, and testing materials anywhere and anytime, the Class Journal provides a forum where they can share experience or problems.

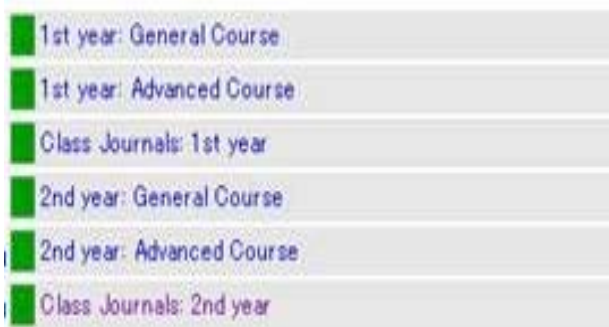


Fig.5. Course list in Data Bank

##### 4.1 Lesson Introduction: Sharing teaching materials, building background knowledge

Student understanding is greatly enhanced through visual aids, particularly when the language of instruction is English. When teachers truly collaborate on materials such as animated slides (see Fig.6), not only are their classes unified, but they are then able to reflect together on ways to improve both learner outcomes and their own teaching materials.

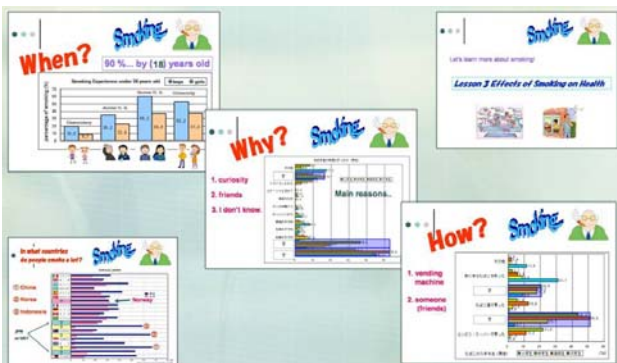


Fig.6. Sample lesson introduction materials

##### 4.2 Class Journal: Reflecting on teaching practices

Teachers write about how students are learning in their classes and ask each other for advice about how to improve learner outcomes (see Fig.7). Reflecting on learning and teaching creates an

environment where they can also share any information about challenges and successes.

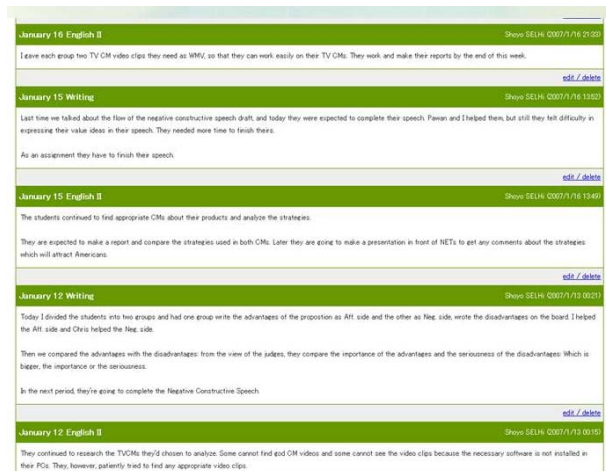


Fig.7. Class Journal

#### 5. ICT and the ZPD: Enhancing learner & teacher autonomy

The authors have created a model (see Fig.8) which attempts to show how a teacher-student collaborative relationship can be constructed (Little, 1999; Schewienhorst, 2003). Teacher roles are not deemphasized when ICT systems are introduced; rather, they are shifted from that of instructor to that of facilitator of real-world interaction, and to that of participant in the classroom community. By establishing a cycle of constant decision-making, practice and reflection, ICT promotes both learner and teacher autonomy.

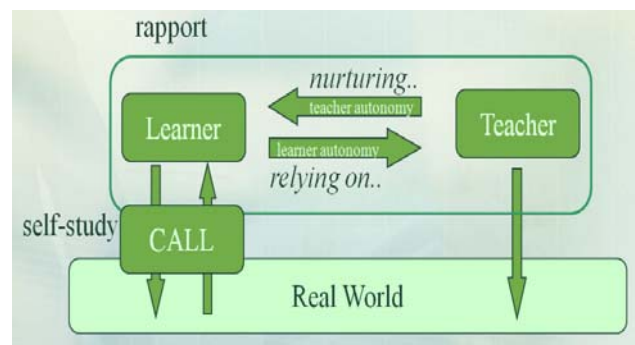


Fig.8. T-S Relationship during an extended activity

#### 6. Concluding remarks

The online communication systems presented above have been shown to support T-S communication and to promote their relationships. Students learning outcomes have improved dramatically with the help of their teachers (Sato, 2006) and with the assistance of this ICT system. As a result, the teachers have redefined their roles so that they are better supporting their students, improving their own teacher autonomy in the

process.

Taking advantage of the ICT systems has also enabled teachers change their habits of collaboration with each other. Teacher-teacher communication has also been enhanced by sharing the materials and discussing various relevant learning and teaching issues.

In this way, through an enhanced e-learning environment, high school teachers working with RIED's ICT systems are now better able to 1) understand student comprehension levels and processes and 2) establish empathetic and collaborative teacher-student relationships.

### **References**

- Blyth, C. & Davis, J. (2007). Using formative evaluation in the development of learner-centered materials. *CALICO Journal*, 25. Retrieved November 15, 2007, from <https://www.calico.org/a-669.html>
- Gaynor, R., Suzuki, H., & Odaira, M. (2002). "A system for design and integration of CALL materials." CALL professionals and the future of CALL research. Antwerp, Belgium. *CALL Conference 2002 Proceedings*, p77.
- Little, D. (1999) . *Learner autonomy 1. Definitions, issues and problems* (pp. 3-4). Dublin: Authentik.
- Saeki, Yutaka. (1998). *Multi-media Kyoiku: Chie to joho, manabi to oshie* (Multi-media education: Wisdom and information, learning and teaching). Tokyo: Tarojirosha.
- Sato, Manabu. (2006). *Gakko no chosen: Manabi no kyodotai o tsukuru* (School challenge: Creating collaborative communities for learning). Tokyo: Shogakkan.
- Schön, D. (1987). *Reflective practitioner: How professionals think in action*. United States: Basic Books.
- Schwienhorst , K. (2003). Neither here nor there? Learner autonomy and intercultural factors in CALL environments. In Palfreyman, D. and Smith, R. (Eds.), *Learner autonomy across Cultures: Language education perspectives* (pp.167-180). Great Britain: Palgrave Macmillan.
- Suzuki, H. & Fujieda. M. (2004). "Designing an e-learning system to promote human communication in EFL classroom." EuroCALL 2004, Vienna, Austria. *EuroCALL Conference 2004 Proceedings*, p.225.

## **An Internet-based personal reading program: A program for Japanese EFL learners to overcome individual weaknesses**

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In order to overcome the inability of listeners to correctly comprehend even simple daily conversations by native English speakers, we have already developed an e-learning program “your Personal Listening Manager(PLIMA)” and practical research was conducted to increase the share of bottom-up listening comprehension skills by increasing learners’ knowledge about language, rather than a top-down approach which involves comprehension based on vocabulary recognition and understanding overall context.(Okazaki & Nitta 2006) We also started developing a multimedia reading program named Your Personal Reading Manager (PREMA), which makes it possible for EFL learners in Japan to have more effective reading practice, based on their basic reading ability. PREMA is designed for anyone to have practice anytime, anywhere, if they have access to the Internet. Although we are still in the process of improving this program, the framework for PREMA has been established.

### **1. Problems 1**

What is necessary in order to carry out rapid extensive reading in or out of class? The short list below shows the most basic that might be required.

1. A large number of books (graded readers)
2. Stop watch, other time-measuring device
3. Score sheet, log sheet
4. Calculator

However, it is very difficult to prepare all of these items in a regular English class, since a large investment of time, effort and money is required. For example, if there is a class of 30 students, a minimum of 30 books is needed. If one student is assigned to read 2 or 3 books, the number of books required doubles and triples. Considering an entire semester’s worth of classes, it is easy to see that a large number of books, i.e. money, is needed in order to sufficiently carry out this task.

Another aspect to consider is the physical situation of the classroom. It would be convenient if the books that are required for reading were located in the classroom, but if they are not, it becomes likely that the teacher would have to cart a heavy load of books in a wagon to the classroom. In addition, if there is more than one class of the same

kind being taught simultaneously, additional sets will be required.

Furthermore, in order to document the word count, reading time, and reading speed of each student, a time measurement device such as a stopwatch and a score/log sheet are also required. Asking students to each buy a stopwatch solely for this purpose is not feasible, so the teacher would bear the burden of providing such devices. The cost of 30-some-odd stopwatches and 30-some-odd calculators also needs to be considered. Even if all the students had cell phones equipped with these features, concerns about losing battery power would still exist, and policing users so that they don’t text message or play games during the exercise would be nearly impossible.

The most difficult task may be, however, the management of the students’ data. Checking individual student’s progress is time-consuming and laborious. Keeping records with paper-based log sheets is clumsy and inefficient.

### **2. Solutions 1 & Problems 2**

In order to resolve the problems discussed above, ICT (Information & Communication Technology) is highly useful.

Utilizing the vast amount of English reading

materials online on the Internet is an alternative to paper-based texts such as books. Articles viewed on browsers such as Explorer, can be copied and pasted onto a word processing program such as Microsoft Word. Then the word counts can be easily obtained (and readability scores can be obtained easily as well). Using a stopwatch, reading time can be measured and once obtained, can entered into a spreadsheet program to log data such as word count, reading time, number of words per minute read, etc. Then, the need to buy large number of books disappears, and keeping track of students' progress is more easily managed compared to a paper-only system, and as more and more schools are equipped with CALL classrooms or computer labs, this style of extensive reading can be started almost immediately.

Using this method has many practical and economic advantages, but the time needed to input data takes away from the main focus, which is reading. The objective is to have students reading more and reading faster, so minimizing any other processes would be ideal.

Also, as the reading materials are web pages on the net, judging the appropriateness of the difficulty level for students is difficult, and finding an appropriate story becomes a heavy burden on the part of the students.

This is why PREMA (your Personal Reading Manager) was developed—to minimize the student effort needed to do reading online.

### 3. Solutions 2: PREMAβ

The first stage of development involved making PREMAβ, a net-based program that allows for extensive and rapid reading in English, and provide a management tool that both teachers and students can use to easily keep track of progress.

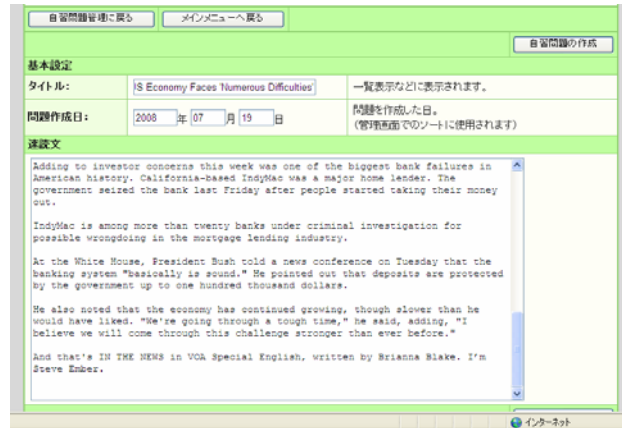


Fig. 1 PREMAβ

First, students choose an article from among the limitless amount of English text available on the web, and copy it into PREMAβ(Fig. 1). Then the students give this pasted article a title of their own choosing, and hit the save button. This action changes the screen to the Training Page screen (Fig. 2).

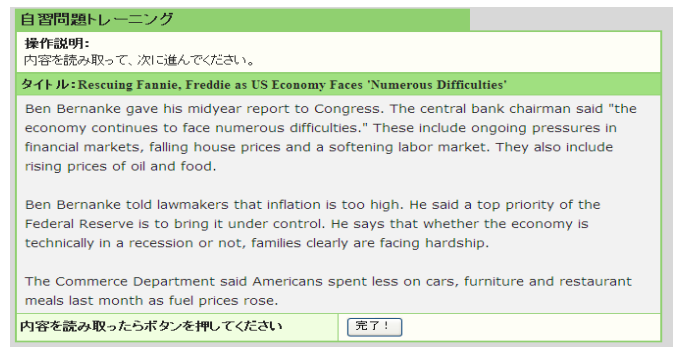


Fig. 2 Training Page

When the screen shows the Training Page (Fig. 2), the word count is automatically taken, and the date and title of the article are logged. After the student finishes reading, they hit the Finish reading button, and the time taken to read the article is recorded and Fig. 3 appears.

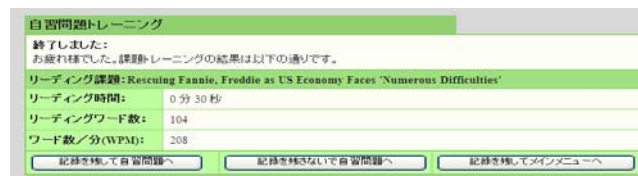


Fig. 3 Result Indicator

This screen shows title, word count, reading time, reading speed (words per minute). This information can be viewed by both students and teachers on a daily basis or monthly basis. (Figs. 4 & 5)

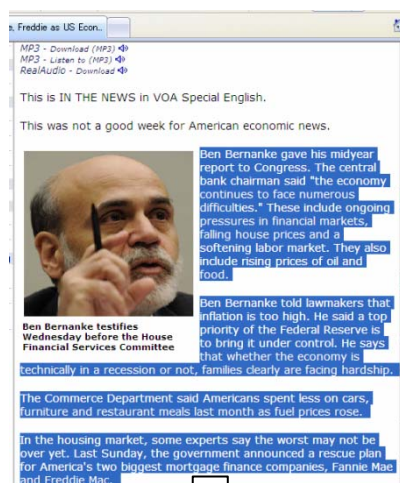


Fig. 4 Result Indicator (daily basis)

Fig. 5 Result Indicator (monthly basis)

Teachers can use the Scoring Manager to see students' progress at a glance (Fig. 6).

Fig. 6 scoring manager

5. Future Solutions: PREMA

As shown above, PREMAβ has been developed to allow for automatic logging and retrieval of data concerning students' reading practice. However, one serious issue, the issue of determining the appropriateness of the level of the learners, has yet to be resolved. Also, the process of copy and pasting text is also troublesome and time consuming. In order to improve on these points, PREMA is being developed to clear these issues by the addition of the following features:

1. To be able to highlight target text to be read, and with a click, be able to obtain

word count, reading time, and reading speed.

2. To be able to indicate level of difficulty of the target text, so that learners can judge the appropriateness of the level of difficulty compared to their own ability, such as too difficult, a little difficult, appropriate level, a little easy, or too easy (Okazaki 2008)
3. To be able to provide a list of reading materials of appropriate vocabulary level for each learner based on Krashen's i+1 theory (Krashen 1982).
4. To be able to automatically log students' practice time.
5. To be able to manipulate in many different languages.

Acknowledgments

This research was partially supported by Grant-in-Aid for Scientific Research(C) (20520507) by Japan Society for the Promotion of Science (JSPS).

References

Krashen, S. (1982). *Principles and practice in second language acquisition*. Oxford : Pergamon Press.  
 Okazaki, H. & NITTA, H. (2006). "Movie English listening system" - developing and implementing an original learning assistance program. *Proceedings of the 46th Annual Conference of The Japan Association for Language Education and Technology*, 150-158.  
 Okazaki, H. (2008). An attempt to index reading materials using e-learning. *Studies in English Language & Literature*, 48, The English Language and Literature Society of Soka University, 73-87.



## **Do Computers Encourage Autonomy? An Experience in the SAC**

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The intention of this paper is to present the experience we have had with students using computers in self-access centers in Mexico. Computers have been considered a tool with a great potential to promote language learning and to support self-instruction. First, a description of the actual use of computers in the center will be given, including the software used and the Internet actual use. Then, some findings on the students' and teachers' perceptions about the relationship between autonomy and computers use will be presented and discussed. Finally, some conclusions about this possible connection will be stated.

### **1. Introduction**

The aim of this paper is to share the experience we have had with students using computers in self-access centers in Mexico. Self-Access centers spread all over Mexico since 1995 which carried out high expectations for autonomy encouragement and the use of computers in language learning. In Baja California, México, the State University (Universidad Autónoma de Baja California) opened four of these centers. Students have been using computers since then in the self-access centers to practice and learn languages. Recently, some teachers have started developing software to support the students' particular needs. Students have worked with didactic software and Internet to support their learning. It has been considered important to make some observations and some inquires to identify the actual use students have been giving to the computers in the self-access centers and to what extent they think computer work encourages self-instruction. Teachers have also been questioned about this issue and a short report on the results has been written. This was part of a diagnostic study of the situation because of the expectations authorities, teachers and the students have about this technological resource, regarding language learning and autonomy encouragement. The objective of this paper is to present those perceptions students and teachers have about this possible relationship between computers use and

self-instruction encouragement at the Self-access of the Universidad Autónoma de Baja California in México.

### **2. Self access**

Dickinson (1987), Sheerin (1997), and Benson (2001) described self-access centers as ideal places to develop autonomous learning because they provide the adequate questions for its development; for example students can: define their learning objectives, identify the areas they want to work, select the materials and the technology to reach their goals, (Dickinson, 1993), establish the time they will dedicate to their learning.

Autonomous learning is visualized as an educational goal in these centers; however, it might be reachable or not depending on the role of the center in the institution.

Gremmo and Riley (1995) mentioned that the technological advances were a detonator in the development of self-access centers in the world because technology became an important support in the learning of languages and a promoter of autonomy in those centers.

### **3. Autonomy**

Autonomy indicates that students are totally responsible for their learning meaning that they can establish objectives and ways of working, identify materials and choose appropriate technology. This means being able to make their own decisions in relation to their learning needs.

Rubin and Thomson (1994) say that a good language learner has some characteristics that when you analyze them are those of independence. These characteristics are that students find their own way of learning, organize the language information, they are creative and experiment, look for their own opportunities to practice and use the language, and develop learning strategies.

#### **4. Computer language learning**

The development of computer technologies made this equipment an important resource in language learning in the 90s. Computers provide language practice through different types of exercises to develop almost any language skill. They offer video, audio, interaction, speech recognition tools, tutorials, possibilities of feedback and assessment. The activity types can be: games, gap filling, problem solving, phonetics, translation, drills, multiple choice, dictation, dialogues, mazes, text reconstruction, simulations, and word processing (Levy, 1997).

According to some studies carried out by this author, the value of CALL is that students perceive it as something modern, updated, motivating and enjoyable. Ss can link it to what they study in the classroom, because it expands work and helps them clarify doubts.

#### **5. Self-access centers in Baja California**

The School of Languages of the Autonomous University of Baja California opened 4 self-access centers in the 90s as part of a national project. The name of this self-access project is CEMAAI (Self-access media center of languages). These centers have been considered an important innovation in language learning, some of the expectations have been: to facilitate learning and develop autonomous learning in students, to provide flexibility in the language centers and to expand the language learning service.

The centers in the Language School have different areas such as: reception desk, offices for tutoring, video, audio, computer, conversation and reading and writing areas. They are practice and learning centers where

users can develop different skills in an autonomous way through printed materials and the use of technology. The staff of each center consists of: one coordinator, one receptionist and some tutors who help in the design and adaptation of materials, guide students according to their needs and provide support in the use of technology and learning strategies development.

The objectives of the self-access center are that the students: practice and expand the knowledge and skills he/she has started learning in class, increase cultural background, better the pronunciation, grammar and vocabulary; improve the four language skills (reading, writing, listening and speaking). Students are expected to establish their objectives, design a learning plan, select the material and equipment and to self-assess and learn how to learn. The idea is that they are responsible and control their own learning when being able to decide what when and where to learn.

#### **6. The study**

The purpose of this study was to identify if the students and the teachers of the language school in Tijuana and Tecate consider that technology encourages autonomous attitudes, that is if students can control somehow their own learning and can take their own decisions when learning a language.

This study was developed under a qualitative perspective. The instruments used were a questionnaire, observations and interviews. The questionnaire consisted of 8 questions to know how the students were using computers in the self-access centers. It was given to 40 students. Some interviews were made to two teachers and the coordinators of the centers, to find out what their perception were about the use of computers in the centers. Ten observations were made in the computer area of both centers to describe what the students actually do in the center. These observations were followed by a short interview to know about the reasons to perform those activities and to identify the hidden actors and beliefs (Barton y Hamilton (2000) en López Bonilla, Tinajero y Pérez, 2006).

## **7. Results**

The questionnaire: students said they had access to computers and internet either at home or in the school. They said that they liked to work with educational software and only a few liked to use the internet. They liked the didactic software because they thought it was interactive, entertaining, challenging, easy to work with, and it helped them improve language skills. Most of the students said they usually looked for grammar, pronunciation and vocabulary practice, listening exercises and games when working with computers. They mentioned that most of them had improved in listening, grammar, vocabulary and pronunciation in this area. Teachers also perceive that students preferred the educational software rather than the internet. They think students do not use the internet very much because they do not feel secure when using it and because they might not like the web pages they have access to, It is important to point out that the access to Internet is controlled. The most popular web pages students use are youtube.com and englishclub.com.

The objective of this observation and interview was to find out the use of the computers and if they promote autonomous learning. The observations were conducted in the computer area of the self-access center obtaining the following results: The students observed and interviewed were young adults, mostly ranging from sixteen to twenty, which are in the second and the third levels of the weekly English Course. They were four males and six females.

All of the students said that they choose what they want to do in the computer area, they receive suggestions from their teachers; however, sometimes they follow that advice but they also look for material themselves which can help them with the areas they need to practice, which are pronunciation, grammar and listening comprehension and fluency.

They choose programs where they can listen to vocabulary and repeat after they listen, programs with fill in the gap exercises where they practice grammar and vocabulary. Some of them like to listen and watch music videos or just listen to music in order to improve their listening comprehension and pronunciation.

Two of them mentioned the advantage of watching movies to improve their listening comprehension and obtain better fluency. One

of them mentioned that he liked to watch cartoon movies because they are easy to understand and he could learn vocabulary.

All students mentioned that they preferred to work in the computer room when they went to the self-access center because this room was updated; it was not boring, they could find the material they needed to practice in relation to what they are seeing in class or that they like in order to improve their language learning.

Students stated that the self access center is the only place they have to practice the target language apart from class. It is well organized, they have a catalog of materials they can practice or they can look for themselves in the net. It's is a good support for their language learning.

## **8. Conclusions**

According to the results, we might say that working in the computer room helps students in this self-access center to develop autonomy somehow. First, it seems that students are being able to decide what resources to use according to their preferences. It is true that teachers and classmates are influencing their decisions regarding the use of the computers.

Second, it is evident that students have to make decisions when working with a computer since they have to decide what program or Internet web site they will be working with. The computers in the center offer them with a menu and they have to explore the programs and web sites in order to decide which one they will be working with for an hour or so.

Third, students find working with computers interesting. They say it is attractive because it is interactive, which is usually the job of the teachers, to make classes interactive. It includes updated materials and a wide variety of them, which sometimes the class does not. It also offers materials for almost any skill providing students with a lot of practice according to their needs.

We can conclude that because of the characteristics of computers and the vast quantity of materials that they can hold, they help students in their decision making which is an important feature of autonomy.

This brief study should be expanded to make data more reliable and provide us with more valid conclusions. Observations should be recorded to provide us with more data and interviews should be based on some questions that helped us obtain more information.

**References**

- Benson, Ph. (2001) *Teaching and Researching Language Learning*. Applied Linguistics in Action.
- Dickinson, L. (1987) *Self-instruction in Language learning*. Nueva York:Cambridge University Press.
- Gremmo, M. y Riley,P. (1995) *Autonomy, Self-Direction and Self-Access in Language Teaching and Learning: The History of an Idea. System*,23. Great Britain: Pergamon.
- Levy, M (1997) *Computer-Assisted Language Learning*. United States of America: Clarendon Press Oxford
- López Bonilla, G., Tijanero, G. y Pérez Frago, C. (2006). Jóvenes, currículo y competencia literaria. *Revista Electrónica de Investigación Educativa*, 8 (2). Consultado el día 22 de diciembre de 2007 en <http://redie.uabc.mx/vol82/contenido-bonilla.html>
- Sheerin, S. (1997) An exploration of the relationship between self-access and independent learning. En Ph. Benson, Y P. Voller, (Eds.). *Autonomy and Independence in Language Learning* (pp.54-65). Reino Unido: Longman.
- Rubin, J. & Thompson, I. (1982) *How to be a more Successful Language Learner*. Boston: Heinle