Wiki-mediated Collaborative/Distributed Narrative Construction of Game Communities

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Abstract
The paper looks at how Wiki technologies can be used to facilitate language learning among the youth through game playing as a social activity. Constructionism as related to computer games and language learning are examined. Constructionist theory creates a context of learning in which learners become engaged in collaborative construction of sharable and meaningful artefacts. A case study of narrative construction is investigated further by identifying collaborative activities around game communities that might be able to facilitate language education. A scenario of an educational game community is presented and challenges in the use of such technologies in a game based setting are discussed.

Keywords: constructionism, game community, language learning, Wiki technology

1. Introduction

With the rapid advancement of computer technologies, it is now not uncommon to read about pre-school children building their own web sites, primary school pupils creating video and comic narratives based on their favourite films, televisions and computer games as well as teenage programmers writing software programs to edit the games they are playing. Being increasingly fluent in technologies, youngsters nowadays are using media in a very different way; they are incorporating media as part of their literacy skills.

In this article, we highlight and attempt to address issues that revolve around how media are used as an educational tool in a popular game culture to support language learning with Wiki technologies. For media scholars like Henry Jenkins, the advent of computer technologies opens a new door for new language practices in three distinct modes (Jenkins 2003). First, it enables consumers to archive, annotate, appropriate and re-circulate media contents. Second, it promotes Do-It-Yourself media productions and third, the integrated media encourages the flow of texts across multiples channels and demands more active participation in media consumption. This new mode of media consumption challenges language education in the classroom where learning is normally centred on writing and reading exercises on generalised subjects which are sometimes not relevant to the students.

2. Theoretical Background: Constructionist Learning Theory

Although some educators are still expounding the behaviourist method of knowledge transfer from experts to novices, psychologists such as Piaget (1929), Vygotsky (1930) and others claim that learning is less about filling learners' head with abstracted facts, than it is about constructing reality internally through collaboration. For constructivists, learners interact physically and socially with the environment and constantly construct and update their knowledge internally (Piaget 1929). This notion of learning is extended by Papert. Papert's constructionism claims that learning is actualised when individual learners construct their own favourite artefacts or object-to-think-with. In his own words, Papert defines constructionism:

"We understand 'constructioNism' as including, but going beyond, what Piaget would call 'constructiVism.' The word with the V expresses the theory that knowledge is built by the learner, not supplied by the teacher. The word with the N expresses the further idea that this happens especially felicitously when the learner is engaged in the construction of something external or at least shareable ... a sandcastle, a machine, a computer program, a book." (Papert and Harel 1991)

Constructionism suggests that learning involves the effort to create external symbols to move formal symbols constructed internally and locate them in the environment. In other words, constructionists stress that learning is more effective when learners are engaged in designing or constructing something tangible. Founded on this, distributed constructionism focuses on situations in which more than one person is involved in the design and construction activities (Resnick 1996). It draws mainly on social cultural aspect of learning that recognises that cognition is not centralised in an individual but distributed around other people and artefacts in the environment. Recently computer networks are used to support this type of learning where learners gather online and work on a project collaboratively.

3. Game community and popular culture

The innovation of computer games has witnessed the rise of computer games that let players construct virtual objects within the game. More recent games even support the construction of objects such as movies that can be used outside the game. Even the game does not support construction intrinsically, players will still find their ways to build something based on the game in a game community which is socially connected. Therefore, we attempt to study the game playing activity as a whole phenomenon of game community.

Being a new media and a popular culture among the youth in particular, computer games are intended to be consumed by active construction, instead of passive reception. Game players are active audiences: audiences as the creator of text rather than as solely recipient of pre-designed media messages. This construction happens at two levels: internal mental construction as well as external media construction. Apart from creating the meaning of the game text internally, players are engaged in externalising the meaning by producing tangible artefacts. This kind of meaning making is exactly what is purported by Papert's constructionism in which externalising and expressing inner feelings and ideas through the use of different

media is as important as internalising the meanings. This by no doubt blurs the boundary between players and game developers. Henry Jenkins calls this participatory culture, or a fan culture that draws its recourses from commercial media culture while also reworking them to serve alternative purposes (Jenkins 2003).

3.1 Participatory culture and language learning

Participatory game culture gives us an implication of the importance of design in language learning. It emphasises on uses of texts rather than on meanings of texts and examines both production and consumption of texts in order to understand better how media assists learners to facilitate language uses. Hence, the focus of language learning rely not on formal learning by treating learners as a generalised subject seeking for generalised linguistic rules. Our intention shifts to language-in-use in communities and social cultural aspects that impact the interaction among the learners. We believe that this production activity not only bring learners closer to language use, but also motivates them to learn as they are constructing authentic things others might want to see or use.

According to Sotamaa (Sotamaa 2003), constructions among gaming culture could be categorised in four categories: design of ICT, design of game contents, meta-game designs and new patterns of use. Design of ICT means that the users are modifying the hardware or software of the game, creating editors to "hack" the games. Design of contents refers to the creation of game-based contents with the game technology. This stretches to a large spectrum of media such as fan fictions, comics and videos. Meta-game design involves the creation of information about the game such as walkthroughs, game encyclopaedia, etc. The last category refers to the creation of rules around the rule-based computer game system.

We are more interested in the second and third category, which we believe most language practices take place. We have examined around 25 websites dedicated to games and identify the following productions:

Table 1: The design of game contents

Fan art	artwork based on game settings and backgrounds
Fan fiction	novels or short stories based on game settings and backgrounds
Fan comics	screenshots of the game composed into comic strips
Fan videos	Short films shot in the game environment with built-in camera functions or third-party software. Each scene is edited and composed with video editing tools
Fan poems	poems written based on gaming experiences or game stories
Fan music	the use a popular song as a framework and then incorporate meanings from the game into the song
Photo fiction	a story with the combination of texts and images

Table 2: The design of meta-game contents

Game encyclopaedia	An encyclopaedia on the game such as game vocabulary, game characters, places, items, etc
Walkthrough	The guideline of how to play the game successfully
Game discussion	Any form of discussion on playing the game

| Review, preview or news | Information such as game rating, comments, or latest updates |

In fact, a researcher at the University of Wisconsin has examined the interactions among participants in a virtual community dedicated to Japanese comic fans where there is a good deal of reading and writing (Black 2004). It is found out that there are many school-age English language learners constituting native and non-native speakers, participating in these sites to engage in this linguistic practice by trying to expand their creativity on the original media

Some teachers are already bringing comics into the classroom for literacy learning among children. Michael Bitz starts a comic book club at an elementary school in 2001. In the club, children are encouraged to create their own comics to express themselves. The parents of the children in the club and the teachers believe that comics help kids read, write and expand their vocabulary (NewsVOA, 2005). Although still very much underexplored, video productions are being incorporated into English classes in some schools with the hope that students will dwell in the language and create a media object to think with (Hu, 2004).

4. Wiki-mediated game community for education

The "Wiki", named for the Hawaiian word "quick" is a new technology that supports the notion of new media consumption where everyone is the author. It is a freely expandable collection of hypertexts which can be easily edited by any user. Recently there is an increasing interest in using Wikis for distance learning. A teacher of Biology for example could start a Wiki site by posting some materials creating a tentative structure of the subject, and uploading some media files. When the students visit, they can expand the contents by modifying or posting more materials, thus enriching the learning resources. The students feel closer to the learning system as they contribute to the development.

Wiki technologies have been quite successful in supporting some collaborative projects and we believe that narrative construction activities in game communities can benefit from these technologies. Game encyclopaedia construction for example is similar to the Wikipedia project (http://www.wikipedia.org/). Fan fictions could also be collaboratively written as in some Wikicities projects such as Novelas (http://novelas.wikicities.com/wiki/Main_Page) where each author contributes a chapter or a portion of a chapter. In term of construction involving media other than text, such as comic strips, the community could use Wiki technologies to share their screenshots. With the increasing popularity of Wikis, it is not surprising that there are already Wiki sites for game communities. For example, many books in Wikibooks project feature strategy guides for popular computer games such as Super Mario Bros. and Simcity. In the next section, we examine how narrative construction activities mentioned in the previous section is being mediated through computers and connectivity by presenting a scenario.

4.1 A scenario of language learning with MediaWiki

As an English as a second language teacher in a secondary school, Chandra Harrison has noticed that most of her teenage students love to play The Sims 2 for their pastime. The Sims 2 is a simulation of humans and their relationships in an American suburban area. Players are in charge of their simulated people known as Sims and trying to satisfy their needs. There is no winning condition of this game; players can totally mess up their Sims' life and see how they react. Recently there is a growth of a community who uses the built-in camera function to make short movies to tell stories.

Therefore, Chandra decides to build a website to allow her students to get involved in collaborative activities that put English into practice based on their favourite game. She has chosen MediaWiki for this project because it is freely available and is supported by a large community of open source developers. Helped by the IT expert in her school, she sets up and installs MediaWiki on the server and her Wiki site is ready to run. She first creates several pages in her site, which are related to the Sims 2 and how the game could be used for making videos. She even includes some video making tips and links to videos made by other players. In the main page, she posts the theme, Christmas celebration, of the project she wishes her students to work on.

The students start logging on to the internet and viewing the Wiki site. Soon, discussions on the theme starts and together with Chandra, 20 students are discussing and negotiating the ideas for the video production. Some have played the game for quite some time and have downloaded Christmas related models to incorporate in their games. New pages are created for the storyboards and students are actively participating in modifying and expanding the plots. At the same time, scripts of the video are being generated collaboratively. When the plots and the scripts have crystallised, Chandra directs the task from discussion to video capturing and voice recording. Within some weeks, new video shots and sound files are being uploaded to the Wiki site.

Discussions on technical issues also spawn in a large number. More able students are helping their peers by answering questions from all range of topics. From time to time, the discussions are even brought into the classroom. Students download the voice files and combine them with their videos. The same scene might be recorded by several different students with different cinematographic techniques. When more and more video and sound clips are available on the Wiki site, students start compiling all the resources into a complete short video. Different versions of short videos are produced. Some students even put English and their native language subtitles in the movies. Toward the end of the project, Chandra organises a "movie festival" in her class to showcase and criticise their productions

When engaging in these activities, students are using a second language to do something meaningful to them and other students. Instead of learning linguistic knowledge such as grammar and morphology, the second language is used as a resource very much like the game for their project. This kind of construction activity lets students dwell on and play with languages and at the same time, aware of their meta-language skill while discussing their constructions before, during and after the construction activity.

4.2 Challenges of Wiki-mediated educational communities

Several challenges of implementing Wiki for educational uses are identified. First, it is generally assumed that cyber vandalism is a major disadvantage regarding Wikis. However, the success of Wikipedia has proven that community self-regulating mechanism prevent the website from being vandalised. Further, for local implementation, password protected Wikis could be used to ensure deep reflection and evaluation. Second, some less able students might be scared off by more experienced users and thus are discouraged to contribute. They might think that their productions are less "professional" than those of more expert users and are shy away from posting. Third, Wikis have no clear authority because they obscure authorship. They do not help a writer discover subjectivity and a personal voice since all constructions are negotiated and agreed by the majority of the community. Forth, extra work might be needed to sort and refine contents in order to maintain a tidy structure and hierarchy of the site. Fifth, the Wiki interface is not comfortable for some people as it lacks WYSIWYG feature. Finally technology skills among teachers and students need to be taken into consideration as video productions especially cannot be done without adequate technical knowledge.

5. Future Direction

The idea of Wiki-based online community is not novel although the use of such community for literacy and language learning around computer games has left much to be studied. Although it has been shown that literacy practices do occur in game communities, the effective use of such activities in language learning is questionable as we have also noticed that cyber citizens are prone to "non-standard" language patterns which might be detrimental to second language learners. Therefore we outline the future direction this research will undertake. Empirical studies need to be conducted in order to examine its feasibility practically. This can be done from several perspectives: the social interaction among the participants, the progress of the use of language and the media construction activities. Problems as discussed should be looked into and possibly solved technically or organisationally.

6. Conclusion

Constructionism states that learners are the builders of their own cognitive tools, both internally and externally, in this context, through the use of signs. Game communities are seen to be a natural environment for such activities for they involve the practice of new literacy by putting languages in practical use. We wish to understand how technologies, popular culture and literacy practices are related to learners' eagerness to read, write, and communicate in a game community. We have presented an idea of using Wiki technologies to mediate new literacy practices in a game culture. We believe that by engaging learners to construct something meaningful and sharable with their peers, learners can learn by putting the knowledge in practice.

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