THE NATIONAL TRADITIONS IN PEDAGOGY AND IMPORTANT POINTS IN THE NATIONAL HISTORY OF EDUCATION. THE PROCESS OF ICT INTEGRATION IN THE EDUCATIONAL PROCESS THROUGHOUT THE YEARS – TRADITIONS AND INNOVATIONS. THE CASE OF CYPRUS

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Introduction

The purpose of this short report is to shed light on education in Cyprus through the years, putting emphasis on the use of Information Communication Technologies (ICT) in the educational process. The report starts with a brief historical overview of facts that shaped the economic, societal and educational situation in Cyprus and then focuses on the development of the Cyprus educational system at all levels; primary education, secondary education and Higher Education. The report then proceeds with the integration of ICT in the teaching and learning process through the years, and finally, it concludes with some suggestions on what the way forward could potentially be.

A Historical Overview

Throughout its turbulent history, Cyprus was conquered by different conquerors, until it was declared an independent republic in 1960, after the rule of the British Empire ended on the island. In 1974 Turkey invaded the island and occupied almost 40% of the total territory of the Republic. In 2004 Cyprus joined the European Union and this opened new horizons for the future of the island that now had the opportunity to participate in the decisions made not only about its future, but also about the future of the whole the continent and the world (European Union, 2022). All these developments through the years had various consequences on all aspects of life on the island including economy, social life and education.

To understand how education advanced through the years on the island, it is useful to have a brief historical overview of the developments. According to Persianis (1996), the majority of the population on the island, that is Greek Cypriots, were influenced by the ancient Greek civilization, and generally by the mainland Greek educational trends through the years. Historically, Cypriots travelled to Constantinople,

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Alexandria, Salamanca, Venice, Rome, and Paris for higher education during the years following the fall of Constantinople to the Ottomans in 1453, and this tradition accelerated particularly following the founding of the University of Athens in Greece in 1837 (*Cyprus Educational System — overview,* 2022). People of Cyprus mainly travelled abroad to receive higher education and the relationship with the Universities in Greece was always strong. Before 1830 there were no teachers in Cyprus; teachers were mainly priests, who had reading and writing skills. The first teacher training institution to be established in Cyprus was in 1893 when Cyprus was under British rule. When Cyprus was declared an independent republic in the 1960, the Pedagogical Academy was established, which provided education for the training of primary school teachers, its programmes being offered in Greek.

Since then, a lot of developments have occurred at all levels in education in Cyprus including the establishment of Higher Education, which is nowadays flourishing.

The Cyprus Educational System – An overview

The educational system in Cyprus is governed by the Ministry of Education, Sport and Youth (*Cyprus Ministry of Education, Sport and Youth,* 2022), which is responsible for the preparation and amendment of the legislation related to education, as well as for the syllabi, the national curriculum and the national textbooks (Kambouri, 2012). Education in Cyprus is consisted of Primary Education, Secondary General Education, Secondary Technical and Vocational Education and Higher Education.

Primary Education

According to the official website of the Ministry of Education (*Cyprus Ministry of Education, Sport and Youth,* 2022), primary Education, the initial stage of education, "has as its basic aim to create, establish and offer opportunities to all children, regardless of age, gender or country of origin, to achieve a balanced cognitive, emotional and psychomotor development". Pre-Primary Education is compulsory for all the children that have reached the age of four years and eight months before September 1st of the year during which they will attend school. Attendance of Primary Education is compulsory for all the children that have reached the age of five years and ten months before September 1st of the year during which they will attend school. The National Curriculum and the teaching methodologies adopted "focus on strategies which assist pupils in learning how to learn and in developing their critical and creative thinking" (*Cyprus Ministry of Education, Sport and Youth,* 2022). They also "help pupils become acquainted with their civilization and tradition and to develop respect and love for their national heritage, become aware of their national identity, the Greek language, the Greek Orthodox religion and their history (*Cyprus Ministry of Education, Sport and Youth,* 2022). Simultaneously, because of the needs for multicultural awareness of today's world, the Ministry makes effort to develop "intercultural awareness, tolerance and respect of otherness" (*Cyprus Ministry of Education, Sport and Youth,* 2022). The Primary Department of the Ministry of

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Education is responsible for Primary Education (private and state primary schools), Pre-Primary Education (private, public and community Pre-Primary schools), Special Education (special schools, special units and support services offered to children with special needs who are taught inclusively in public primary and Pre-Primary schools), the Cyprus Educational Mission (Cyprus community schools in Great Britain), the Education of the children of Greek of the Diaspora, Educational and Summer Camps, and Adult Education Centres.

Secondary Education

Secondary Education is provided for students aged 12 to 18. In public schools, students attend classes in two three-year cycles - Gymnasium and Lyceum. The two cycles include cross-curricular programs (Health Education, Environmental Education, etc.) as well as a variety of extracurricular activities (excursions, visits, etc.) so to achieve a global and balanced development of the students' personality (*Cyprus Ministry of Education, Sport and Youth*, 2022). The main objectives of Secondary Public education are to:

•   offer comprehensive knowledge preparing the students for their academic or professional orientation;

•   promote and develop healthy, intellectual and ethical individuals;

•   create competent, democratic and law-abiding citizens;

•   consolidate national identity, cultural values, global ideals for freedom, justice, peace, love and respect for people;

•   promote mutual understanding and cooperation among people.

Another aspect of secondary education in Cyprus is also the promotion of the European dimension, which is promoted interdisciplinary, represents one of the basic objectives of Education in Cyprus for many years through the syllabi and the organisation of different activities that enhance the European consciousness.

Apart from the general secondary education, there is also the Secondary Technical and Vocational Education which allows students to follow a more technical direction of education which involves subjects of more practical nature, and special education, which caters for the needs of students with special needs. As far as special education is concerned, this takes place in a normal class or in a special unit of the public school or in a public school of Special Education and Training. In case of children of primary and secondary education with special needs, who as a result of health problems cannot attend the regular program of courses at school for a long time, may be offered an alternative way of education (*Cyprus Pedagogical Institute*, 2014).

The Ministry of Education, Culture, Sports and Youth has introduced a series of innovations and reforms since 2015 that affected Secondary Education. Specifically, a new timetable and curriculum were launched, along with new frameworks for access to the Public Universities of Cyprus and Universities in Greece, a new student assessment system is being promoted across primary and secondary education, and a nationwide

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diagnostic assessment of students is being applied. Finally, the design and launch of a new Teacher Evaluation System is well under way (**Cyprus Ministry of Education, Sport and Youth**, 2022).

Higher Education

Higher Education Institutions in Cyprus consist of Public Universities, Private Universities, Public Institutions of Tertiary Education and Private Institutions of Tertiary Education, and it aims at fulfilling the local needs for Higher Education and at establishing Cyprus as a Regional Educational and Research Centre. With Cyprus being a European country, the Higher Education System in Cyprus is shaped by the European Higher Education Area, as outlined by the Bologna Process.

After the independence of the island (1960), the professional educational needs of the locals were covered through the establishment of a number of professionally oriented public and private non-university level institutions. Nevertheless, at the end of the 80's, the discussions about the establishment of Universities in Cyprus matured and the first University of the island, The University of Cyprus, was founded in 1989, welcoming its first undergraduate students in 1992. The second public University, the Open University of Cyprus was founded in 2002 and received its first students in 2006, operating in through open and distance learning to cover the needs of citizens accessing lifelong learning and professional development. A year later, in 2007, the Cyprus University of Technology was established to offer fields of studies related to applied sciences and technology. Public Universities are established by law and they are financed mostly by the government, and they are autonomous and self-governing Universities. Apart from public Universities there are some private Universities, such as the Frederick University, the European University, the University of Nicosia, Neapolis University and the University of Central Lancashire. The evaluation of Higher Education Institutes in the past was made by Bodies for Evaluation and Accreditation, that is the Evaluation Committee of Private Universities (ECPU), the Advisory Committee of Tertiary Education (SETE) and the Council of Educational Evaluation and Accreditation (SEKAP). These bodies were replaced by the Cyprus Agency of Quality Assurance and Accreditation in Higher Education (CYQAA), which is now the competent authority for Quality Assurance in Higher Education in Cyprus (*Higher Education - Cyprus Ministry of Education, Sports and Youth - Historical Background*, 2022).

According to the official webpage of the Higher Education of the Cyprus Ministry of Education, Sports and Youth (*Higher Education - Cyprus Ministry of Education, Sports and Youth - Historical Background*, 2022), the main goals and challenges of Higher Education in Cyprus are the following:

• Enhancement of quality assurance in HE through keeping up with the Bologna Process

• Active involvement in Bologna Process and its implementation in Cyprus Education

• Development of Cyprus into a regional centre for education and research

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• Increase in the number of people attending HE in Cyprus

• Increase in the number of students attending programmes related to science, technology and communication

• Promotion of the knowledge square (education, research, innovation and social service) and excellence in research, technology and innovation in Higher Education

• Making Cyprus' Higher Education more attractive and accessible to international students

• Enhancement of the governance and funding of the HE Institutions

• Promotion of mobility of students and staff

Higher Education in Cyprus has undergone a series of developments that reflect the main trends in education around the globe.

Developments in Cyprus Education – The integration of Information and Communication Technology (ICT) in the Teaching and Learning Process

The rapid transformation of all aspects of life due to developments in technology and the rise of the Fourth Industrial Revolution (Hirschi, 2018) has had an effect on education. Modern theories of learning such as Social Constructivism (Vygotsky, 1978) and Connectivism (Siemens, 2004) are in favour of educational practices which promote social interaction, collaboration, problem-solving and networking. Having in mind the extent to which these are depended on technology nowadays, one can realise how important the integration of technology is in education.

According to Vrasidas (2002), between the 1960s and 1980s, educational technology efforts in schools involved the use of traditional audio-visual equipment and some government-produced educational radio and television programming. It was after the early 1990s that advanced ICT became a part of the Cyprus educational technology scene, and this was mainly because of the island's technological infrastructure. After the special evaluation report of the Cyprus education system (by the International Institute for Education Planning in 1997) a number of reforms were initiated in order to increase the quality of education on the island. These included the introduction of a number of computers in public schools and access to the internet (Vrasidas, 2002). Nevertheless, it was not only until recently that all schools in Cyprus were equipped with computers and the appropriate infrastructure that ensured access to the internet; the need for this was intense, especially after the outbreak of COVID-19. Despite all these, one of the biggest challenges remains the need that teachers have for training in the use of technology. This role was mainly granted to the Cyprus Pedagogical Institute of the Ministry of Education, that undertook the duty of training the teachers in the use of different applications and tools that could be integrated into the educational process (*Cyprus Pedagogical Institute - Ministry of Education, Sports and Youth*, 2022).

In Cypriot Higher Education, there are several efforts the last years to apply technological advancements in the education process, and despite the fact that research in the area is still limited, there are many practitioners and researchers who investigate the issue of educational technologies in depth. Taking the example of the Cyprus

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University of Technology, in 2007 when the University started its operations, all the classrooms were equipped with a computer and a projector for the instructor. Soon computer labs were created equipped with personal computers and printers which could be utilised by students as well as multimedia classrooms which were mainly used by the Language Centre of the University. Through the years, the University invested in more contemporary technologies, such as Interactive Whiteboards and more advanced audio-visual systems, which were used in the educational process. Nowadays, the University has equipped many of its classrooms with smart interactive touch screen boards which can make the teaching and learning experience easier, more interactive and suitable for the needs of students with different learning styles. Most of the desktops in classrooms have been replaced by new laptops.

Moreover, as far as software is concerned, the University has granted access to all the students and the members of the academic staff to Learning Management Systems (LMSs) such as Moodle and to cloud technologies through Microsoft Office 365. Access to Office 365 ensures access to Microsoft Office Teams too.

The Cyprus University of Technology hosts various research centres/ labs which belong to different Departments of the University. Some of these labs focus on the research and development in the field of pedagogy, while some others purely on the exploration of the use of technology. Each of these labs have their own equipment which is used mainly for research purposes. These labs are the following:

Department of Communication and Internet Studies

- The Media Cognition and Learning Research Group http://mcl.cut.ac.cy
- Social computing research centre https://www.socialcomputing.eu/
- Technologies for Reflection and Behaviour Change http://persuasive.cut.ac.cy/

Department of Multimedia and Graphic Arts

- Visual Media Computing https://www.cut.ac.cy/faculties/aac/mga/research/researchlabs/visual-media-computing/
- Language and Graphic Communication Research Lab https://www.cut.ac.cy/faculties/aac/mga/research/researchlabs/lgcrllab/
- Semiotics and Visual Communication Lab https://www.cut.ac.cy/faculties/aac/mga/research/researchlabs/semiotics-and-visual-communication-lab/
- Immersive and Creative Technologies Lab https://www.cut.ac.cy/faculties/aac/mga/research/researchlabs/immersive-and-creative-technologies-lab/
- Visual Sociology and Museum Studies Lab https://www.cut.ac.cy/faculties/aac/mga/research/researchlabs/visual-sociology-and-museum-studies-lab/
- Cyprus Interaction Lab https://www.cut.ac.cy/faculties/aac/mga/research/researchlabs/cyprus-interaction-lab/

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- GET Lab - Microsoft Computer Games and Emerging Technologies Research Lab https://www.cut.ac.cy/faculties/aac/mga/research/researchlabs/mcgetr/
- Art_+ Design: elearning lab https://www.cut.ac.cy/faculties/aac/mga/research/researchlabs/art-and-design-elearning-lab/
- CYENS https://www.cut.ac.cy/faculties/aac/mga/research/cyens/

Apart from these research centres/ labs, a few years ago, the American Embassy sponsored the creation of the CU**T**ing Edge, An American Space (*CUTing Edge*, 2022) on campus, which, according to their official webpage, "aims to provide an inspirational place where people can relax and embrace technology, become innovators and present their work to the worldwide community. It also aims to promote entrepreneurship for young people, introduce various possibilities that are available out there and prepare them for today's competitive business and working environment." Apart from all these, the CUTing Edge "aims to introduce various aspects of American culture and promote the English language and study possibilities that the US has to offer". The space is equipped with contemporary technology such as Extended Reality equipment, Lego Mindstorms Education Core Sets and Lego Boost Robotics and also a studio for video shoots which could be used for educational purposes (*CUTing Edge*, 2022).

For information on research conducted in the use of technology in education readers can check the websites of the aforementioned research centres, the CUTing Edge and the Language Centre.

Furthermore, since the summer of 2021, the University established the Learning Development Network (*The Learning Development Network*, 2022). The main objective of the Network is to enhance the educational experience of the students of the Cyprus University of Technology and to promote innovation in teaching and learning. Amongst their aims are also the organisation and implementation of seminars and workshops which will enact discussion on innovative teaching practices and the support of academic practice.

Conclusion - The Way Forward

Generally, there have been many developments in the educational system in Cyprus since the declaration of the Republic in 1960. Nevertheless, bureaucracy, the lack of strategy in many cases and lack of training (Vrasidas, 2002) are delaying progress. Luckily, the situation in Higher Education is better, since researchers seek funding through bodies outside the boundaries of Cypriot governing bodies. Nevertheless, there is still much room for improvement and development.

The way forward should perhaps involve everyone related to the educational process; stakeholders, decision-makers, curriculum designers, teachers, students, parents and also future employers. More funding is needed for education in order to equip educational institutions of all levels with the appropriate technology tools to embrace

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state-of-the-art integration of technology in education. More research in education should also be funded and supported by the government and the European Union, and finally more dedicated and targeted teacher education schemes/ programmes should be launched. Drawing on the most contemporary theories of learning, solutions such as the embrace of connectivist approaches to professional development could be a good way to move forward. This would mean the creation of Communities of Practice (CoPs) (Wenger & Trayner-Wenger, 2015) that would be extended beyond the boundaries of Cyprus and would involve the inclusion of academics, practitioners and other experts in education around the globe.

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