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CONFERENCE SESSIONS

ORAL SESSIONS, 1st July 2019

Massive Open Online Courses (MOOC) Effective Pedagogical Practices ICT & Digital Skills for Educators (1) Foreign Language Learning Vocational Education Ethical Issues in Education Design Thinking and Creativity Quality Assurance and Accreditation Health Sciences Education

Virtual Reality and 3D Experiences Flipped Learning (1) ICT & Digital Skills for Educators (2) Language Learning Technologies Informal Learning Gender Lensing in Academia Team Based Learning Internationalization in Higher Education Nursing Educational Experiences

Virtual Learning Experiences in Higher Education m-Learning & Personal Learning Environments Professional Development of Teachers (1) English for Special Purposes Up2U, Learning from Learners Sustainability in Higher Education Project and Problem Based Learning Entrepreneurship Education Programming and Coding Skills (1)

Learning Analytics Flipped Learning (2) Pre-service Teacher Experiences Language Learning Experiences Student Support in Higher Education Active Learning in Engineering Education Active Learning University-Industry Cooperation Programming and Coding Skills (2)

POSTER SESSIONS, 1st July 2019

New Trends in Education and Research

Pedagogical Innovations and Educational Issues

ORAL SESSIONS, 2nd July 2019

21st Century Skills Serious Games & Game-Based Learning (1) Educational Management Student Support & Wellbeing Intercultural Issues in Education Secondary Education Experiences ICT Skills and Digital Literacy Research on Higher Education Pedagogical Innovations in Education

Next Generation Classroom & Learning Space Design Serious Games & Game-Based Learning (2) Technology-Enhanced Learning (1) Professional Development of Teachers (2) Inclusive Education (1) Primary Education Experiences Digital Competences and Virtual Learning Experiences Links between Education, Research and Innovation Videos for Learning

Augmented and Virtual Reality Serious Games & Game-Based Learning (3) Technology-Enhanced Learning (2) Professional Development of Teachers (3) Teacher Training for Inclusive Education Teacher Training in STEM Digital Literacy Curriculum Design e-Learning Experiences (1)

e-Learning Platforms and Learning Management Systems Gamification Technology Enhanced Experiences in Special Education Mathematics Education Student Support & Inclusive Education STEM Outreach Activities e-Assessment Work Based Learning e-Learning Experiences (2)

New Trends in Learning Analytics Blended Learning Technology in Primary and Secondary Education Business Education Inclusive Education (2) STEM Education Assessment in Higher Education Internships and Workplace Learning e-Tutoring and Intelligent Tutoring Systems

POSTER SESSIONS, 2nd July 2019

New Experiences in Education

Emerging Technologies in Education

VIRTUAL SESSIONS

21st Century Skills Academic Research Projects Augmented Reality Barriers to Learning Blended Learning Collaboration Projects and Networks Computer Supported Collaboration Curriculum Design and Development Design Thinking and Creativity Distance Learning Diversity Issues, Women and Minorities E-content Management and Development e-Learning Projects and Experiences Early Childhood and Preschool Education Education and Globalization Educational Management Educational Software & Serious Games Educational Trends and Best Practice Contributions **Emerging Technologies in Education** Enhancing Learning and the Undergraduate Experience Ethical Issues in Education Evaluation and Assessment of Student Learning Flipped Learning Game Based Learning Higher and Further Education ICT skills and Digital literacy Impact of Education on Development Language Learning Innovations Leadership in Education Learning and Teaching Methodologies Learning by doing & Experiential Learning Learning Management Systems (LMS) Lifelong Learning Links between Education and Research Massive Open Online Courses (MOOCs) Mobile and Tablet Technologies Mobile Learning Multicultural Education New Experiences in Education New Learning/Teaching Models New projects and Innovations New Trends in Education and Research Organizational, Legal, Policy and Financial Issues Pedagogical Innovations and Educational Issues Pre-service and In-service Teacher Experiences Primary and Secondary Education Problem and Project-Based Learning Quality Assurance and Accreditation **Research Methodologies** Special Education & Inclusive Learning STEM in Education Student Support in Education Team-Based and Collaborative Learning Technology-Enhanced Learning The 2030 Agenda for Sustainable Development The Bologna Declaration and ECTS Experiences The Impact of Web Technologies on Education Transferring Skills and Disciplines Virtual Learning Environments (VLEs) Virtual Reality and 3D Applications Workplace Training and Employability Issues

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E-LEARNING, PROFESSIONAL TRAINING, AND DIGITAL TOOLS: NEW OPPORTUNITIES FOR STUDENTS OF ALL AGES

L. Kazantseva, P. Nicolini, E. Cirilli

University of Macerata (ITALY)

Abstract

In the modern world, technology develops very rapidly and becomes part of all spheres of life. For some time now it has also entered the process of teaching and learning. More and more possibilities are found for studying on the internet or through digital tools. In our research we have analyzed which strengths and weaknesses meet the students who experience this form of study, what kind of technology they use for professional updating, why they choose to do the professional update with the use of new technologies and what are they waiting for from this experience.

Keywords: online education, Teaching-Learning process, social interaction, social groups, digital tools, e-learning.

1 INTRODUCTION

The speed with which the modern world changes increases more and more and digital tools become part of everyday life, so that processes of teaching and learning must be introduced at the most various ages. Personal training does not end with the formal stage (for example with University degree) but continues throughout the life with different types of professional updates and different courses of personal curiosity. More and more part of they is organized on online platforms. But how clear and usable is interaction and learning within those courses for people of different ages, technological preparation and professionalism?

One of the eight key EU citizenship skills was identified in 2006 (the Recommendation of the European Parliament and of the Council of 18 December) for lifelong learning as precisely digital competence (DC). On February, 15th 2018, the public consultation for the first version of the official Italian translation of the DigComp 2.1 European model was implemented.

The Agency for digital Italy created the guidelines for different areas of professional work for the development of digital skills.

Digital competence consists of knowing how to use IST (Information Society Technologies) for work, leisure and communication confidently and critically. It is supported by basic ICT skills (Information and Communication Technologies): the use of computers to find, evaluate, store, produce, present and exchange information as well as to communicate and participate in collaborative networks via the Internet. Digital competence requires a solid awareness and knowledge of the nature, role and opportunities of IST in everyday life: in private and social life, in the sphere of tuition as well as at work.

In the document, the capacities that form the DC are proposed:

- 1 Technology Literacy that presupposes knowing how to choose and use technologies in a functional way to the objectives;
- 2 Visual Literacy that presupposes knowing how to interpret the images that are transmitted on the screen of the electronic device.
- 3 Information Literacy and its development that helps to find, evaluate, select and manage information.
- 4 Media Literacy that includes abilities to analyze, interpret, understand the media.

These 4 types of skills that build digital competence can be used for different activities within the learning process through digital tools.

The communication among them is presented in Fig.1

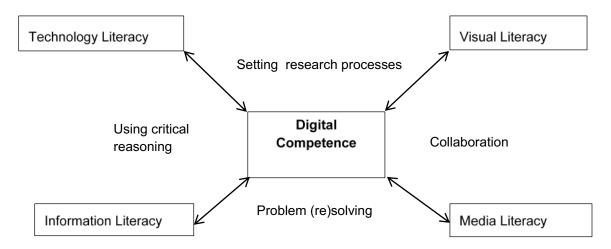


Figure 1. The communication among capacities

In this way, Technology and Visual Literacy help to carry out research, understand and use different types of research based on the definite purpose. Image and media analysis can help people collaborate. Meanwhile, the ability to analyze, filter and manage information together with technological knowledge helps develop critical reasoning.

By e-learning we mean the use of multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services, as well as to remote exchanges and remote collaboration.

In the e-Learning Action Plan the European Community proposes a definition that more than any other represents the complex evolution that e-learning has had since its birth, effectively combining the technological dimension with different methodological approaches. According to the EC, e-learning refers to the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services and promoting both distance sharing of information and collaboration.

This definition reflects three main aspects of e-learning:

- 1 Remote access to resources and services. Production and use of educational material through the internet.
- 2 Remote information sharing. While access to resources and services is a substantially individual process, information sharing calls for a social aspects of learning. Materials and documents can be shared within communities of practice or learning through special virtual environments.
- 3 According to the theories of Socio-Cultural Constructivism, the collaboration is one of the main conditions through which it is possible to develop meaningful learning.

Recently, the online learning system has developed both to achieve greater knowledge in the professional fields and to expand one's knowledge even outside one's profession. The number of people registered on the official pages of online platforms is growing every day. Many Educational Institutions propose this method of studying for professional refresher courses.

1.1 Objectives

Based on this background, we formulated our research question: what were the strengths and weaknesses of the online learning process according to o students who have already done it' opinion? What are short-term and long-term goals of e-learning professional updating method? Can digital tools help in learning?

1.2 The Sample

62 people participated in the research. The respondents are the students (in the past or present) 4 private educational institutions that did or still do the professional updating through digital tools and online courses. The 53.2% of respondents are between the ages of 31 and 40, 19.4% are between the

ages of 41 and 50, 9.7% are between 26 and 30, 8.4% are among The 51 and 60 years. Less than 25 years had 5% of participants, over 60 years they had 3%.

Some of them were university students and professors (3) while others were high school and university professors (8), freelancers (22), employees (13), dependents (7), entrepreneurs (6), pensioners (2).

Respondents had completed different degrees of education among which there were 78.7% of graduates in different subjects (48), 11.5% were PhDs (7) and 9.8% were high school graduates or professional institutes (6).

2 METHOD AND TOOLS

To formulate the research question the analysis of the official European documentation in the field of technological development and improvement of digital skills was made. The texts of the documents have been taken from the official websites of the European institutions of reference.

To understand how and why people choose training through digital tools, we have created a questionnaire with 14 multiple choice questions and 1 open question with a long answer. The questionnaire had three parts. The first part contained questions about the use of the internet and technologies in general. The second part was devoted to training with the use of the internet and digital tools. The third part instead contained the questions to collect the demographic information of the respondents.

3 THE RESULTS

The first part of the research was devoted to the use of the Internet and digital tools in general. All respondents (62) use the internet every day, mainly for work reasons (90%). Instead for the study most of the participants use it just over half (34 people corresponding to 56.5%), another 28% use it every week but not every day.

We asked students what types of digital and multimedia electronic devices use. The possible answers we have proposed based on the devices that are required by the institutions as necessary to carry out the training activities. Almost all respondents use laptops and smartphones, only half of them use stationary computers and only 27% use tablets. Other multimedia tools that have been taken into consideration are webcams (22.6%), projectors (16.1%) and multimedia whiteboards (only 3.2%).

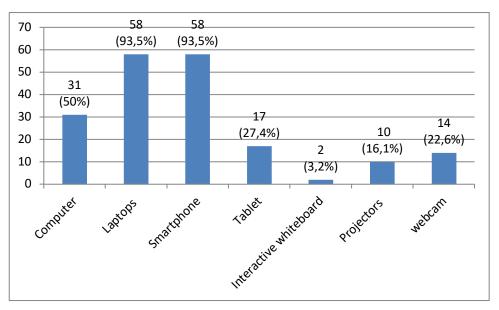


Figure 2. Use of digital and multimedia electronic devices

To understand what use they make of the Smartphone we asked the students what kind of applications they use. The services for messages and social media use almost all respondents (93%). The following other answers are navigators of various kinds (77.6%), educational / training

applications (66.5%), more than half of respondents use applications to make purchases on the internet (55.2%), the official Apps of the Public Administration or banks (56.9%) and services for planning and organizing trips: airline and / or rail tickets, hotel reservations, restaurant reservations (53.4%). Instead, apps for personal health services and online games are used much less by respondents (31% and 15.5% respectively).

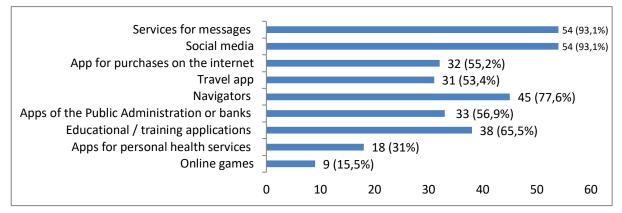


Figure 3. Use of Applications

We analyze participants' responses to their age. We have considered 3 central groups. People aged between 26 and 30 are generally young people, graduates or not, who have completed most of their professional studies and entered the labor market. Most of them stated that the digital and multimedia skills developed through participation in online training were improvement of personal professionalism and improvement of skills in working with professional digital tools (software, portals, programs). The second group trained people between 31 and 40 years old. They are adults who continue their career, most of them (72%) have already formed the family and have children. This group of people makes 53% of the participants (33 people) who respect the proportion of students registered in the Training Institutions that had joined this research. They confirmed that in the choice of the refresher course or specific training they turn mainly to social media (81%) where they find announcements in the groups of organizations or professionals. They also trust the advice given by their colleagues or acquaintances (51%), instead they do not trust the reviews on specialized sites so much (only 27%) use this source of information. The third largest group contains the people who have between 41 and 50. They managed to make a certain career (42% of them are managers, 20% are entrepreneurs.) We can see (fig. 4) the use these 3 groups of Applications make.

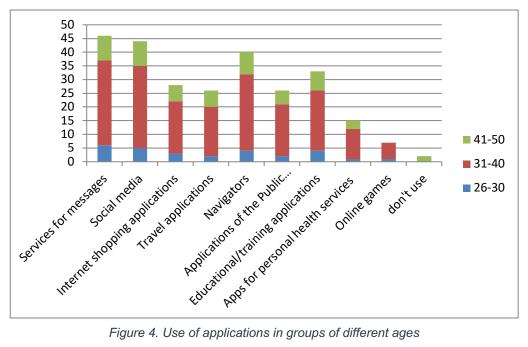


Figure 4. Use of applications in groups of different ages

They seem almost homogeneous, without a big difference. However, in the largest group there are people who do not use the Applications and do not play on the internet. Also interesting is how health applications are used that practically do not interest young people. Instead, adults use it more.

In the second part of the questionnaire we asked the Training institutions students of their relationship with training and professional updating through digital tools.

Regarding the frequency of the use of online resources for their own training, 46.8% confirmed using them every day, even if for a short time. Instead 35.5% of respondents use these resources several times during the week and 14% use them only a few times a month.

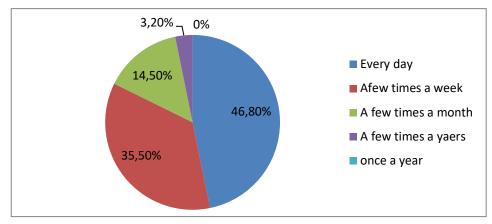


Figure 5. The frequency of the use of online resources

Instead it concerns precisely the digital tools that are used for training and the professional online update the most used are the portals that propose the recorded videos (75% of the participants have confirmed the use of these portals). We must take into account that some portals do collaborate with universities in different countries which allows students to receive the official certification of the universities in question. A little less than the portals but still quite frequently the resources of the webinars organized by freelancers from the different fields of work or by the Training Institutions are used. Instead of the portals that most often offer complete courses, webinars are single meetings on pre-established topics. Often they do not give any certification but they help to share the experiences of professionals with perhaps younger and inexperienced colleagues. Half of the respondents use electronic books for the purpose of their education. The third of the participants (36%) use the training apps for mobile phones. Video call programs (eg Skype) are often used for online lessons. 20% of respondents confirmed that they do. Many use it for private lessons to learn foreign languages.

In the informal era there are many possibilities to learn and discover the online courses that may be of interest. But most people find the proposals for the study on social media (80%), instead 56% follow the advice of colleagues or acquaintances regarding online training possibilities and only half (52%) search alone on engines of search. Only 24% of respondents look for course reviews or / and webinars on specialized sites.

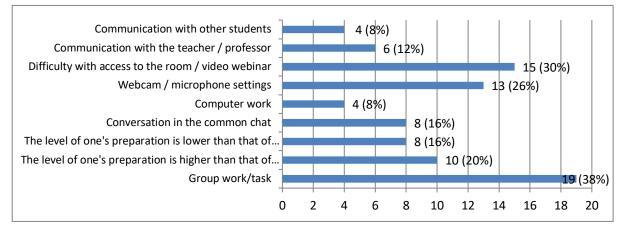


Figure 6. Difficulties that the students encountered during the training course

Speaking of the difficulties that the students encountered during the training course (fig.6). The greatest difficulties for students (38%) met in group work. The need to organize work with other students, to agree to be able to achieve the best result. Internet access and technical tools such as a microphone, webcam can also prevent quiet learning.

The students stated that having the preparation lower than the average of the group, or higher than the average (which are in total 36%), can create the difficulty in following the group. Another not inconsiderable problem (16%) declared conversations in the chat of the course, difficulty to follow the speech.

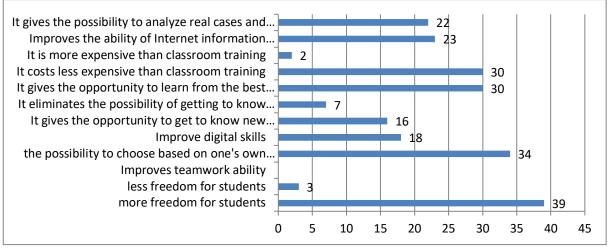


Figure 7. The differences between the ways of learning in the classroom and learning through digital tools

Regarding the differences between the ways of learning in the classroom and learning through digital tools, the students were quite positive. They confirmed that this mode gives students more freedom both from the point of view of time (62%), and from the point of choice (54.8%). According to the students the professional refresher courses have the advantage of being able to be chosen based on the topic of their own interest. Which is very important because it allows people with different basic preparation to get rich working in groups, even if this involves some difficulties. This also means that new knowledge is made that considers 25% of respondents an important point.

The other observation made by respondents was that online courses cost less than attendance in the classroom. According to 48% of students online education helps to find the possibilities and conditions to learn from the most trained professionals in their field. It would be more difficult to find the possibility of this kind by doing a course in presence. There are some cases in which the teacher would have been unattainable for the webinar or / and the course due to distance, lack of time or health conditions. Instead through internet platforms it is possible.

The development of digital skills (29%) and the development of the ability to analyze information (38%) are considered important by respondents. It must be remembered that the continuous development of digital skills is the key and the basis for work in the future.

4 CONCLUSION

Given the learning modality that involves a certain physical distance between the teacher and the students, we did not set as a limit the origin of the people who participated in the research, rather we were interested in the point of view of people with different backgrounds. Therefore the bodies that have given their availability are from Russia and Ukraine, but the participants live in Russia, Ukraine, Kazakhstan, Germany, Italy, Argentina and Spain.

We can consider this one of the limits of the research because all the participants were Russian native speakers. However, the sample taken into consideration represents the important part of the students enrolled in the professional updating groups of the bodies in question. There seem to be valid data given that we are dealing with people who are closely interested in the topic, who already had the experience of online professional updating or would like to improve their knowledge.

Another limitation we encountered during the research was the lack of balance between the male and female gender in the sample (83.6% are females, 16.4% are males).

Data analysis has shown us that people of different ages and levels of preparation find it interesting and important to continue their education and do professional updating even after the end of the basic training course. One of the valid possibilities offered by the modern world is to follow training courses on the internet and with the use of digital tools. The people who are most active in this field of training are the people who are between 30 and 50 years old. Older people do it less.

Recalling the three main dimensions of e-learning we can say that:

- 1 The professional online update contains remote access to various types of services, the teachers who offer their own courses make available educational material through the internet.
- 2 Distance information sharing helps people to get rich both professionally and personally. Sharing information and teamwork during the training course calls for a social dimension of learning.
- 3 Collaboration both among pupils and with the teacher is one of the main conditions through which it is possible to develop meaningful learning. Even if we take into consideration that the participants have a very varied age and basic preparation.

This research will be continued also to understand if the origin of the students and the teachers can make the difference.

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