

Teaching and Learning in the Digital Age

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Abstract

The current paper deals with the relationship between ICT and education in the Digital Age. The education system has reinvented itself lately, and the key driver to this change is the contribution of ICT to education. Adopting e-learning tools, students and other stakeholders benefit from a flexible learning environment and do not feel the pressure of the exam taken in a traditional way. E-learning platforms have become reliable tools in the academic field and an important factor for ensuring quality in learning and training, in the sense that they create a more flexible academic-administrative institution, contribute to the optimisation of the instructive-educational process, enhance the quality of the teaching-learning process, increase the motivation degree of the participants/learners in this process and improve the assessment procedures. They also provide different services in the field of second language acquisition, becoming appealing and handy tools for both educator and student – the former assumes a dominant role in classroom interaction whereas the latter is stimulated to learn and is willing to network.

Keywords

Digital Age, ICT, E-learning platform, digital inclusion, networking.

1. The relationship between ICT and education

The Digital Divide is still a problem in Europe considering the unachieved goal of universal access to computers and Internet connections. The European Commissioner for Digital Agenda, Neelie Kroes stated that too many Europeans do not have the necessary skills to succeed in the digital economy.³⁹ The report showed that less than 50% of Europeans have the necessary ICT skills to perform the jobs that are available. According to the figures only 43% have medium or high ICT skills in Europe, and almost 25% have no ICT skills. These problems are making it difficult to fill ICT vacancies which will reach the number 700,000 by 2015.

³⁹http://www.mcit.gov.sa/En/InformationTechnology/Pages/IntentionalNews/Tech_newsint_152_en.aspx

The key drivers⁴⁰ to overcoming digital exclusion are the following:

- focusing on parts of the societal challenges with high potential for sustainable competitiveness, innovation and growth;
- using dedicated measures to leverage and boost engagement of industry, including SMEs;
- developing the new knowledge and contributing to skills, which underpin excellent research and innovation, and promoting EU excellence;
- boosting the industrial deployment of enabling technologies;
- addressing the research and innovation divide;
- supporting strong partnership with Member States;
- ensuring a strategic approach to international cooperation, to facilitate access to the best researchers and to the best sources of expertise globally.

The Internet and the Web have become the key vehicles for innovation and creativity across the economy and society, with the digital sector representing a market of around EUR 3 trillion worldwide and more than 10% of the world's GDP estimated to depend on ICT. Nowadays, most teachers are the main motivator and initiator of the ICT implementation at schools as they are driven by the wish to combine traditional teaching and learning with online learning. Moreover, IT experts have built cloud-based and e-learning platforms, where participants, their learning support and E-learning opportunities are continuously aligned. But, above all, under the support and coordination of E-learning tutors, these platforms empower all users to plan, collaborate, and act in real time.

Being aware of the significant role of ICT (Internet Communication Technology) in our life, especially in the educational activities, developers of E-learning applications manage to meet the needs of EU young people (to enhance their computer skills, to stimulate and train them for a better accessibility, to test and train them in order to obtain an international certificate (i.e. TOEFL, GMAT, etc.) for a better employability in Europe.

The objectives of ICT implementation in education are the following (Savarinus Kaka 2008)⁴¹:

⁴⁰ http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/main/h2020-wp1415-intro_en.pdf

1. to implement the principle of life-long learning/education.
2. to increase a variety of educational services and medium / method.
3. to promote equal opportunities to obtain education and information.
4. to develop a system of collecting and disseminating educational information.
5. to promote technology literacy of all citizens, especially for students.
6. to develop distance education with national contents.
7. to promote the culture of learning at school (development of learning skills, expansion of optional education, open source of education, etc.).

Thus, ranging from email and forums to web applications such as social networking sites or wikis, computer-based tools can help in the meaningful construction of knowledge in LSP, while they also exemplify typical target situations that are relevant to students' needs, including the demands posed in terms of social, language, academic, and electronic skills (Arnó 2012: 89-104)

2. Embracing ICT tools to incentivise learners

By developing an online education platform, developers place an emphasis on a technology of participation, motivation and networking. Through networking people all around the world use an interactive terminology and, furthermore, they build confidence with other people, groups, and this is beneficial because they face the challenges of both digital age and intercultural communication. Much of what people learn is not an outcome of formal teaching. Instead it comes from a process of self development and through experience (Pretty et al. 1995):

People learn:

- 1% through taste
- 2% through touch
- 3% through smell
- 11% through hearing
- 83% through sight

People remember:

- 10% of what we read
- 20% of what we hear

⁴¹ <http://verykaka.wordpress.com/2008/07/25/the-role-of-ict-in-education-sector/>

- 30% of what we see
- 50% of what we see and hear
- 80% of what we say
- 90% of what we say and do

This implies that we must use visual aids as part of any learning activity and give people the chance to articulate and act on what they have learned.

Adult learning

- Adults are voluntary learners. They perform best when they have decided to attend the class for a particular reason. They have a right to know why a topic or session is important to them.
- Adults have usually come with an intention to learn. If this motivation is not supported, however, they will switch off or stop coming.
- Adults have experience and can help each other to learn.
- Adults learn best in an atmosphere of active involvement and participation.
- Adults learn best when it is clear that the context of the training is close to their own tasks or jobs. Adults are best taught with a real-world approach.
- All learning is best done through active involvement. The process of learning often matters more than the actual subject.

E-learning platforms advance integration, implementation, and coherence in the up-take of technology. The peculiarities of the most fashionable e-learning platform enhance learning and digital inclusion as follows:

The platform acts as a Mentor

The e-learning platform is a worth-accessing tool. Being tailored by the IT experts with customized features, it will become a mentor that will inspire, motivate and challenge all those interested in teaching, learning, providing all the interested with an opportunity to think about career options and progress. Thus, turning the platform into a breakthrough, the developers will add the mentoring feature which is about becoming more aware of education tools, taking responsibility for one's education to become digitally literate and improving one's skills to build a career in a specific field.

The platform provides free access to E-learning

In many EU countries, the traditional ways of teaching and learning still prevail. The education institutions would embrace technology and implicitly E-learning, but they do not have the

financial resources and institutions have to overcome a lot of barriers in order to adopt e-learning.

Romania is one of the countries in which education is provided in a traditional way. In university environments the need for E-learning departments is crucial. It will obviously be a breakthrough and will enable the access to a lot of teaching and learning opportunities for free, with a permanent up-take of technology, permanent maintenance and data security in the following years. Moreover, this department will provide an eco-friendly environment for learning and will increase the inclusion rate (more and more students will access the platform).

The platform opens the door to M-learning

If we are to conduct a university-wide survey on students' mobile learning practices we will notice that ownership of mobile devices is high among students and that tablets are the most popular devices for academic purposes. This Digital Era turned young people into digits because they have become very fond and addicted to smart phones and tablets in the university environment.

We witnessed the addiction phenomenon during our lectures: students keep hands-on smart phones and this is an issue faced by many educators around the world. For this reason, in order to stimulate inclusion, we consider it will be necessary for the platform to give access to M-learning as it is more flexible, creates individualised learning and provides immediate feedback and assessment. The e-learning platform will host applications for smart devices based on Android system and all the users (including the educators) can install them and access the PfA from anywhere (users become familiar with push notifications and can take tests, check grades, check the timetable of the lectures, access journal databases for their academic and research work, etc).

The platform promotes green education

Another advantageous aspect of the E-learning platform is its eco-friendliness: the use of paper is not needed during training sessions or assessment sessions. Thus, promoting the values of green education, the open, user-friendly and flexible E-learning system will be worth accessing.

The platform includes Digital Literacy accessibility features

The developers of the e-learning platform will consider that not all users have the same computer skills. In this respect, they will design and adapt the user interface, namely accessibility enhancement

for users with sight or hearing disability (higher fonts for reading the needed information, video tutorials that guide them in order to make them comprehend concepts, etc.).

The platform offers flexible and customised assessments

The assessing procedure could be an important factor for attracting more and more participants; it will be based on quizzes, multiple choice questions and all the participants in the evaluation could receive a certificate that will be issued automatically.

The platform enhances networking

The inclusion rate can be increased by creating virtual classes, and thus openness and networking are enhanced, in the sense that the interaction between T-S (teacher-student), S-T (student-teacher), S-S (student-student), T-T (teacher-teacher) at national and international level will be higher, and it will contribute to better collaborative learning through wikis, enhance communication skills, language skills, and intercultural awareness.

The platform gives access to international Journal Databases for academic writing and research

The access to information will not be limited; students and educators can access Journal Databases (Springer, Elsevier, etc.) to collect information, to prepare teaching materials, to improve the students' academic writing, to make projects, to do research for their bachelor examination, etc.

The platform offers permanent security support and maintenance needed

The platform offers security support and maintenance needed and the developers will take measures when tracking threatening activities that put the platform at peril and will act according to the law.

Moreover, E-learning platforms reach a wider target audience by engaging learners who have difficulty attending conventional classroom training because they are:

- geographically dispersed with limited time and/or resources to travel;
- busy with work or family commitments which do not allow them to attend courses on specific dates with a fixed schedule;
- located in conflict and post-conflict areas and restricted in their mobility because of security reasons;
- limited from participating in classroom sessions because of cultural or religious beliefs;

- facing difficulties with real-time communication (e.g. foreign language learners or very shy learners)⁴².

E-learning offers effective instructional methods, such as practising with associated feedback, combining collaboration activities with self-paced study, personalizing learning paths based on learners' needs and using simulation and games. Furthermore, all learners receive the same quality of instruction because there is no dependence on a specific instructor.

On the other hand, mobile learning content is designed to allow people to select between lessons that require only a few minutes to complete and lessons that demand sustained concentration over a period of hours. This flexibility allows people to study during a long break or while taking a short bus ride⁴³.

3. Concluding remarks

The relationship between ICT and LSP is relevant to the learning and teaching process. Based on thorough research and investigation of student's needs in the Digital Era (Connected Age), such as flexibility, user-friendliness and performance by means of ICT, as well as from the information offered by universities, research institutes, Language Schools, IT experts have commenced to develop platforms for learning and inclusion, bringing forth open and user-friendly e-learning applications that promote appealing and fruitful interactions (web interactivity) between student – professor (S-P), professor – student (P-S), student – student (S-S), and professor-professor (P-P).

In particular, the developers have focused on ICT benefits and have achieved applications for smart phones and tablets, thus offering accessibility on smart phones and tablets to all users and customised applications to support users with disabilities to promote better digital literacy, intercultural awareness and e-accessibility. Moreover, the online assessments stimulate users to participate in trainings and examinations, to obtain certificates of competence, such as TOEFL, GMAT, and GRE for better employability in the European Union.

We strongly believe that E-learning platforms favour learning and help youngsters become more digital because the use of computer and ICT deliver a broad array of solutions to enable learning and

⁴²<http://www.fao.org/docrep/015/i2516e/i2516e.pdf>

⁴³<http://www.fao.org/docrep/015/i2516e/i2516e.pdf>

improve performance. Thus, ranging from email and forums to web applications such as social networking sites or wikis, computer-based tools can help in the meaningful construction of knowledge in LSP, while they also exemplify typical target situations that are relevant to students' needs (including the demands posed in terms of social, language, academic, and electronic skills).

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