



Using ICT to Improve Higher Education in Morocco

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Abstract

Teaching English to speakers of other languages rests on a rich body of scholarship and practice. Over the past four decades Moroccan public universities have had to adapt to a rapidly changing higher education environment, and recently to both globalization and the Internet. The integration of information and communication technologies into the curriculum is a crucial vehicle in ensuring the quality of education.

In education, ICT plays vital roles in facilitating teaching and learning. It is of paramount importance in higher education for the university students and for professors as well.

This paper attempts to highlight the varied outcomes of ICT in higher education. It will draw, on one side, on teachers' experience and the use of ICT in teaching university students, and on the other side, students' experience with using ICT and its varied benefits on acquiring and actively constructing the knowledge, skills, and abilities to deal with the ongoing technological change.

1. Introduction

Besides using it for entertainment, ICT can influence in the development of education and enable better access to it. It increases flexibility so that students can access educational resources regardless of time and space. ICT Fosters the learning environment and enhances the learning experience. The usage of ICT also improves the student's potentials as it enables collaborative development of skills and capacities to create knowledge. In addition, it sets the foundation for long life learning and personal development because among other things it also develops the digital competence and technical competences that are needed for employment, education, and self-development.

The new teaching methods assume that the learner is an active source of knowledge and that s/he helps creating and designing instructional artifacts that support learning. In this context, using ICT helps learners actively construct their own knowledge in collaboration with others. It gives them the opportunity to be more interactive and more involved. A range of research indicates the role of ICT in the enhancement of the quality of education. ICT, then, has the potential to innovate, to enrich skills, to motivate and involve students, to help associate school experience to work practices.

2. ICT enhances constructive learning

The use of technology allows university students construct and direct their learning. In this vein, according to constructivism, knowledge is considered to be socially as well as individually constructed. In this domain learning is viewed as the construction of meaning rather than as the memorization of facts [2]. Learning approaches using contemporary ICT provide many opportunities for constructivist learning through their provision and support for resource-based, student centered settings and by enabling learning to be related to context and to practice [3]. That is, the acquisition of meaningful competences in a realistic context and it is advanced through interactive and authentic experiences that match with the interests of the student. So, the focus of teaching should be on the development of a suitable environment for constructing knowledge rather than for its transfer.

Today's students are different from previous generation students because the world they live in has become an information-rich environment, thanks to the rapid development of ICT. Students are now taking a leading role in their learning. They are eager to learn in real world and learn from real-life situations. The use of ICT in learning settings supports various aspects of knowledge construction and as more students are using ICT in their learning, the impact of ICT shall increase accordingly. Thus, universities must think globally in order to respond to students' needs, create new relationships, design new programs, and rebuild their conceptions on the characteristics of the rapidly changing learning environments to encourage innovation, experimentation, and to facilitate the acquisition of relevant life skills.

The cooperative nature of learning with technology can provide students with opportunities to demonstrate their strengths and gain class status that would be difficult in traditional competitive-based class environments. Using collaborative learning software or active learning, students can



become involved in researching and presenting solutions to their own local concerns. Thus, technology can simulate real-life environments and promote learning by doing.

3. ICT enhances self-centeredness

The use of ICT in higher education has immense power in promoting self-centeredness. It has significantly changed the teacher's role turning him into a facilitator in the learning process. Student-centered learning as a new teaching approach has been proven to be effective in its ability to teach students. It is demonstrated that its implementation is being strictly emphasized to ensure that students "...are responsible for their learning in which they can construct their learning by actively seeking their own information" [4]

ICT is potentially a powerful tool for expanding educational opportunities as it encourages students to take responsibility for their own learning and offers problem centered and inquiry based learning which provides easy access and information based resources. In this perspective, learning empowers individuals in an ever changing society and fosters lifelong independent learning skills, especially through access to a vast range of up-to-date materials.

Concerning the effects of ICT on students' motivation a number of specific motivational aspects has been identified, including enhanced commitment to the learning task, enhanced enjoyment and interest, increased self esteem and improved independence and confidence. In the same vein, evidence shows that the use of ICT can increase learner autonomy and self-regulated learning for certain learners. "Students assume greater responsibility for their own learning when they use ICT, working more independently and effectively... ICT offers learners assignments better suited to individual needs and makes it easier to organize their own learning, through the use of, for example, digital portfolios." [5]

Therefore, an appropriate use of digital technologies in education can have explicit effects both on students' attitude and their achievement. In this sense, teachers need to adopt student-centered, inquiry-oriented teaching approach as well as practices that promote students' authentic activities, independent work, knowledge building, and students' responsibility.

4. ICT enhances designing creativity

One of the most exciting aspects of technology in education is that it is used to enhance creativity. Just as students are able to express their voice through paper and pen, they are able to do so on a computer. Computer technologies such as word processors, photostories, computer DJ systems and other software enable students to express themselves through writing in a more natural, interactive and comfortable form. Students use a variety of multimedia applications such as digital camera, scanner, HyperCard, Hyper Studio, etc., to present their work in a highly professional format and to complete a range of projects that match the curriculum. Using these applications, they can generate documents and slideshows to demonstrate what they have learned, and then share this with other students, with their teacher, and even via email with people all around the world. ICT, then, allows learners to explore and discover rather than merely listen and memorize, or learn by heart.

Blogging is an example of how young people are using technologies to express their creativity and to be innovative. These applications provide a variety of means of how users can learn "how to learn", which according to [Rogers, 1983] is a major component of creativity. The example of blogging shows that there are various ways in which students learn how to write for a public, how to link their work to other works, how to network with other bloggers and how to utilize the blog for their eventual career paths. In other words, it provides freedom to students to post whatever they want and comment or share each other's material

Also, they can openly write on topics that intrigue them and give vent to their ideas. For example, students can volunteer to organize and manage a common class blog, which will act as a common source of expression for the entire class. Blogging makes students feel responsible for their own learning and incorporate creativity in their learning, in a way they could not do before. Such activities show that users are able to make new and valuable connections between old and new knowledge.

In view of that, all of these technology tools are creativity triggers that help students develop creative and critical thinking and other essential skills. They are easily and freely available and teachers should readily adopt them into their academic curricula, so that their students never lag behind when it comes to creativity and their development.

5. ICT enhances critical thinking



Students need to develop and refine specific abstract reasoning abilities. Knowledge comes not through dictating information and rote memorization, but from the ability to understand, synthesize, and evaluate evidence. So the use of ICT allows students to achieve higher order cognitive skills of analysis and evaluation, and helps them acquire specific abstract reasoning capacities, and fosters their ability to think critically and creatively.

Accordingly, the use of technology in higher education has changed the way students think, learn and interact. It results in a more productive learning environment and empowers users as it helps them develop a deeper understanding of topics that are relevant to the areas being studied. It allows students to do a lot of research and learn valuable research skills which lead to higher levels of education as it is important for students to understand the morals and principles of using the online content, and evaluate the authenticity and accuracy of this content (what to use and what to avoid, or to trust, how to access accredited sources...).

In this vein, Polly demonstrates that: "Technology has been shown to positively influence student learning when students explore technology-rich tasks that simultaneously require them to use higher-order thinking skills (HOTS), such as analyzing or evaluating information or creating new representations of knowledge." [7]

6. ICT enhances collaboration

Research has shown that 'collaborative' learning strategies and opportunities can improve learner engagement and learning outcomes. These studies propose that setting up asynchronous computer-mediated discussions as one component of course assessment is a natural mechanism to encourage 'collaborative' learning. The importance of the 'social' element of learning in these environments is substantial.

The application of ICT gives more opportunities for communication between peer learners who can thus exchange information in real time, participate in blog discussions and forums, work in teams on different projects, exchange emails, search for and disseminate information by communicating with people elsewhere using email, such as students in a different university or even in a different country.

In the educational context, networking could enable people to develop collaborative forms of learning. Collaboration among student would be more alive when it is used to develop new ideas, or to seek help from other members via online environment. This results in spontaneous discussion, collaboration and peer help.

7. ICT enhances easy Access to Learning

ICT fosters the flexibility of delivery of education so that learners can access knowledge anytime and from anywhere. It can influence the way students are taught and how they learn as now the processes are learner driven. This would better prepare the learners for lifelong learning as well as improve the quality of learning as confirmed by the European Commission "technological skills are important not only for students but also for lifelong learning." [9]

With the help of ICT, students can now browse through e-books, e-articles, courses, exercises, samples of previous examination papers, and can also have an easy access to experts, researchers, professionals, and peers all over the world [10]. It is a fast way to access a huge amount of resources that are regularly updated like the latest research and statistics on education, health, sports, politics, economy, science, etc.

Another major advantage of technology is that the Internet offers a wide variety of reference materials such as online dictionaries, e-encyclopedias and search engines that help develop students' individual work and autonomy. Learners can access diverse links with explanations, exercises, vocabulary, pronunciation, etc. They can find the missing information, the meaning of new words, synonyms, antonyms, definitions or can communicate information with the rest of the group online, via e-mails or in any other ICT environment. Thus, as more and more students use computers as information sources and cognitive tools, the influence of the technology will increase to support their studies.

Conclusion

The overwhelming presence of technologies in our lives has revolutionized the way young people learn and understand and has had considerable impact on education. Therefore, it can be reasonably established that the teaching and learning processes can be greatly enhanced through the incorporation of ICT.

It is worth emphasizing that ICT may cause radical change, not only in the ways in which learning takes place, but also in the manner of thought and of knowledge. ICT enriches existing educational models and provides new learning models. These models share features of a technology-based training and suggest new learning methods in which the learner plays an active role and also emphasizes self-directed, independent, flexible and interactive learning.

All in all, ICT is used to prepare students for future jobs, improve student achievement, promote active learning strategies, individualize student learning experience, encourage cooperative and project based learning, develop student independence, and make the learning process more interesting.

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