

## THE CHALLENGES OF USING ICT IN ALGERIA

Boukhatem Nadera\*

\*Dr., Abou Bakr Belkaid University, Algeria, [boukhatem.nadera@yahoo.fr](mailto:boukhatem.nadera@yahoo.fr)

### Abstract

The increasing volume of knowledge and information, Getting old, fast course, rapidly changing societies. And the future is unpredictable, Supervised training necessary continuous Instead requires cross training, The ICT also requires new ways of learning, Ways by which one can an autonomous and independent extreme life time of knowledge and use it to pay the claim, hence the importance and necessity abandonment of traditional methods and strategies in education and Teaching. The new educational strategies and procedures are clear in this regard one of the strategies of new training methods, applying the principles and Improved knowledge of educational technology in educational systems. Given what was said the present paper is while explaining the challenges of using educational technology and the necessity of its use in educational systems.

**Keywords:** The Challenges of educational technology, ICT, educational systems, tools and teaching aids

### Introduction

Information and Communications Technology (ICT) is becoming increasingly widespread, influencing many aspects of our social and work lives, as well as many of our leisure activities. For instance, ICT dexterities constitute a major part of educational programs (Thomas & Stratton, 2006). In many developed countries, nearly all schools are equipped with the infrastructure to conduct ICT mediated teaching and learning. In Algeria, one of the main goals of the Ministry of Education is implementing ICT in the education system and making it tool of teaching and learning, to increase the productivity, efficiency and effectiveness of the management system. To achieve these goals, it is important to ensure students and educators to integrate ICT into their teaching and to enable them to adapt their environment and adjust their instructional approaches (Zhang & Espinosa, 1997). Some studies reveal that using ICT consistently develops more positive attitudes toward computers (Delcourt & Kinzie, 1993; Birisci, Metin, & Karakas, 2009; Teo, 2008). So the most important factor that affects teachers' attitudes toward using information technologies in the classroom could be gaining of more positive attitudes. If teachers' attitudes toward ICT are negative, they would not want to use ICT in the teaching and learning process. In particular, (Kersaint *et. al.*, 2003) have shown that the successful implementation of educational technologies depends largely on the attitudes of educators, who eventually determine how they are used in the classroom. (Bullock 2004) found that educators' attitudes are a major influence in the adoption of technology for teaching and learning.

The advent of technology and information systems and their importance in economic development has caused nations to create a more technologically literate workforce. Hence, the Algerian Government has introduced various initiatives to facilitate the greater adoption and diffusion of ICT to improve capacities in every field.

Algeria plans a more widespread use of computers and related Information and Communications Technology in educational areas to ensure that graduating students are proficient in the use of such technology.

### 1. Definition of Information and Communication Technology (ICT)

Information and Communication Technology (ICT) is often associated with the most sophisticated and expensive computer-based technology.

But ICT also encompasses the more conventional technologies such as radio, television and telephone technology. While definitions of ICT are varied, it might be useful to accept the definition provided by United

Nations Development Programme (UNDP): 'ICT is basically information-handling tools- a varied set of goods, applications and services that are used to produce, store, process, distribute and exchange information.

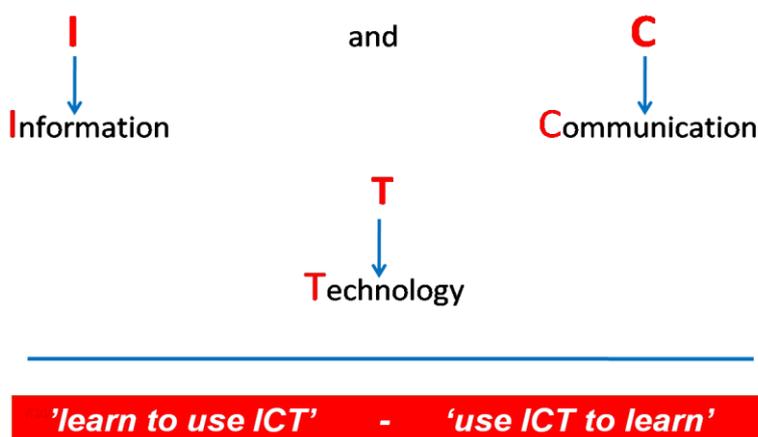
They include the 'old' ICTs of radio, television and telephone, and the 'new'

ICT of computers, satellite and wireless technology and the Internet. These different tools are now able to work together, and combine to form our 'networked world' – a massive infrastructure of interconnected telephone services, standardized computing hardware, the internet, radio and television, which reaches into every corner of the globe'. ForUSHA VYASULU REDDI

talking of ICT, means that we refer not only to the latest computer and Internet based technologies, but also to simple audio visual aids such as the transparency and slides, tape and cassette recorders and radio; video cassettes and television; and film. These older and more familiar technologies are referred to under the collective heading of "analogue media" while the newer computer and Internet based technologies are called the "digital media". However, in today's world, with the increased convergence or blending of the engineering designs and with the coming together of the satellite and the computer, the dividing lines between these different media are becoming blurred and consequently, the way people define and refer to ICT is also getting blurred.

Gerry (2005) sums up the history of ICTs in education

by explaining that the period from 1981 to the current age has seen the educational use of computers developing from standalone data processors in computer labs, through to accessing the Web, to being able to provide integrated Web services for teaching and learning, resource collections, student records, administration, professional development and community relations now.



## 2. What ICT Brings to the Classroom?

Many are predicting that ICT will bring about several benefits to the learner and the teacher. These include sharing of resources and learning environments as well as the promotion of collaborative learning and a general move towards greater learner autonomy. These are benefits with some examples.

- Shared learning resources. Students and teachers enjoy the facility to share information wherever they are in the school. Television monitors provide details of timetables, projects and assessment, mealtime menus and a host of other useful up-to-the-minute information. There are also regular play-outs of short films and videos created by children, and some schools can use several channels for broadcast purposes.

- Shared learning spaces. When pupils use networked software to communicate with other pen pals' in other countries using e-mail. They develop transferable skills such as literary construction, keyboard techniques and written communication skills, whilst simultaneously They acquire knowledge of other cultures, languages and traditions. Furthermore, children are able to make links between internal thinking and external social interaction via the keyboard, to improve their social and intellectual developments in the best constructivist tradition (Vygotsky, 1962). Children are quickly mastering the ability to communicate effectively using these new technologies because the experience has been made enjoyable in an unthreatening environment, and there are immediate perceived and actual benefits.

-The promotion of collaborative learning. Reil (2000) argues that much of what we now see as individual learning will change to become collaborative in nature. Reasoning and intellectual development is embedded in the familiar social situations of everyday life (Donaldson, 1978) so the social context of learning has a great deal of importance. Collaborative learning is therefore taking an increasing profile in the curricula of many schools, with ICT playing a central role.

-The move towards autonomous learning. At the same time, computers - and the power they bring to the student to access, manipulate, modify, store and retrieve information - will promote greater autonomy in learning. Inevitably, the use of ICT in the classroom will change the role of the learner, enabling children to exert more choice over how they approach study, requiring less direction from teachers. Students will be able to direct their own studies to a greater extent, with the teacher acting as a guide or moderator rather than as a director (Forsyth, 1996: 31). This facilitation will take on many facets and will also radically change the nature of the role of the teacher as we currently understand are able to use a software based music laboratory in their lunch hours to write, record and produce their own music CDs. Microphones and keyboards have been purchased to encourage the creativity the children are discovering within these self-driven extracurricular activities. Minimal teacher management is required.

### 3. Algeria and the use of ICT in education

Educational systems around the world are under increasing pressure to use the new information and communication technologies (ICTs) which include radio and television, as well as newer digital technologies to teach students the knowledge and skills they need in the 21<sup>st</sup> C.

Since the implementation of the competency-based approach in the secondary education some 5 years ago, we have witnessed a dramatic change in our educational system. The Ministry of Education (MOE) recognizes that ICTs have a vital role to play in improving the quality of education.

So, we may say that Algeria's policies for ICT use in education are the center of the nation's efforts for innovation in education. At the initial stage of ICT introduction in education, Algeria mainly focused on computer use; the focus at the beginning of the reform was providing the physical infrastructure of ICT use and hiring ICT teachers. So, the provision of computer hardware and basic skills to learners was the priority of the MOE.

In a drive towards modernity, this policy aims to enable ICT access, provide ICT infrastructure and tools, and help develop ICT skills on a large scale in all sectors of the community.

However, its main purpose is to use ICT as instrumentality of modernity to improve and enhance the quality of Algerian education through:

- Adopting modern, technology-assisted educational techniques and methods;
- Supporting the scientific community to get involved in research within the general Algerian population;
- Encouraging the private sector to engage in funding higher and specialist education;
- Developing open and distance learning;
- Boosting the profile of higher education.

Consequently we notice that ICT removes problems of space and time

The students can communicate anywhere, any time and can contact the teacher anywhere, any time. They can collect and exchange information anywhere, anytime More than that, the students can draw on a global pool of knowledge and can individually and/or together create records of notes and presentations (portfolio) The Teacher facing ICT To increase the likelihood of successful initial computer training we considered teachers' anxiety about the change, learning and computer. Initial sessions aimed to build 'computer comfort', not high-level skills. Teachers were asked to learn by doing, not to learn by listening. . The aim, in fact, was computer literacy We wanted to make them feel that they have to change otherwise they will be left behind. Teachers' concerns around technology and their willingness to use it depend upon a number of factors:

**1.Complexity:** a teacher may feel more anxious about a computer, which is a complex tool, versus a radio for example.

**2.Support:** teacher ability to implement an innovation depends upon the amount of available support

**3.Expectations:** the more dramatic the expected change, and the more intense the teacher concerns, the more help teachers will need. If ICT is kept simple, expectations are modest and ongoing support is provided, teachers are more likely to implement innovation at the school level and thus register their progress and use it for exams.

#### 4. Strengths and Weaknesses of ICTs

Like all innovations that we have come to accept, ICTs also have strengths and weaknesses. We should list these because it is important to know what

they are especially if we are to plan and use them effectively. Some of the strengths of the ICTs include Individualization of learning:

This means that people learn as individuals and not as a homogenous group.

ICTs allow each individual to relate to the medium and its content.

- **Interactivity:** Interactivity is the way in which a person can relate to the content, go forward and backward in the content, start at any point depending upon prior knowledge instead of always in a sequential way.
- **Opening windows for new thinking, an atmosphere of innovation**
- **Distance and climate insensitive:** It does not matter where you are, or how the weather is, you can still access and learn from ICTs.
- **Global access to knowledge**
- **Can serve multiple teaching functions and diverse audiences:** ICTs, especially the computer and Internet based can be useful in drill and practice; to help diagnose and solve problems, for accessing information and knowledge about various related themes.
- **Learning becomes interactive and joyful through multimedia tools**

But ICTs also have weaknesses which we must understand. Some of these include:

- **High infrastructure and start up costs:** It costs money to build ICT systems and to maintain them.
- **Tend toward centralized uniform content in economies of scale:** The larger the numbers, the lower the cost. This means that sometimes we try to reach large numbers so we make content common, not taking into account individual differences.

factors having to do with skills, support, time and attitudes .

- It is significant that teachers see themselves as generally lacking the required skills.

#### 5. Different Types of ICT/ Media Technologies

We can study ICTs in terms of the technologies, i.e. the delivery systems or in terms of their content. Let us look at the different types of

ICTs/Media Technologies first .

Delivery systems:

Based upon their characteristics, media technologies can be grouped into two categories, namely, synchronous and asynchronous.

- **Synchronous media** require all participants to be together at the same time even though in different locations.
- **Asynchronous ICTs** allow for participants in the learning process to be at “different times” and “different educational content - general awareness

and instructional content. Table 13.2

describes the different features of  
educational and instructional content.

3Teachers' problems in implementing ICT into educational practices.

Implementation of ICT into the classroom has often been investigated by focusing on a teacher's individual characteristics, such as a teacher's pedagogical conceptions or experienced problems. The second major focus has been on school level: how the school should support teachers' implementation processes. Third, some of the studies

have focused on external aspects, such as teachers' in-service training or necessary technical or pedagogical support, as well as the lack of appropriate educational material. These are factors that, e.g. municipal school administration or even commercial publishing houses work with. Only very few studies have focused on the societal level: how the educational system is organised, and how this supports the implementation or the transformation of teaching practices. In the following section some of the main results reported in the earlier studies are described.

Teachers differ in their age and gender, both of which are essential factors behind ICT use. We compared teachers of different age groups and genders

## Conclusion

Computer hardware becomes available in an increasing number of schools around the country, more attention needs to be given to the capacity building of the key transformers in the process, namely, teachers.

That's why; I do believe that the most important agent for the implementation of ICT in education is the teacher. Therefore, I would welcome an ICT training program both for teachers and supervisors. This training program should focus on the 'I' and 'C' of ICT rather than concentrating on the traditional 'T' for technology. The teachers will not only *'learn to* Teachers were asked to learn by doing, not to learn by listening. We wanted to make them feel that they have to change otherwise they will be left behind. Teachers' concerns around technology and their willingness to use it depend upon a number of factors: . The teachers will not only *'learn to use ICT'*, but –more importantly- *'use ICT to learn'*.. We do believe that the quality of teachers is known to be a key predictor of student learning. Therefore teacher training is crucial. ICT can become a tool that on the one hand facilitates teacher training and on the other hand helps them to take full advantage of the potential of technology to enhance student learning.

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