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The Integration of the Information and Communication Technology at Primary School in Tunisia: A Hope or a Project

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Abstract

Digital education is one of the most important tools that should be employed in the normal situation in all societies because of its role in facilitating the learning environment and the education process. Currently, with the spread of the Corona virus epidemic, all educational institutions, including schools, universities and scientific institutes, have been closed in an

emergency and sudden manner which has made it necessary for educational institutions to search for new and innovative ways and methods for the continuity of the educational process. The best way to achieve this is to resort distance education which many universities and scientific institutes were able to use and became required by this emergency situation. But were these institutions are have been prepared for this sudden use of digital education tools? Did they perform their role? Are the teachers and students ready for this major and qualitative change in education?

This article offers an analysis of the use of information and communication technology in primary school in Tunisia between theory and practice. The research showed that the teachers in our sample are not attracted by digital culture in their teaching practices because they have not acquired techno-pédagogical skills that allow them to script and evaluate learning via digital technology and they don't receive a real support from pédagogical team.

Keywords: Information and communication technology, Educational reform, Distance learning

1. Introduction

The Tunisian primary school is now experiencing a particular situation dictated by a global health crisis and the weight of Covid 19. An unprecedented situation which requires it to switch to distance education which designates any learning where the two components of the learning teaching situation are geographically distant. In fact, the Corona epidemic led to the closure of educational institutions and the interruption of more than a billion and a half of learners from education UNESCO (2020).

Several authors such as Warschauer and Matushniac (2010) have demontrate that technology is one of the most important tools that should be used in the normal situation in all societies because of its role in facilitating the learning environment and the education process. But in exceptional situations of wars, forced asylum and epidemics, the need is more comprehensive.

However, the closure of primary schools and institutes in Tunisia created confusion among educators in light of the continuing dangers of the emergence of a new wave of the disease. The decision raised questions about the integration of communication technology in learning stipulated since the educational reform of 1991 and its cost-effectiveness (Means et al., 2010; Mechlova et al., 2013). It also puts the test teachers' perceptions of its added value Allan et al. (2008) and how to use it to build a digital culture Aslam et al. (2020) that guarantees continuity of the educational process during crises.

This scientific paper aims to:

*Give an overview on the reforms of the Tunisian education system in particular the integration of information and communication technology in primary school.

* Study the impact of these innovations in classroom teaching practices based on research.

2. Theoretical Framework for Research.

The Tunisian educational system has witnessed several developments since the 1958 reform, which laid the foundation of a free public school after independence in 1956. The 1991 educational reform supported these gains and approved avoiding education and forcing it until the age of 16 and the 2002 reform placed the learner at the heart of the educational process which required a transition from the performing teacher to the expert teacher.

In line with technological developments, the Ministry of Education has sought since the beginning of the 20th century to equip educational institutions with computers and connect them to the Internet. In addition it creates web sites and issues digital documents to keep pace with the digital revolution. The reforms also included changing curricula assessment methods and teacher training in line with Chapters 9 and 10 of the education directive law of 2002. This low stipulates that teachers and learners must possess technological skills to help them adapt to the requirements of the 21st century.

Thus, the legislator has sought to adopt active teaching methods that contribute to the development of the learner's personality in all its cognitive, emotional and social dimensions to accommodate the necessities of globalization which necessitated the transition from an

educational paradigm and a traditional pedagogy emphasizing the teacher to a new paradigm of learning centered on the learner and his role in the construction of knowledge.

The above-mentioned reforms aim to create a learner with a balanced personality, with a degree of independence able to employ technologies to build his knowledge and skills in continuous interaction with his peers, teachers and surroundings. According to the logic of the reform projects of 1991 and 2002, the teachers will have to be reflexive practitioners Schön (1983), didacticians and at the same time animators Saint Pierre and Raymond (2004) to find new modalities of relation with the social context in which they work.

From this point of view, teaching information technology is not a goal in itself but rather must be employed to achieve the quality of education and promoting learning Hsu (2011). This goal was confirmed by Pelgrum and Law (2004) in their study. These Two authors have demonstrated that employing information technology requires technical and other methodological skills. They are acquired through practice and interaction with peers and teachers as means of seeking information and synthesizing it to produce knowledge.

Thus, the learner turns from a passive consumer to a conscious consumer who is able to dispense information and synthesize it to produce new knowledge. As for the research of Tardif (1998), it identified 10 competencies that the teacher must possess to integrate information technology into learning especially, his ability to script the content of lessons and to accompany the learners until they gain a degree of independence. These are the skills that the Tunisian school has estimated to develop in teachers for more than two decades.

Therefore Corona crisis has represented an opportunity to compare the extent to which the pedagogical innovations stipulated in educational reforms have been embodied on the ground.

3. Research Methodology

The sample of the research included 80 Tunisian teachers (50 females and 30 males). They were randomly selected from among 120 teachers working in 14 urban primary schools in an inspection department by looking at a delegate from the Ministry of Education in the Republic of Tunisia and who were inspected during the school year 2018/2019. We analyze their inspection reports noting what it is appreciated and criticized by the inspector. A multiple choice questionary was distributed to the research sample consisting of 3 axes related to the personal and professional uses of communication technology. The questionary also included an axis related to their pedagogical practices during the quarantine period from March 12, 2020 to June 30, 2020, the end date of the academic year 2019/2020 and from 4 to 31 January of the academic year 2020/2021.

4. Results

Table 1. What was valued in the inspection reports?

The teacher	Percentage %
Prépares his lessons adequatly with the pédagogical recommandations	**77,5%**
Prépares situations that meet school standards.	**90%**
Dévelops critical thiking in learners	**45%**

This table schows that 72.5% of the teachers prépare their lessons adequatly with the pédagogical recommandations such as unit planning, the class diarly, worksheets and didactly materiel. 90% of the situations proposed to learners meet school standards but contribute only to 45% of learners to develop their critical thinking which explains that teachers find it difficult to endorse the new professional identity because they exclude almost half of the students from their interest. They focus their work on learning content rather than on their appropriation by the students.

Table 2. What was criticized in the inspection reports?

The teacher does not	**Percentage %**
Contrebute to training	**72,5%**
Use the information technology in producting eductional documents	**70%**
Join a work team	**86,25%**
Use active pédagogy	**60%**

Threw the second table it can be seen that 70% of teachers inspected do not use technology in producing educational documents .86, 25% of them do not join at work team and 60% of the teachers adopt a frontal pedagogy. Their only technic animation is question answering.

The results of the analysis of the questionary showed that all teachers have advanced technological devices such as smart phones and digital boards. But 90% of their use is limited to browsing web pages and chatting with friends. On the professional level, the use of communication technologies was limited to download some digital contents, such as videos or pictures, to display them to learners without making any modifications due to the lack of technical ability to adapt them too. Also, teachers' access to the digital space that the Ministry makes available to them to facilitate communication with learners and the framework of pedagogical supervision was limited to downloading notes at the end of each triumvirate (three times a year) although it allows them to carry out many educational activities such as communicating with parents and providing support lessons for students remotely.

It's worth noting that 90%of the research sample lost contact with their students throughout the quarantine period, that is about 4 months in the academic school year 2020/2021 and more than one month in the academic school year 2021/2022 because they are not used working in contents design teams to solve problems of practice like remote teaching during crisis Koehler and Mishra (2005).Too teachers communications with the pedagogical team (the inspector , the director...) were limited to the phone for subjective reasons such as the inability to the use of e-mail, for example, and other technological reasons related to poor Internet flow.

As for the male and female teachers who remained in contact with their students, they study the final sections (especially the sixth year) and communication was limited to students who applied to pass the entrance examination to the model preparatory schools which is an optional debate that enables each learner at the end of the first stage of basic education to obtain an

average of 15 out of 20 or more are enrolled in it. The number of candidates for it is usually weak 20 % of the students of one class due to its selective nature.

Although the teachers were able to overcome the technical difficulties, their communication with their students did not last long because some parents did not engage in the process of framing their children while their teachers communicated with them.

5. Discussion

The study showed the difference between the renewed pedagogical practices stipulated in the 1991 and 2002 reform, especially those related to the use of information technology in learning, and their counterpart observed in the Tunisian primary school for several personal, institutional and social factors. Some of which are related to the teacher's perceptions of their added value and his new roles as a learning facilitator, activator and practitioner prudent.

This transition from the position of the traditional teacher who owns knowledge to an assistant to the learner to own it through multiple media, the most important of which is digital media, does not happen through decisions only because we cannot change society through laws Grozier (1979), rather it requires work on changing values and mentalities to establish a digital culture, as confirmed by Abric (1994) and Boukhari (2006) in their studies.

Also, learning through digital media requires financial resources to equip educational institutions and prepare them to contribute to the dissemination of the new culture among learners. How can this be achieved when 97% of the Ministry of Education budget is allocated to wages? The remaining 3% do not meet the need due to the disparity between the states of the republic at all levels, which was one of the reasons for the outbreak of the 2011 revolution. Perhaps the rate of linking educational institutions to the Internet, which ranges between 30 and 100 percent, is the best evidence for that.

In addition, many internal authorities still suffer from a lack of necessary facilities, such as connecting to the electricity network, drinking water, and the distance of schools from the residences of the students. This lack makes the principle of equal opportunities into question.

It is worth noting that bringing about a technological revolution can only take place through qualified teachers with a solid theoretical and practical training to meet the challenges of the times. However, closing teacher training schools for a period of nearly 10 years opened the way to assigning teachers to postgraduate certificate holders who have long been unemployed and have reached an advanced age. This category of teachers, who entered the profession by defaults find themselves face to face with the learners without any didactic and pedagogical training which represents a contradiction between the quality slogan that the legislator bet on and the mechanisms for achieving it.

The législator has also built an ideal picture of the educator who is able to overcome the social and contextual difficulties in his professional environment to develop internal and external efficiency of the primary school without providing him the conditions to achieve this. In fact, it ignors that the educational system, as the most complex social system, interacts with the different economic, political and cultural variables that surround it.

6. Conclusion

In general, the Tunisian legislator commented on building a digital culture through the school, which contributes to help the Tunisian citizen to adapt to the challenges of the knowledge society and make strides to achieve this despite the shortcomings we mentioned. However, realizing this dream requires the provision of more financial and human resources. It also requires involvement of all those interested in educational affairs, including institutions, civil society, organizations, authorities and political parties, in this national project to achieve its goals according to a partnership strategy that makes quality education stipulated in Chapter 39 of the Constitution of the Second Republic a reality. Concrete its effects are reflected in the daily behavior of individuals, not just a slogan.

7. Recommendations

This research is only one step in the study of the integration of information and communication technology in Tunisian primary school. We have not been able to study the phenomenon in all the schools of the country. So, we propose:

1) Further studies should be conducted focusing on influence of the local culture on teachers perceptions of the technology and it value in developing education so as to widen the scope and be able to make comparisons between rural and urban primary schools for example or between private and public schools.

2) The pédagogical team should support the teachers to use technology in their daily work and help them to scénarise the lessons.

3) The government should change the training system to make it more practical by improving the teaching with technology and frequenting micro- teaching sessions in primary schools to equip teachers with technopédagogical skills.

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