

An Investigation of Moroccan EFL High School Teachers' Use of ICTs to Assess Students' Learning

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Abstract: *The use of ICTs in the teaching and learning process has become a necessity due to the potentials technology has in this digital era. Despite the merits of ICT incorporation in the classroom, there are still barriers or challenges that hinder successful ICT integration. One of these challenges is teachers' practices of assessment. Assessment plays a crucial role in student learning. However, a few researches have been conducted on the problematic use of ICT in assessing students' learning. This study aims at investigating Moroccan EFL teachers' attitudes and use of ICTs to assess students' performance. To achieve the objectives of the study, an online survey is administered to Moroccan High School Teachers of English. The findings reveal that teachers' attitudes towards the use of ICTs as assessment tools are positive. On the other hand, findings show that there is scarce, if not any, use of these technologies to assess students learning.*

Keywords: ICTs, assessment, teaching/learning, student learning, benefits and challenges

1. Introduction

Information communication technologies (ICTs) have become, within a very short time, one of the tenets of the modern educational process. In this regard, many studies have been carried out to examine the contribution of technology to the teaching and learning process. The worldwide claims of integrating ICTs in education has led program developers to bring about educational reforms and initiate national programs to introduce ICT into education in countries worldwide, especially in developing countries. For this purpose, large amounts of money have been invested to the technical and infrastructure-related conditions necessary for ICT integration. However, in most cases, the expected benefits have not been attained (Albirini, 2006; Barton & Haydn, 2006; Ertmer, 2005)

Despite the positive outcomes ICTs have regarding teaching and learning, their use in assessment has not been that successful. Gipps (2005), for instance, states that "assessment using ICTs as a basis is still a minority activity" (p. 172). In the same realm, Clarke and Dede (2010) claim that "despite almost three decades of advances in information and communications technology (ICT) and a generation of research on cognition and on new pedagogical strategies, the field of assessment has not progressed much beyond paper-and-pencil item-based tests whose fundamental model was developed a century ago." This article touches up some of the issues that would be involved in moving towards ICT-based assessment.

2. Theoretical Background

Using information and communication technologies in the educational process has been ramified into two main ramifications. The first is ICTs for education, and the second is ICTs in education. In this regard, the formal designates the enhancement of information and communications technology particularly for teaching/learning objectives. The latter revolves around the involvement of general elements

of information and communication technologies in the teaching learning process (Amin, 2013).

ICTs have often been perceived as a stimulus for change in teaching and learning styles, and in access to information (Watson, 2005). They designate technologies that provide access to information through telecommunications. Toomey (2001) provides a useful definition of ICT when stating that it:

....generally relates to those technologies that are web for assessing, gathering manipulating, presenting and communicating information. The technologies could include hardware (e.g. computer and other devices); software applications; and connectivity (e.g. access to the internet, local networking infrastructure, video conferencing). What is most significant about ICT is the increasing convergence of computer-based multimedia and communications technology and the rapid rate of change that characterizes both the technologies and their use.

(As cited in Liyod, 2005)

It can be concluded that any technological that can be used in favour of education is of great importance. These technologies can be used for different purposes such as assessing, gathering manipulating, presenting and communicating information at different levels.

The Benefits of ICT

The integration of ICTs in the educational context is due to the potentials these technologies have. This has been advocated by Suryani (2010) who claimed that "technology can bring our education sector from the dark age to the light age. This is because the implementation of ICT in schools can bring about some potential benefits" (p. 106). In the same realm, Al-Ansari (2006) has proclaimed the positive impact of ICTs on the quality of education. In the same line of argument, Davis and Tearle (1999) and Lemke and Coughlin (1998) stated that ICTs have the prospect of

innovating, accelerating, enriching, deepening and sharpening skills for prompting and involving students in in-school and in out-school practices.

ICTs enhance the adjustability of the lesson delivery so that knowledge can be accessible for learners anytime and in any place. They can positively affect the way students learn and the way how they are tutored due to the fact that the learning processes are learner-centered rather than teacher-centered. This would undoubtedly equip the learners with the necessary skills for lifelong learning (Amin, 2013). In accordance with geographical flexibility, Moore & Kearsley (1996) asserted that technology-facilitated educational programs also remove many of the temporal constraints that face learners with special needs. In this respect, students are starting to appreciate the capability to undertake education anytime, and anywhere. Overall, the ICT's benefits can be summarised in the following:

- Assist students in accessing digital information efficiently and effectively.
- Support student-centered and self-directed learning.
- Produce a creative learning environment
- Promote collaborative learning in a distance learning environment
- Offer more opportunities to develop critical (higher-order) thinking skills.
- Enhance autonomous learning.

Assessment in Education

Assessment has long been an essential component of teaching and learning. From a student's perspective, assessment is often central to the interpretation of the aims, goals and focus of a course. For teachers, assessment is a key element of the didactic process, providing a mechanism for feedback and a means to encourage the practice of skills and techniques. Traditional grading and feedback are, however, time-consuming activities that do not scale as enrolment increases; it still takes a minimum of one teacher to grade one assignment.

Assessment is always understood to have summative and formative purposes. Formative assessment and feedback contribute to learning through reflection and interpretation and are valued as a diagnostic tool to identify misconceptions (Sambell et al. 1999). Whereas, summative assessment provides a measure of personal and comparative progress within a cohort (Ryan et al. 2000: 128). The key to successful ICT use is assessment, then, is to match assessment techniques carefully to the objectives.

Potential barriers to ICT integration in assessment

Although ICTs integration in education has its merits, there are numerous factors that hinder teachers to integrate ICTs into their teaching practices especially in assessment. In this vein, many researchers have approached technology integration barriers from different perspectives, and have labelled them with different names. However, one can notice that all researchers have many points in common. Others differentiate between external and internal factors. They indicated that both factors have an influence on ICT use in education (Al-ruz and Khasawneh, 2011; Lin, Wang and Lin 2012, Sang et al., 2011; Tezci, 2011, as cited in Fu, 2013). Among the external factors, the most common are access to

computer and software, insufficient time for course planning, and adequate technical and administrative support. On the other hand, internal factors include teachers' attitude, confidences and belief in ICT use. Similarly, Earle (2002) pointed out some barriers to the integration of ICTs in the classroom. In this report, he differentiated between extrinsic factors such as success; time support resource and training and intrinsic factors such as attitudes, beliefs, practices, and resistance. Other typologies of ICTs potential barriers are personal factors (age difference, teachers' experience, teachers' ICT competence, gender differences, and teaching subject), school factors (school practice and culture, school resistance to change, teachers' practical knowledge), and technical factors (lack of resources, lack of appropriate software, lack of time, and lack of technical support)(as cited in Cartelli & Palma, 2009). Moreover, educational infrastructure, teacher training, curriculum structures and materials, classroom practices and modes of assessment are all identified as hindrances to ICTs integration in the teaching and learning process.

3. Methodology

The purpose of this research is to explore Moroccan EFL teachers' attitudes and use of ICTs to assess students' performance. To attain the objective of this study, an online questionnaire was administered to eighty Moroccan EFL High School Teachers using a convenience sampling technique. A quantitative research design was adopted due to the nature of the instrument used and the nature of the collected data. Data were analysed using the Statistical Package for Social Sciences (SPSS) version 20. The research questions that this research set out to answer are as follows:

- To what extent Moroccan EFL high school teachers are aware of the importance of online assessment.
- To what extent Moroccan EFL high school teachers use ICTs to assess students' learning.

Therefore, the preminent objective of this research is to find answers to the aforementioned questions. It is also of crucial importance to know if using ICTs to assess students' learning can affect students' performance, of course from teachers' perspectives.

4. Results

As it was previously mentioned in the methodology part, this study targeted a population of 100 high school teachers of English in the region of Fes-Meknes using availability sampling. As the table below indicates, 64% of the participants are males and 36% of them are females. Concerning age of the participants, the table below also shows that participants who are between 20-29 years old constitute 30.8% of the respondents, those who are between 30-39 represent 61.5% of them, those who are between 40-49 years old are not represented in the population and finally those who are over 50 years old represent 7.7% of the whole population. From the same table, it can be noticed that teachers who have between 1-5 years teaching experience are 38.5% of the population, 6-10 are 50% of the participants, those who have over 20 years of teaching

experience are 7.7% of them, those who have been teaching for 11-15 are 3.8% and none of the participants worked for 16-20 years.

Table 1: Respondents' age, gender and teaching experience distribution

Age	20-29	30-39	40-49		50-over
	Percentage				
	30.8%	61.5%	0%		7.7%
Gender	Male		Female		
	Percentage				
	64%		36%		
Teaching Experience	1-5	6-10	11-15	16-20	20-over
	Percentage				
	38.5%	50%	3.8%	0%	7.7%

ICTs use and attitude patterns in assessment

Successful integration of ICTs in the foreign language classroom is strongly related to ICTs availability. As indicated in Figure 1, 57.7% of the informants stated that ICTs are available in their institutions. While 42.3% of the participants claimed that there exist no ICTs tools in their workplace. As for using ICTs in the teaching and learning process, 69.2% of the respondents said that they use ICTs in their teaching practices. However, 30.8% of them claimed that they do not use ICT tools in their classes.

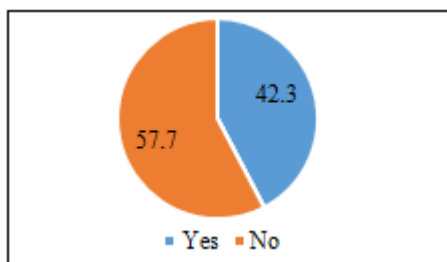


Figure 1: ICT tools availability in Schools

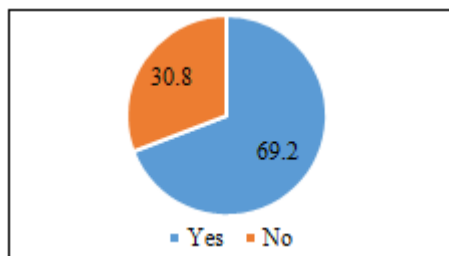


Figure 2: The use of ICT in teaching

As shown in Figure 3, most of the informants (73%) either agreed (26.9%) or strongly agreed (46.2%) on the importance of incorporating ICTs in the teaching and learning process. Yet, 11.6% of them disagreed and strongly disagreed on the necessity of ICTs in the educational operation. Nevertheless, 15.4% of the respondents revealed their neutrality concerning the necessity of such tools.

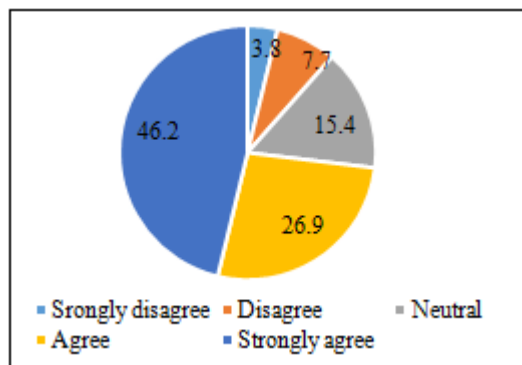


Figure 3: The importance of ICTs integration in the Teaching/ Learning Process

Despite agreeing on the necessity of ICTs in the classroom, it appears that the massive majority of teachers, as illustrated in Figure 4, do not use them to assess their students' performance. In fact, 61.5% of the participants stated that they never assess students using ICTs, and 30.8% declared that they sometimes make use of them. On the contrary, 4.1% of the participants asserted that they do not use ICTs to assess learners, and only 3.6% of them stated that they use ICT tools to evaluate students.

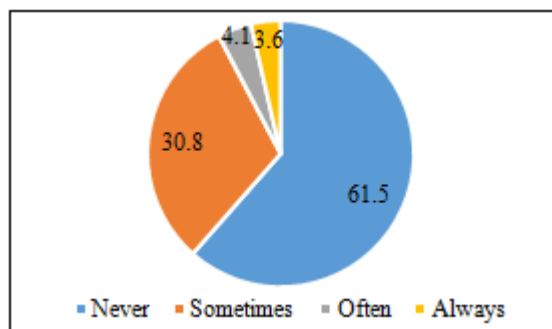


Figure 4: The use of ICTs to assess students' performance

As indicated in Figure 5, the majority of the informants (72%) pointed out that they are not familiar with assessing students' performance using ICTs, whereas only 28% of them declared that they are acquainted with ICT applications used for assessment.

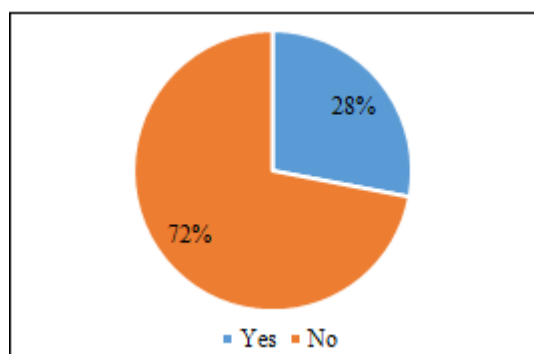


Figure 5: Familiarity with assessing students' performance using ICTs

Although the vast majority of the informants claimed not being familiar with ICTs in assessing students (Figure 6), 88.5% of the overall number of the informants stressed the effectiveness of ICT tools in assessing students' progress. Yet, 11.5% of the respondents see no effect of assessing

students using ICTs. As for the effectiveness of ICTs for assessment, the informants were requested to state how would ICTs be effective. In this regard, the informants listed different ways in which these technologies can be fruitful. First, they improve the students' performance as they can have time to reflect on it and compare themselves to their peers. Second, students will be exposed to and tested using authentic materials. Third, as technologies are a major part of their life, they will be motivated to learn and be assessed using ICTs.

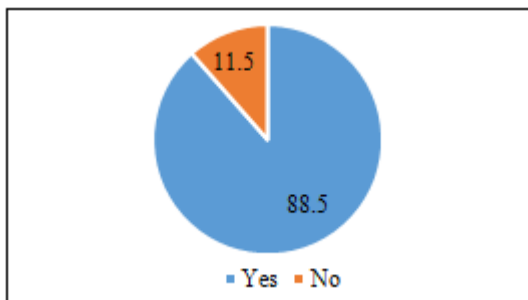


Figure 6: The effectiveness of ICTs to assess students' performance

As indicated in Figure 7, 69.3% of the respondents agreed and strongly agreed that ICTs represent an opportunity for students to reflect on what they learn. Whereas 30.7% of the informants revealed their neutrality as far as students' reflection on what they learn.

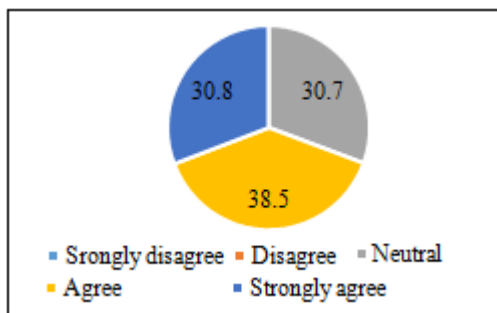


Figure 7: ICTs are an opportunity for students to reflect on what they learn

The results from Figure 8 revealed that 50% of the respondents agree that students' experience with computers and attitudes towards them can influence computer-based tests performance, 19.2% of them strongly agree on the effect that students' experience and attitudes can have on computer-based tests. Conversely, 7.7% of the participants either disagree or strongly disagree with the idea stating that students' experience with computers and attitude towards them can have any impact on computer-based tests as far as performance is concerned.

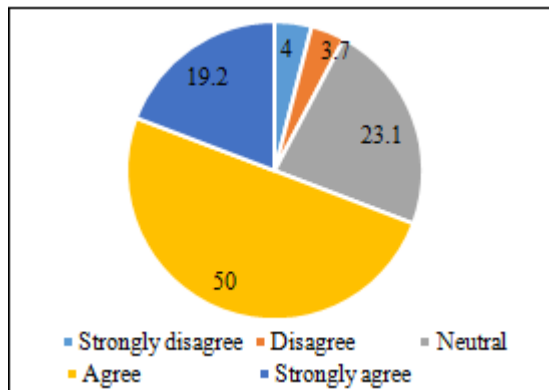


Figure 8: The impact of students' experience with computers on the computer based test performance

The results in Figure 9 show that 42.3% of the informants claimed that using ICTs to assess students' performance is important, 26.9% of them thought that evaluating students using ICT tools is very important, and 23.1% of them argued is highly important to use ICTs to assess learners' progress.

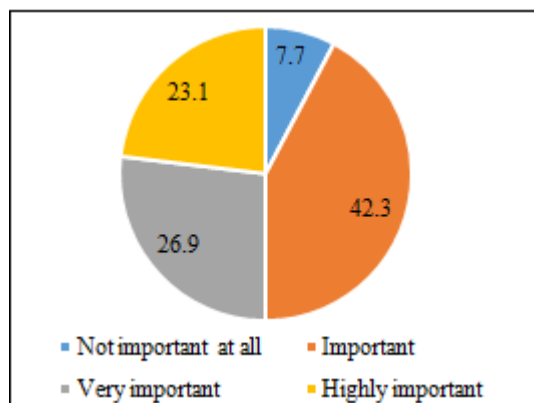


Figure 9: The importance of using ICTs in assessing students' performance

Barriers that hinder the use of ICTs in assessment

Regarding the barriers that prevent teachers from using ICTs to assess students' performance, the respondents listed numerous factors that are categorized into personal, technical and school factors as indicated in the following table.

Technical factors	<ul style="list-style-type: none"> • Lack of ICT tools and materials • No internet connection • Unequipped classrooms • Time constraints • Class size • Classroom management • Time consuming • Too demanding • Curriculum coverage
Personal factors	<ul style="list-style-type: none"> • Willingness of teachers and administrative staff. • Lack of training • Lack of expertise • Teachers' competence • Digital gap • Age differences
School factors	<ul style="list-style-type: none"> • School resistance to change • Moroccan students' culture of ICTs use.

5. Discussion and Conclusion

It is undeniably recognized that ICTs have many potentials in upgrading the learning outcome. Their integration in FL classroom will enable students to engage in classroom interaction. However, successful ICTs incorporation in the teaching/learning process highly depends on teachers' beliefs, attitudes and practices.

The findings of this study reveal that most of Moroccan EFL high school teachers are likely to employ ICT applications and resources such as computers, overhead projectors, PowerPoint presentations and smart phones in their teaching practice, but to an unsatisfactory degree.

The finding of this study further indicate that teachers perceive using ICTs to assess students' performance as preeminent. They also pinpoint the effectiveness of ICTs for evaluating students for the aim of upgrading their learning outcomes. Despite the fact that the informants hold positive attitudes towards the potentials of ICTs in the assessment process, the results imply that the participants lack the necessary ICT skills. The findings also reveal a huge gap between teachers' attitudes and their practices. With regard to this, the findings show that the participants are unfamiliar with the ICT applications that can be used as assessment tools in the teaching and learning process. It is then mandatory that teachers receive effective training to develop their skills regarding assessment applications and therefore enable them to assess students' performance effectively using such ICT tools.

Incorporating ICTs in the educational operation is never challenge-free. The findings of this study imply numerous impediments that hinder the integration of ICTs in the assessment process. These hindrances involve lack of ICT tools and materials, curriculum coverage, time constraints, classroom management, class size, teachers' competence, lack of training, school resistance to change, etc. Therefore, it is highly recommended that teachers should reconsider the way they approach and use ICTs in teaching and assessment.

References

- [1] Al-Ansari, H. (2006). Internet use by the faculty members of Kuwait University. *The Electronic Library* Vol.24, No. (6), Pp; 791-803.
- [2] Baxter, G. P., & Shavelson, R. J. (1994). Science performance assessments: Benchmarks and surrogates. *International Journal of Educational Research*, 21, 279-298.
- [3] Becker, H. J., & Ravitz, J. (1999). The influence of computer and internet use on teachers' pedagogical practices and perceptions. *Journal of Research on Computing in Education*, 31(4), 356-384.
- [4] Brinkerhof, J. (2006). Effects of a long-duration, professional development academy on technological skills, computer self-efficacy, and technology integration beliefs and practices. *Journal of Research on Technology in Education*, 39 (1), 22-44.
- [5] Clarke, J. (2009). *Studying the potential of virtual performance assessments for measuring student achievement in science*. Paper presented at the Annual

- Meeting of the American Educational Research Association (AERA), San Diego, CA.
- [6] Clarke, J., & Dede, C., (2010). Assessment, Technology, and Change. *Journal of Research on Technology in Education*, Vol. 42, No. 3, pp. 309-328
- [7] Davis, N.E., & Tearle, P. (Eds.). (1999). A core curriculum for telematics in teacher training. Available: www.ex.ac.uk/telematics.T3/corecurr/tteach98.htm
- [8] Lafarri re, T. (1999). Benefits of using information communication technologies (ICT) for teaching and learning in K-12/13 classrooms. Report for SchoolNet Program, Industry Canada. Retrieved April 22, 2005 from <http://www.schoolnet.ca/snab/e/reports/benefits>.
- [9] Lemke, C., & Coughlin, E.C. (1998). Technology in American schools. Available: www.mff.org/pnbs/ME158.pdf
- [10] Moore, M. & Kearsley, G. (1996). Distance Education: A Systems View. Belmont, CA: Wadsworth.
- [11] Noor-Ul-Amin, S. (2013). An Effective Use of ICT for Education and Learning by Drawing on Worldwide Knowledge, Research, and Experience. ICT as a Change Agent for Education. India: Department of Education, University of Kashmir, 1-13.
- [12] UNESCO (2002). *Information and communication technology in education: A curriculum for schools and programme of teacher development*. Division of Higher Education, France