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Exploring the Efficacy of ICT Training in the Use of Distance learning

استكشاف فعالية التدريب على تكنولوجيا المعلومات والاتصالات في استخدام التعليم عن بعد

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Abstract

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The aim of this article is to provide a descriptive study of teachers' attitudes towards the implementation of ICT training and its impact on mastering the skills of distance learning. To achieve this objective, teachers' questionnaire was carried out among newly recruited teachers who were exposed to this type of training. The questionnaire which was conducted at Skikda University precisely sought to reveal if ICT training was properly implemented. The analysis of the questionnaire revealed that, to some extent, the participants showed positive attitudes towards ICT training, but they confessed that it still needs more organization and improvement to achieve the expected outcomes. The study; therefore, provides some pedagogical implications to shed light on the major shortcomings of ICT training directed at newly recruited teachers.

الكلمات المفتاحية: ملخص

الهدف من هذه المقالة هو تقديم دراسة وصفية لآراء المعلمين حول تطبيق التدريب على تكنولوجيا المعلومات وتأثيره على إتقان مهارات التعلم عن بعد. لتحقيق هذا الهدف، تم إجراء استبيان المعلمين بين المعلمين المعيّنين حديثاً الذين خضعوا لهذا النوع من التدريب. الاستبيان الذي تم إجراؤه في جامعة سكيكدة يسعى بدقة للكشف عما إذا كان التدريب عن بعد يتم تطبيقه بشكل صحيح بين تحليل الاستبيان أن المشاركين أظهروا إلى حد ما مواقف إيجابية تجاه التدريب على تكنولوجيا المعلومات والاتصالات لكنهم يعتقدون أنه لا يزال بحاجة إلى مزيد من التنظيم والتحسين للحصول على النتائج المتوقعة. لذلك تقدم الدراسة بعض الآثار التعليمية لتبسيط الضوء على أوجه القصور الرئيسية في التدريب على تكنولوجيا المعلومات والاتصالات الموجهة إلى المعلمين المعيّنين حديثاً.

التعليم عن بعد، التدريب على تكنولوجيا المعلومات والاتصالات، الابتكار في التعليم، استبيان المعلمين.

1. Introduction

In developed countries, teaching and learning are no longer confined to educational settings. Distance learning is used to offer students the opportunity to learn and graduate from their homes. The increased use of distance learning in many educational settings in many countries has led other developing countries to adapt to rapid technological change and integrate good training to bridge the gap between technology and education. The Algerian educational system, among others, embraced distance learning and provided ICT training courses to train teachers to utilize distance learning in their future practices. There were constant initiatives to train newly recruited teachers to master technological skills.

2. Literature Review

2.1 The Role of Information and Communication in Education

In line with the challenges and changes of the dynamic teaching and learning environment, ICT plays an important role in ameliorating and innovating pedagogy. According to Brinton (2001, p.1), “everyday language is so tied technologically that learning a language through technology has become a fact of life with important implications”. Therefore, to abandon traditional methods and adapt new teaching methods, we require fundamental change especially in terms of digitalization. Jansen (2003) stated that the growth in number and variety of ICT has led to a major transformation of teaching methods. The effectiveness of ICT in language teaching is undeniable, which calls for a real change in our classroom practices. According to Harris (2002), “educators are more willing to explore new opportunities for changing their classroom practices by using ICT”.

Accordingly, the use of ICT leads to a change in learning approaches, teaching styles and access to information (Livingstone, 2003). Thus, if teachers are not well trained in the skills of ICTs, they cannot be effective in rethinking education and meeting the expectations of digital native students.

2.2 ICT in Algerian Education System

Though the Algerian government started few years

ago to make some reforms to the educational system, the pandemic crises nowadays urge the utilization of ICTs in academic settings. Teachers were obliged to use e-learning as a new teaching method as opposed to traditional face to-face-learning to cope with the new situation.

Henceforth, the Algerian universities inclined Moodle platforms to share lectures, tasks, videos...etc. but it seems that efficient e-education requires professional experts in distance education as not all tutors are

trained on using e-platforms and demand a great deal of investment (Jarvis, 2009).

2.3 Teachers' Attitudes toward ICT Integration

The spectrum of changes and new demands impacts teachers' roles and responsibilities as it requires them to improve their knowledge and skills to cope with new technologies. However, it seems that the implementation of technology struggles with teachers' attitudes to accept change and transformation rather than technology integration. Knezek and Christensen (2002) noted that changing teachers' attitudes is more important than ICT integration. Hence, technology integration highly depends on teachers' perceptions and capacity to use technology in classes. Kinnaman (1995, p.96) stated that “teachers and technology each have vitally important, but different roles to play in education.

2.4 Distance Learning

Distance learning is a type of learning where teachers and students are physically separated and rely on technology to communicate with each other. Komba (2009) stated that distance learning is an approach that takes learning to many learners who are separated by time and space. So, it is a type of learning where individuals study at their own pace. According to Moore (1994), distance education is composed of two elements. The first element is the provision for two-way communication (dialogue); some systems or programs offer greater amounts of two-way communication than others. The second element is the extent to which a program is responsive to the needs of the individual learner (structure); some programs are very structured while others are more responsive

to the needs and goals of the individual student.

In order to gain the perceived benefit of distance learning and adopt its sustained use, effective training should take place. Implementing distance learning should be done in a strategic way because the required distance training should be provided to make teachers experience the full benefit of distance learning. In simpler words, as distance learning is a new method for deploying a course, the appropriate training should be imparted to teachers. Widdowson (1990, 62) pointed out that “training is a process of preparation towards the achievement of a range of outcomes which are specified in advance”.

2.4 Incorporating e-learning in education

E-learning is defined by Clark and Mayer (2011, 8) as: “... instruction delivered on a digital device such as a computer or mobile device that is intended to support learning”. It has grown to be used in combination with traditional learning. Given its importance, Fayek (2004, p. 7) addressed several problems which call for the incorporation of this new type of learning.

- Over-crowded classrooms.
- High price of traditional educational books.
- Soaring prices of private tutors.
- Chance for handicapped & special needs students.
- Transportation Problems.
- Adult education & specialized training.
- Chance for talented students.
- Active participation in the International educational community.
- Enhancing the level of national education and graduates.

However, incorporating eLearning into education faces certain barriers which make its adoption a challenging matter especially in developing countries. These barriers include technological, course and contextual barriers and so forth as illustrated by Andersson and Gronlund (2009), who categorized these challenges into four categories.

■ Course challenges which are related to subject content design.

■ characteristics of the individuals (Lecturer and or student) which is related to motivation towards the use of eLearning and technological confidence of using ICT systems.

■ Technological challenges such as internet connection.

■ Contextual challenges: these is related to organizational challenges such as teachers’ training.

2.5 Research Questions

The current study centers around the following questions:

- Did teachers receive an adequate ICT training program?
- To what extent is ICT training properly implemented to benefit teachers’ needs?

2.6 Hypothesis

We hypothesize that:

Teachers may effectively use distance learning if effective ICT training is provided.

2.7 Objective of the study

The ultimate objective of this study is to explore whether the newly recruited teachers received successful training. In other words, our objective is to shed light on its effectiveness in academic settings.

2.8 The Significance of the Study

The study is significant because it highlights the effectiveness of training in facing the new demands and help to prepare qualified teachers and improve the quality of education; teachers should be supported with training to confront the fundamental constant changes and track the improvement in science and technology. More importantly, teachers should adapt to the new development of digitalisation to increase students’ interests and potential.

Henceforth, the study is significant because it investigates teachers’ perceptions and experiences with ICT training to update their methods through technology integration and keep pace with the new

challenges. More importantly, it highlights the way of improving training and explores the factors that influence the success of eLearning.

3. Methodology

The practical part of this paper aims at providing a clear description of the method used and is designed to analyse the data obtained from the questionnaire given to newly recruited teachers. Though the interview is the suitable tool for this study, the researcher opted for the questionnaire because the study took place at the beginning of the Corona virus which makes it difficult to meet teachers' face to face. The study; therefore, employed the quantitative method to achieve the objectives and compare the participants' different answers.

3.1 Participants

The study took place at the department of English at Skikda University. The participants are 07 teachers who experienced the ICT training enrolled for the academic years 2015, 2016-2018 and 2019.

3.2 Data Collection

For conducting this study, an online questionnaire was served to teachers to uncover their perceptions that hold towards ICT training and whether they were ready to incorporate distance learning into their future practices. The questionnaire contains a total of 11 items; we used various types of questions: closed and open-ended ones and it is made up of two sections:

Section One: General Information

Section Two: Teachers' perception and experience with ICT training

3.3. Analysis of the Teachers' Questionnaire

Question 1: Gender

Gender	Female	Male	Total
Number	05	02	07
Percentage %	71.42%	28.57%	100%

Table 1: Gender

Most of the respondents are females and 2 males of the total participants (N=07).

Question 2: Teachers' evaluation of their digital competence

-How do you evaluate your digital competence?

Q 2	N	%
Good	2	28.57 %
Average	4	57.14 %
Poor	1	14.28 %
Total	7	100 %

Table 02: Teachers' digital competence

- 57.14% of teachers asserted that their digital competence is average, 28.57% of the respondents hold that their digital competence is good whereas only 14.28% of teachers claim that their digital competence is poor. The results indicate that teachers are not highly skilled in the use of technology, but their answers indicate that their technological competency is acceptable.

Question 3: The impact of ICT on teachers' role in the teaching profession

What impact ICT has on your role in the teaching profession?

- ICT plays approximately the same role as the teacher in providing information to the students.

- ICT adds further interest and innovation to the educational environment because it helps teachers adopt new methods of teaching; offers teachers the possibility to supervise students online and organizes collaborative work.

- ICT is supportive of the role of the teacher.

Section Two: Teachers' experience and perceptions about ICT training

Question 4: Teachers' satisfaction with the training programme

- Were you satisfied with the training program?

Would you please justify.

Q 4	N	%
Yes	05	71.42 %
No	02	28.57 %
Total	7	100 %

Table 03: Teachers' satisfaction with the training programme

- 71.42 of the participants hold that they were satisfied with the training program as they enriched their knowledge especially concerning the use of new

software and methods for constructing online courses.

- The participants hold that they were satisfied about the training programme because it was very rich and useful and they learned new things such as how to design a conceptual card and to insert videos and documents within an online course.

- The program was satisfactory, but the training was not because the problem lies in the way the knowledge is imparted to teachers; Furthermore, the experience still needs more ideas, organization and more framework.

- One participant stated the training has not been taken seriously.

Question 5: Teachers' evaluation of ICT training

- *How do you evaluate your ICT training?*

a) *challenging* b). *interesting* c.) *boring*

Q 5	N	%
a	5	71.42 %
b	0	00 %
c	0	00 %
b+c	2	28.57 %
Total	7	100 %

Table 04: ICT training evaluation

-Almost the majority of the respondents agreed that ICT training was challenging.

- The minority of teachers claimed that this experience was interesting, and challenging at the same time.

Question 6: The challenges of the ICT training

- *If you opt for the first option, what are the challenges you faced in your training?*

- The respondents answered that this training was tiring given the number of activities to do in a very short time taking into account their duties and responsibilities especially the pedagogical ones.

- Timing chat within groups was not appropriate and helping most of the time.

- Internet connectivity and spending much time to download videos sent by tutors.

- The need for seminars before each workshop takes place.

- The language affected to some extent mastering the work in its full form

According to the participants' answers, they faced many difficulties, especially time, as they found that they did not have the ability to balance between teaching, preparation and carrying out activities directed to them, especially in their specific deadlines.

Question 7: The extent of improving teachers' distance competence through the training

- *To what extent has the training program improved your distance competence?*

- Teachers stated that the tasks with which they have been provided have made it possible for them to consolidate certain knowledge and develop new knowledge.

- The different tools presented and used during the training helped to constantly look for new ways to improve their teaching.

-Personal technical skills were improved.

- Better knowledge of distance education has been developed.

-One participant claimed that he was trying to develop distance competence by himself. Training did not really help him to do so.

Question 08: Tutors' guidance and feedback

-*Did you receive the guidance required and feedback from your tutors on your performance? justify in both cases.*

Q 08	N	%
Yes	0	00 %
No	7	100 %
Total	7	100 %

Table 05: Tutors' guidance

- Regarding guidance, teachers stated that they did not find enough response or guidance, as their dependence was entirely on their own efforts.

- They also stated that they were very ill-supervised at the beginning since they were only trying to learn the software and then, suddenly, they were asked to design a course.

The participants also claimed that when tutors

provided them with feedback; they did not provide them with enough details and most of the time, the feedback was not provided on time.

Question 9: Description of the importance of training in enhancing technological skills

- Describe the importance of this type of training in enhancing technological skills.

- ICT training should be incorporated into higher education to help teachers meet the inevitable new demands and challenges due to the widespread use of technology.

- The participants argued that there is no doubt that the training was beneficial during which they learned about several important programs that benefit them in their work.

- It was so beneficial for the career of the teacher, but we need more clarification, guidance and monitoring for designing an online course.

- The guarantee of the quality of higher education is bound to the extent of the professor's ability to keep pace with the development, which is parallel to the growth of the available and modern means and methods in order to develop his knowledge and electronic capabilities with reliance on the experience of his predecessors in this profession.

- Every project that they accomplished aimed to achieve a specific result, and this training that they followed achieved some positive results, but unfortunately the circumstances did not help due to certain conditions.

- Important experience, but it needs improvement especially for the design of the online course.

Question 10: Teachers' readiness to incorporate distance learning in their future teaching

- Are you ready to incorporate distance learning effectively in your teaching.

Q 10	N	%
Yes	2	28.57 %
No	5	71.42 %
Total	7	100 %

Table 06: Teachers' readiness to incorporate distance learning

- The respondents reported that there are obstacles that hinder teachers from adequately incorporating distance learning in their future practices among which are:

- ICT infrastructure.

- Technological equipment.

- The participants also stated that they are in need of effective training to understand the process in its full form.

- The informants believed that incorporating digitalization is unavoidable; it is important to remember that the teaching profession is not confined to the transmission of knowledge during working hours.

Question 11: Further suggestion

Please, add any further suggestion

- Achieving quality in the high packaging sector requires several conditions, the most important of which is the achievement of an important amount of funding to ensure the progress of scientific research and keep pace with developments in this field, so the Algerian government took upon itself the issue of funding, but this alone is not sufficient to achieve the goal. It has become necessary to involve the sector either through privatizing universities and institutes, or establishing private universities that are competitive with government universities, this measure will improve university services and raise the quality of higher education. In addition, the private sector can achieve rigor and transparency as is the practice in other developed countries.

- Ensuring the success and continuity of the training must be inevitable. I suggest that each university should have its own platform and that the training of teachers in that university be specific to that university's platform because the professor is in direct, immediate contact with the tutors.

- I think we should have been told about the portfolio from the start since that sums up all of our experience with e-learning.

- For my part, I find the idea of training very interesting, however the period chosen for its realization is not

conducive given the workload that a newly recruited teacher can have (Preparation of lessons, supervision, teaching obligations, projects of research.....). It would have been better to block a period of the year for the realization of the workshops and therefore for better learning.

3.4 General Discussion

The analysis of teachers' questionnaire yielded information related to their perceptions of ICT training. The results indicate that teachers have positive perceptions about the importance of training and implementing new methods in pedagogical innovation; however, they call for it to be more organized and conducted in a serious manner. The informants hold that the process should be carried out in a strategic way to fulfill the expected outcomes. Teachers confessed that the training was beneficial for their careers, but they declared that they were distracted by many educational tasks, which did not allow them to follow the training well. The overload of work that teachers were confronting in the year and other conditions such as internet connectivity, the language, and less feedback affected achieving the objectives of the training. These factors made teachers feel uncomfortable with training and consider it a source of anxiety and stress rather than interest.

Moreover, teachers stressed the fact that among the multiple tasks they were required to perform in their training, designing an online course needed improvement. As a result, teachers are reticent to change and innovate their methods as certain barriers affect the strategic incorporation of distance education negatively.

3.5 Recommendations and Pedagogical Implications

In order to innovate methods of teaching and develop distance education:

- Teachers should not only focus on traditional face-to-face interaction; they also need to move towards new methods of teaching.
- They should be provided with adequate and strategic training to exploit its full benefits.
- They need to raise teachers' awareness about the importance of technology integration.

4. Conclusion

New technologies have led to new changes in distance education to develop effective ways to meet students' needs and expectations. However, the results of the questionnaire reveal that the use of ICT training is associated with many challenges. There are several factors which stand as obstacles to the appropriate and successful implementation of distance learning, among them internet connectivity, infrastructure and so forth. As developing countries are less advanced in terms of information and communication systems, teachers will be demotivated to innovate and adopt new methods in their teaching processes. Therefore, distance learning and e-learning contribute to the development of higher education if the right conditions are provided.

Conflict of Interest

The author declare that they have no conflict of interest.

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APPENDIX

Teachers' Questionnaire

Dear teachers,

This questionnaire is a data collection tool that aims at exploring the efficacy of ICT training on the use of distance learning.

I would be very grateful if you could answer the following questions.

Would you, please, tick the appropriate box and make a statement whenever required.

Section One: Background Information

Q1: Specify your Gender:

a: Female ☐

b: Male ☐

Q2: How do you evaluate your digital competence?

Average ☐ good ☐ poor ☐

Q3: What impact ICT has on your role in the teaching profession?

.....

Section Two: Teachers' Experience and Perceptions about ICT Training

Q4: Were you satisfied with the training program?

Would you please justify

.....

Q5: How do you evaluate your ICT training?

challenging ☐ interesting ☐ boring ☐

Q6: If you opt for the first option, what are the challenges you faced in your training?

Q7: To what extent has ICT training program improved your distance competence?

.....

Q8: Did you receive the guidance and feedback required from your tutors on your performance?

.....

Q9: Describe the importance of this type of training in enhancing technological skills.

.....

Q10: Are you ready to incorporate distance learning effectively into your teaching?

Yes ☐ No ☐

.....

.....

Question 11: Further Suggestion

.....

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