Journal of English Language Teaching and Applied Linguistics
ISSN: 2707-756X
DOI: 10.32996/jeltal
Journal Homepage: www.al-kindipublisher.com/index.php/jeltal

JELTAL
AL-KINDI CENTER FOR RESEARCH AND DEVELOPMENT

| RESEARCH ARTICLE

An Examination of Moroccan EFL Teachers' Use of Digital Tools in the Classroom: The Case of Teachers and School Related Factors

Abdelouahed LAACHIR[1] ✉ Ghita BOUSMAHA[2] and Abderrahim El KARFA[3]

[1]Cultures, Representations, Education, Didactics and Engineering Laboratory (CREDIF), Dhar El Mahraz, Sidi Mohamed Ben Abdellah University, Fez, Morocco

[2]A Part time teacher at EuroMed University of Fez. A PhD holder in Cultural Studies, Morocco

[3]Sidi Mohamed Ben Abdellah University, Fez, Morocco

Corresponding Author: Abdelouahed LAACHIR, **E-mail**: Abdelouahed.laachir@usmba.ac.ma

| ABSTRACT

The aim of the present study is to examine the extent to which teachers' attitudes and beliefs, access, training, and support influence the integration of computers in the classroom. Since this study deals with the variables that affect the incorporation of computers in the classroom, a cross-sectional research design was adopted to describe the relationship between those variables. A questionnaire was administered to 61 Moroccan high school teachers of English. The results of this study illustrate that teachers' beliefs and attitudes did not seem to be an obstacle because the vast majority of teachers have positive attitudes towards computer use in the classroom; (b) access to computers and technological tools was found to be the most factor that stopped teachers from using computers in the classroom; (c) in addition, training was explored to be another factor that affects the integration of computers. A very small minority of teachers reported that they were offered training opportunities; (d) this study continued to prove that support was another obstacle to computer use. Most teachers reported the absence of technical support to fix technical problems by the school system.

| KEYWORDS

Teachers' attitudes, computer use in classrooms, teacher training.

| ARTICLE INFORMATION

ACCEPTED: 02 October 2023 **PUBLISHED:** 17 October 2023 **DOI:** 10.32996/jeltal.2023.5.4.8

1. Introduction

The use of computers in education has brought up a new field of investigation and offers a tool that may change certain traditional teaching techniques. It is generally accepted that teachers who learn how to integrate technology into their classrooms teach differently than teachers who receive such training. For this difference, analyzing factors that contribute to the use of computers in classroom instructions is the intent of this study.

Despite a large growth in the number of computers provided in schools, the issue of "What do we do with them?" still exists (Cuban, 2001, p. 167). Computers are used to assist in a variety of academic contexts (Alessi and Trollip, 2001), but just possessing technology does not guarantee that learning outcomes will be successful. The school has incorporated a sizable quantity and diversity of computers as well as other technology. However, the challenges of integrating technology into study classrooms are not new. Furthermore, according to a middle school context study, instructors find it difficult to use computers to support student-centered learning, even with substantial professional development and students having access to technology.

1.1 Statement of the Problem

Learning and teaching have changed since the emergence of technology. Because of the benefits it has brought, it plays a significant role in the process of teaching in middle schools, high schools, and higher education. Teachers who teach using technology have positive effects on students' beliefs and attitudes toward technology and learning. However, a study done on 2.5 million teachers showed that only 20% of teachers felt comfortable with the use of computers as a tool to enhance their teaching. The vast majority of them struggle with the use of computers in the educational context, so an analysis of the obstacles behind this is required.

1.2 The Purpose of the Study

This study focuses on the effects of different factors on the use of computers on the part of high school teachers of English. It is obvious that teachers who could use computers in the classroom have got positive effects on students learning. Those teachers were affected by personal and environmental factors which contributed to the incorporation of computers in the classroom. On the contrary, and, talking about those factors, they could affect teachers not to use computers in the educational system. These teachers are not ready yet to use them in the classroom. All in all, this study aims to analyze the factors that contribute to the use of computers among high school teachers.

1.3 Significance of the Study

Technology use in schools has progressed slowly and significantly less than anticipated. In an effort to comprehend the factors and barriers that affect technology integration, several case studies, research surveys, and experimental research have all been conducted. A lengthy list of the aforementioned obstacles has been discovered in several studies to explain or infer the limited usage of technology in schools. However, it is accepted to look at these elements separately or outside of the context of the school where technology integration took place (Zhao & Frank, 2003).

1.4 Research Questions

This study addresses the following research questions:
To what extent do the following factors affect the use of computers in educational instruction?

- Teachers' attitude towards the use of computers.
- The availability of computers to teachers and students.
- Training and computer use.
- Support and computer use.

2. Review of the Literature

In three main segments, this section reviews selected research from the literature. The first segment focuses on defining the use of computers. It is important to understand how computer use is seen from different perspectives. The second section deals with factors related to teachers which affect the use of computers in the classroom. To this, teachers' attitudes and beliefs, computer anxiety, the readiness to integrate technology, computer proficiency, self-efficacy, professional development, experience, age, and gender are personal factors that can influence the integration of technology in the classroom. At the end, three main school-level factors are discussed. Access, training, and support are environmental factors that can affect teachers' incorporation of computers in the classroom.

2.1. Computer Use

In the context of classroom instructions, it is not an easy task to give a definition of computer use. Taking into our calculation the literature, defining computer use can be seen from a variety of perspectives. Defining it can be based on three main elements, which are frequency of use, amount of time, and purpose. Use is sometimes described as the frequency of use, which can be expressed as the actual number of times or as a percentage. The use can also be quantified in terms of time. Researchers from Field Research Corporation (1995) evaluated use as a percentage of time spent using computers during a normal week. The research team at CECA (1988) used the number of hours per student per semester as a gauge of computer use at the college level. Field Researcher Corporation (1995), CECA (1998), and Kirby (1988) all used the quantity of time spent using computers in a particular subject area (such as math and social studies). The objective of the usage has the most impact on how the use is measured.

2.2. Teacher-Level Factors

The teacher is seen to play a crucial role in the improvement and change of instructional practices in educational institutions (Holland, 2001; Lemke & Coughlin, 1998). The aim of using technology in the classroom and the extent to which it is used are, to a great extent, based on teachers, so they are the bringers of change in the educational context. Experience, attitudes, beliefs, teachers' demographics, and computer proficiency are, based on a previous study, factors that may affect the incorporation of

technology in the classroom (Becker & Ravitz, 2001; O'Dwyer et al., 2004; Pierson, 2001)

2.3. Attitudes

Sandhotz (1996, p. 281)says, "If I had my druthers, I don't think I would ever look at computers again (John Erickson, high school teacher) …although John brought years of teaching experience to his job, he felt like a novice again". This way, whether someone is willing to test a new idea depends on their attitude. Rogers (1995)**.** In the USA, a thousand elementary school teachers were interviewed by researchers at Field Research Corporation in 1995, and they discovered that most of them had favorable sentiments regarding the use of computers. To continue with the same study, the findings were the following:

The vast majority of teachers believed that the use of computers is a powerful motivator to make today's learners more excited to do their classwork and assignments. Likewise, 76% contradicted that computers are not useful as a teaching tool. Moreover, 59% coincided with the idea that educators who incorporate computers into class are found, to a great extent, successful. Plus, 61% coincided that when learners are in classes, they are willing to utilize computers (Field Research Corporation,1995, pp. 1-2).

Ertmer et al. (1999) focused on the idea that teachers' beliefs have an influence on the integration of technology in the classroom. The rising availability of technology has not kept up with instructors' ability to use it in the classroom (Sandholtz, 2001, p. 349). Similarly, teachers who are new to the teaching profession are not competent enough to use technology in educational instruction (Willis, 2006). According to The Office of Technology Assessment (1995), only 10% of pre-service were ready to integrate technology into their classroom.

Ertmer et al. (1999) what formed the extent to which technology is used in the classroom is educators' beliefs. Hughes (2008) claims that some educators make an effort to incorporate technology to help students. However, this use of technology is only intended for simple drills and practice exercises, not for sophisticated usage. Along with this, Hylén conducted a study in Sweden in 2003 and compared the results. Teachers and the general population were the same age, although the use of computers by the former was less than that of the latter. With this in mind, it can be said that the attitudes, convictions, and competence of educators were crucial in determining what was done in their classes. Cuban (1993), page 256. The following are some instances of the various justifications given by teachers for not employing additional technology aids in the classroom: lack of time for curriculum planning, insufficient time to interact with every student in the classroom, computer use skills of students, students having access to computers, and lack of assistance with technical concerns.

2.4. Self-Efficacy

Self-efficacy can be defined, from the point of view of Bandura (1977), as how teachers think about their ability to accomplish a target task. Similar to Smith (2001), one's belief in his or her ability to integrate computers in the classroom to do a certain task is what Bandura calls self-efficacy. Besides, Bandura **(**1988**)** declares that the strong predictor that shows someone's capabilities of performing a certain task is self-efficacy, which makes a person judge his or her ability to do it.

According to many studies, computer self-efficacy was influenced by many factors. (Watson, 2006). The duration of teaching experience, technical support provided by the school, and professional development were factors that influenced computer self-efficacy, according to Watson. Based on his research, he believed that professional development was a negative predictor when teaching experience was a positive predictor. According to Piper, there was an important relationship between self-efficacy and computer use. The more teachers are confident, the more they are likely to use computers in the classroom Hsu (2004). Based on one of Hakverdi's studies in 2005, the use of computers is based on how teachers perceive their capabilities to use computers in the classroom. Along the same line, Dennard (1993) says that there are two main perspectives on the perception of teachers' use of computers. Dennard stated that "perception has been investigated from the perspective of a person's self. This perception has been identified in research as self-perception".

2.5. Access and Computer Use

For the last ten years, it has been believed that the availability of technological components was a major challenge for teachers to computer integration in the classroom (Atkins & Vasu, 2000)**.** According to Norris et al., 2003, p. 15 he said, "no access, no use, no impact". From this angle, the biggest challenge to the integration of computers in the classroom by teachers, according to Morris (2002), was the lack of availability of computers. In simple words, learners would not be affected by technology if they were not given the chance to access technology, according to Barron et al. (2003). Moreover, Russek (1991) described an obstacle that influenced the integration of PCs in classroom instruction to be the "challenges with the whole-class demonstration format" (p. 28). This obstacle is often linked to teaching in a one-computer classroom. Lots of computers are too old to use current software, but politically, it is not wise to throw out something that looks like a computer.

To sum up, defining computer use in this review of the literature has focused on three main definitions. The first definition is based

on the frequency of use. It's about the number of times a teacher uses the computer. The second definition is based on time. It is about the number of hours computers are used by students. Finally, the purpose of using technology is another measure of computers' use. It might be to give direct instructions or monitor students.

Factors that contribute to technology usage in the context of education can be classified into two categories. The first category can be described as intrinsic and personal factors. This category involves teachers' attitudes and beliefs, computer anxiety, the readiness to integrate technology, computer proficiency, self-efficacy, professional development, experience, age, and gender. In addition, the second category contains other extrinsic and environmental factors. It involves access, training, and support, which can influence the incorporation of technology in the classroom. Overcoming teachers level factors requires challenging teachers' own beliefs and the traditional ways of teaching. However, overcoming school-level factors needs providing more resources and training (Brickerner, 1995).

3. Method

Perceiving this study as a practical educational problem to solve, the purpose of this applied research was to examine factors that affect the use of computers in the classroom among English high school teachers. Acknowledging my role as a research tool, I am highlighting my viewpoints about the research design of this study. Sampling and instruments are explained. Moreover, the reliability and validity of the instrument are stated. Finally, and most importantly, the procedures for collecting data are mentioned.

3.1. Research Design

The current study examined the degree to which teachers' attitudes and beliefs, access, training, and support contribute to the use of computers in the classroom. A quantitative approach was used. The purpose of this was to measure the extent to which the aforementioned variables affect the use of computers in classrooms by providing a variety of statistical models. In addition, it aimed to involve a greater number of participants to enhance the generalizations of the result.

A correlational design was used. The purpose was to examine the relationship between teachers' attitudes and beliefs, access, training, and support as variables, and the use of computers in the classroom. A questionnaire was used to collect data. Closed-ended questions and one open-ended question on the four factors were included to be answered by high school teachers of English. The aim was to know if computer integration is affected by the mentioned factors and how it is affected.

3.2. Participants

The goal of this study was to examine the extent to which teachers' attitudes and beliefs, access, training, and support affect the use of computers in the classroom. Because of this, it was crucial to choose high school teachers as participants in this study. Teachers are seasoned to answer the questionnaire of this study. In addition, educators have an important effect on students' learning paths. If the obstacles and challenges they face are known, it will be clear to be responsible to provide and offer solutions based on their needs and lacks. Moreover, high school teachers who answered the questionnaire were to be representatives. They represented educators as a large population within Morocco. Analyzing 61 teachers of English could help to know what other high school teachers go through.

3.3. Instrumentation

After modifying a questionnaire developed by Strader E. Blankenship, the final version consisted of five parts, which were used to collect data from high school teachers of English. The first part was mainly about teachers' demographic characteristics. Teachers were asked about their gender, age, and educational level. The second part was about attitudes and beliefs. Three closed-ended questions were asked to know about their attitudes and beliefs about the use of computers in the classroom. The third part dealt with the availability and access to computers for teachers and students. It included five closed-ended questions to measure the accessibility to computers. The training was put in the fourth segment. It contained four closed- ended questions about the training and preparation teachers get to learn how to use and integrate technology in the classroom. The fifth part was about support. It included four closed-ended questions. Finally, the last section included an opened-ended question. This question opened the floor for high school teachers of English to share things they consider to be barriers to integrating technology.

3.4. Data Collection

In this quantitative study, the researcher first had to choose a ready-made questionnaire. A decision was made to choose a questionnaire that was developed by Strader E. Blankenship, among many other questionnaires. It included 42 questions, but the researcher had to modify them to suit the research question of this study. By the end, they had only 19 questions. Put simply, the researcher had to keep the questions that were relevant and closely related to teachers' attitudes and beliefs, access, training, and support. Having the questionnaire ready, the next step was to share it with Moroccan high school teachers of English. Asking some of my university professors to help share it was an option. The researcher asked kindly four university professors to share it with high school teachers of English whom they know to answer it. Additionally, the researcher posted the questionnaire in some

Facebook groups in which there were Moroccan high school teachers in English. Two of those groups were ONLY lesson plans, materials, and the MATE Facebook Group. However, the researcher had to contact and ask them privately.

The snowball sampling technique was used. The researcher asked high school teachers of English to answer the questionnaire. Those who did were asked to share it with other high school teachers of English they know. However, only some of them did share it.

4. Results

The purpose of this section is to present and describe the findings of the study. The data collected for this study is presented in the form of graphs, charts, and tables. They are to present what has been collected in visual forms to help the readers have clear visions of the results. The first section presents three demographic characteristics about high school teachers of English. Those are gender, age, and educational level. The second section presents the data collected on teachers' beliefs and attitudes toward the use of computers in the classroom. The next section is focused on the data collected about access in the form of a table. In addition, the following segment is about the data collected on training as a factor that can contribute to the incorporation of computers in the classroom. Finally, the data collected about the support provided to ease the integration of technology in the classroom will be displayed.

4.1 Demographic characteristics of participants.

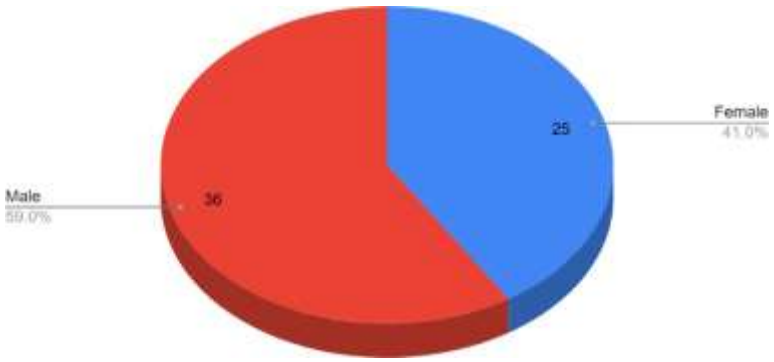

Figure 1: Frequency distribution of Gender.

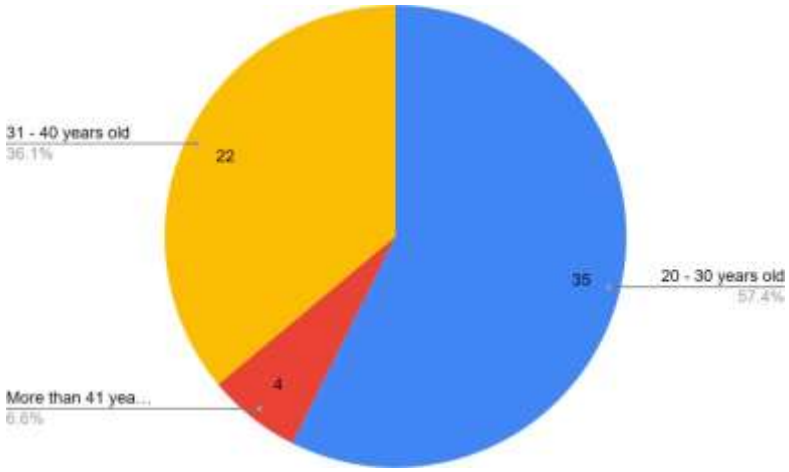

Figure 2: Teachers' Age

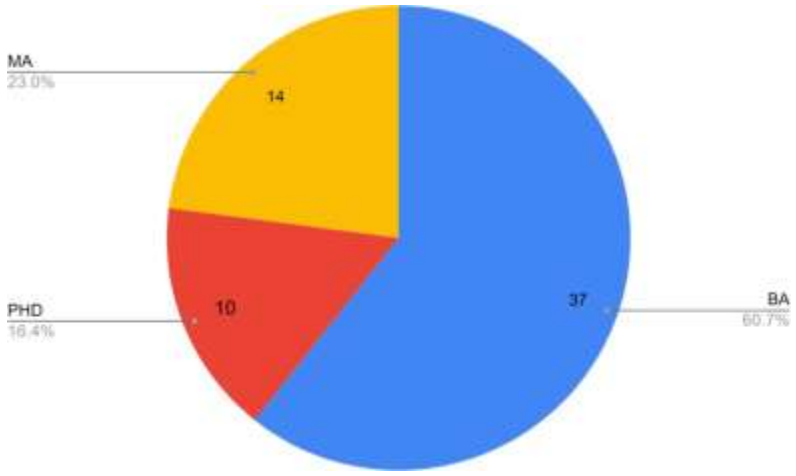

Figure 3:Participants' Educational Level.

The participants of this study have three main characteristics. The first one was their gender. Across all teachers, the number of male participants, which represented 59%, was a bit greater than the number of female participants, which represented (41%). The next characteristic was their age. Teachers who were between 20 and 30 years old represented 57,4% of all the participants. In addition, 36% represented teachers who were between the ages of 31 and 40 years old, and only 6,6% were teachers who were more than 41 years old. Finally, the last one was their educational level. 60,7% of teachers who answered the questionnaire had a bachelor's degree. In addition, 23% of them had a master's degree, while 16% of them had a PhD degree.

4.2 Teachers' Attitudes and Beliefs

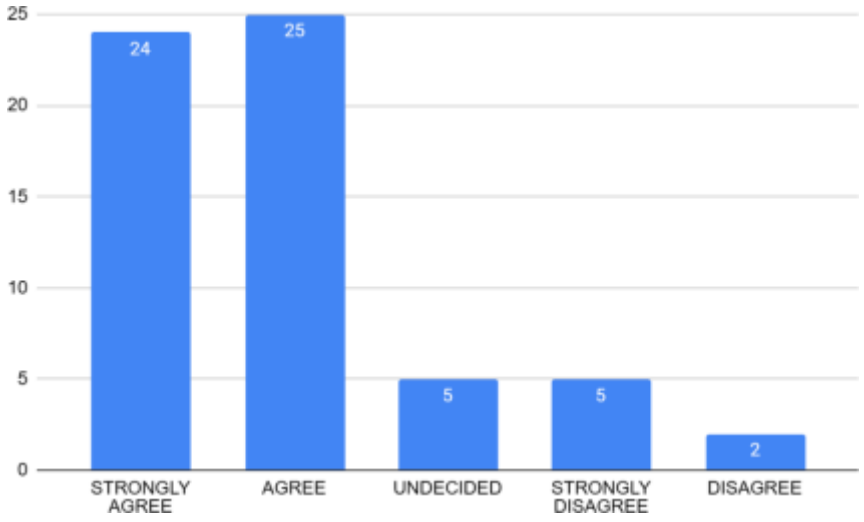

Figure 4: Students' Degree of Enjoying Computers Use in Class.

This bar chart illustrates teachers' perception of whether students like to use computers or not in class. It can be seen that the vast majority of them agree that students like to use computers in class. 24 of the participants, which represent 39.3%, strongly agree that students like to use computers in the classroom. Likewise, 25 of the samples, which represents 41%, agree on the same idea. However, while the number of teachers who agree decreased, the number of teachers who do not agree increased. 5 teachers, which represent 8,2%, strongly disagree, and 2(3,3%) teachers disagree. Overall, we can see a clear increase in the number of teachers who believe that students like to use computers in the classroom.

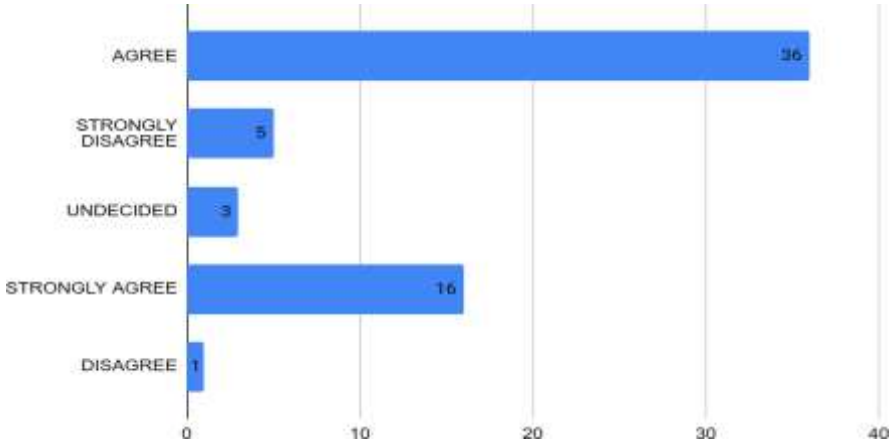

Figure 5: The Use of Computers in Class Helps Students Learn Better.

This figure shows teachers' perceptions on whether teachers who use computers in classroom instruction have a positive influence on learners or not. According to this chart, a significant majority of teachers agree that the use of computers in educational instruction does have a positive impact on students' learning. Teachers who agreed were 36 (59%). Like, teachers who strongly agreed were 16 (26,2%). However, very few teachers did not agree. 5 (8,2%) teachers strongly disagreed, and only one teacher did not agree, which represented 1.6%. All in all, a large portion agreed that the use of computers positively influences the students to learn better.

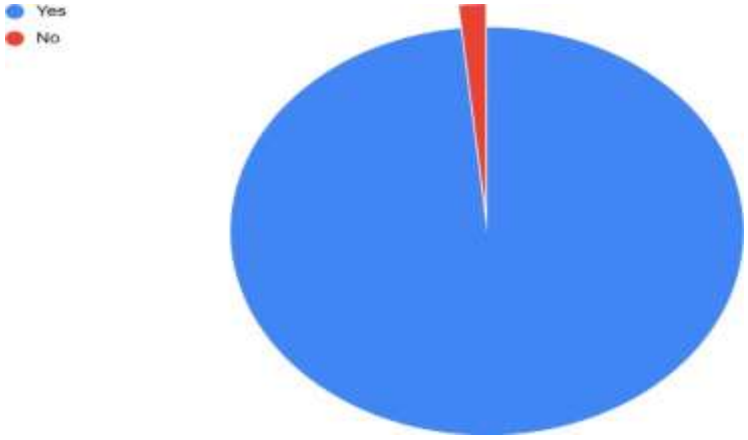

Figure 6: Teachers' Perception of Adopting Software and Its Impact on Students' Achievement.

The pie figure above shows the number and percentages of 61 Moroccan high school teachers of English and their perception of adopting software if it has a positive influence on students' learning. Looking at this pie chart, we can see clearly that there is a huge difference between teachers who agreed and the ones who did not agree. A large percentage goes with teachers who answered "Yes". 60 teachers, which represented 98,4%, stated that software will be used if it has a positive impact on their students. On the other hand, only a very small minority prefers not to use it, though they know it has a positive impact. Put simply, one teacher who answered "No" to the question represented only 1,6%.In conclusion, since the majority of the participants agree to adopt software if it has a positive impact on learners, it is obvious that those teachers have the will to use and adopt technology in the educational context.

Table 1: Teachers' Access to Software and Necessary Equipment.

Teachers have access to	Yes	%	No	%
1- Computers to Use with Classes.	3	54,1%	8	45,9%

2- Software for Whole-Class Computer Instruction	2	37,7%	8	62,3%
3- The Internet and Presentation Software for Students-Directed Learning.	2	32,8%	1	67,2%
4- Software to Assign Students Drill and Practice Activities	2	36,1%	9	63,9%
5- A Computer at Home That will Run the Software They Wish to Use.	5	90,2%		9,8%

This table shows the extent to which teachers have access to the necessary software and technological equipment to use with their classes. It allows comparisons between teachers who answered "Yes" and "No"; it shows numbers and percentages of each. Looking at this table it shows five-row headings and four cells. The first row expresses teachers' access to computers to use with classes. Out of 61 teachers, only 33 have access to computers, which represents 54,1%. On the other hand, some teachers don't have access to computers. 45,9 % of Moroccan high school teachers of English don't have computers to use with their students. Overall, it can be concluded that only half of the high school teachers of English have access to computers to use with students. The second row represents the data collected on the availability of the necessary equipment and software for the whole-class instruction. 23 out of 61 is the proportion of people stating that they have access to the equipment and software. It means that only 37,7% of English high school teachers can access the necessary equipment for whole-class instruction. Likewise, a large proportion state that they lack the necessary equipment for the whole class. In other words, 38 teachers, which represented 62,3%, answered "No" to the question. Altogether, we can see that a significant number of high school teachers of English still struggle with the lack of technological equipment for whole-class instruction.

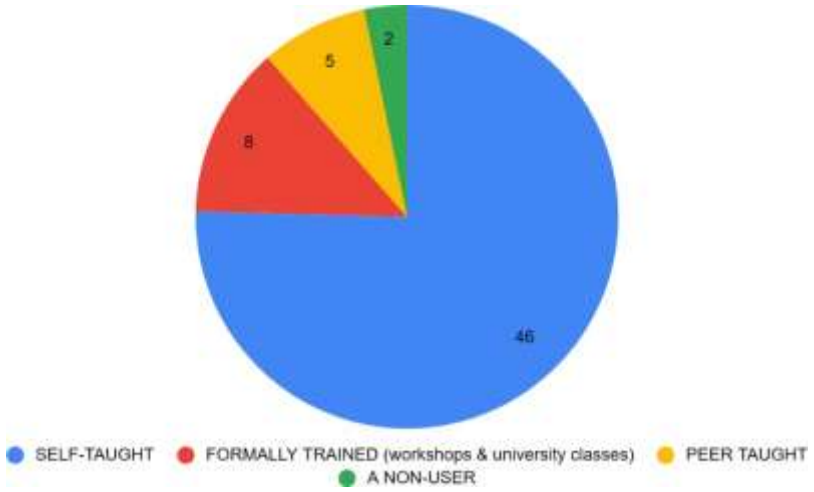

Figure 7: Teachers' Classifications on Their Computer Training.

This pie figure illustrates how teachers categorize their computer training. Around three-quarters of public high school teachers of English see that their computer training is self-taught. In other words, out of 61 high school teachers of English, 46 (75,4%) teachers consider their computer training to be by themselves. In addition, 8 teachers, which represent 13.1%, classify themselves to be formally trained in workshops and university classes, and five teachers are peer taught 8,2%. However, only two teachers consider themselves to be non-users of computers, representing 3,3% of the participants.

Table 3: Teachers' suggested barriers.

Factors	Examples
Access	- It is hard to find materials - Lack of equipment. - Old computers - Wi-Fi and data barriers - The absence of a reliable source of internet. - Computers are not available for teachers. - Computers aren't sufficient; more equipment are needed, e.g., TV or projectors. - Electricity.
Students- Related Issues	- Overcrowded classes. - Large classes. - Lack of training for students. - Students' lack of proper digital literacy. - Pupils don't like to focus on the lesson; instead, they will make noise. - If students have a computer, they do not have ultimate access to the internet. - Mastery of ICT. - Several students ignore the usage of computers.
Training	- Lack of computer knowledge. - Network illiteracy. - Lack of training for educators.
Attitudes	- Teachers' and learners' s attitudes
Time	- Time constraints.
Support by the School	- The school doesn't permit its use. - Shortage of facilities - Lack of technical support.

From this table, we can see the factors that affect the incorporation of computers in the classroom. The factor that, from high school teachers of English perspective, affects most use of computers in the classroom is access. Most of them expressed the lack of necessary equipment and materials in the educational context. In addition, teachers came up with another factor, which is about issues related to students. According to this table, we can notice that the large number of students and their lack of mastery of ICT are barriers to computer use. Likewise, we find training, attitudes, time, support, and financial issues to be obstacles to the use of computers in the classroom.

5. Discussion

In this section, the main findings of this study are discussed in relation to the research question. It was about an examination of which teachers' attitudes and beliefs, access, training, and support influence the integration of technology in the classroom. Moreover, the findings are discussed in relation to what has been found in other studies. In the same way, some implications of the findings are stated.

5.1 Attitudes and Computer Use

According to this study, the idea that teachers' beliefs and attitudes are essential factors that influence the integration of computers in the classroom does not seem to be a factor. The first question teachers were asked was the extent to which they think students

like to use computers. It was shown that only 8,2% of teachers strongly disagreed and 3,3% did disagree. By the same token, according to Field Research Corporation,1995, only 24% of teachers agreed that computers are not helpful as a teaching aid, and 61% agreed that students in their classes expressed their readiness to use computers in the classroom. These are clear indications that when teachers see their students like to use computers, their beliefs about the use of computers increase.

Teachers' attitudes and beliefs regarding the use of computers in the classroom are favorable among most of the participating teachers. Teachers' responses to whether teachers who use computers in classroom instruction have a positive impact on learners or not were very positive. We could see that 59% agreed and 26,2% strongly agreed. Moreover, being aware of the benefits computers can have on learners, teachers may be good about the need to try using computers in the classroom. Likewise, 59% agree that teachers who integrate PCs into the classroom are considered to be more successful in their profession (Field Research Corporation,1995). However, we can find excellent teachers in the domain of teaching who do not use computers.

To continue with teachers' beliefs and attitudes, the last question was about their beliefs on adopting software if it's going to have a positive impact on learners. We could see that 98,4% of teachers are ready to incorporate software if it has a positive impact on their students. Like this study, which has shown that teachers are ready to adopt software to help learners, Russek (1991) and researchers at Field Research Corporation (1995) found that teachers were friendly with the use of computers.

5.2. Access and Computer Use

According to the findings of this study, they show that the availability of computers to teachers and students is a real predictor of the use of computers in the classroom. Participants of this study were asked about the availability of computers to use with their classes. According to its findings, 45,9% of them did not have computers to use with students. In contrast, 76% of teachers in the USA had at least one computer in the classroom, Field Research Corporation (1995).In addition, 67,2% of teachers who participated did not have access to the internet and presentation software, while only 36,1% had access to software to assign students drilling and practice activities. In comparison, only 26%, based on research done by Field Research Corporation (1995), had computers at school so out-of-date that they could not run current software. Furthermore, several schools have been adopting a variety of necessary equipment and software for educators and their students so that they can have access to computers with a good-prices to pay. Being offered chances to buy computers, students who were not able to pay for computers had opportunities to check them out (e.g., Roanoke County Public Schools, 2003).

Besides, it is obvious that the availability of computers to teachers in their homes should not be seen as an obstacle to the incorporation of technology in the classroom. 90,2% of participated high school teachers of English have computers that can run the software they want to use in the classroom. In the USA, only 73% of educators had computers at home. Altogether, according to Morris (2002), the main obstacle to the incorporation of computers in the classroom by teachers was the lack of access to computers.

5.3. Training and Computer Use

Talking about factors that affect the use of computers in the classroom, this study continues to prove another factor, which is training to be a barrier. Only 36,1% of teachers reported that they were offered training opportunities. To compare, it was found that 43% of teachers believed their school offered enough training and support to integrate PCs into educational instructions, according to Field Research Corporation (1995). In addition, 37,7% of teachers in this study classified the training they received to be presentation software such as Word and PowerPoint, and only 8,2% of teachers received training on computer operation and basics on DOS and Windows. Nevertheless, in the 1995 Tenth Planet Survey of Elementary Teachers, 63% of educators were used to various types of computer-related courseware besides how they can be used. Furthermore, only 36,1% of teachers believed that receiving training was helpful. Because of this, teachers were asked to classify their use of computers into four categories. 75,4% considered their use to be self-taught, whereas 13,1% found themselves to be formally trained in workshops and university classes. Conversely, 40% of teachers saw their use of computers to be something they learned by themselves, but 64% of the educators surveyed perceived themselves to be sophisticated or comfortable users. Overall, we can say that because of the lack of training opportunities offered to teachers, they found themselves in a position to learn how to use computers by themselves.

5.4. Support and Computer Use

The results of this study suggest that the existence of support when facing a technical problem is another predictor of technology incorporation. Only 24,6%% of teachers reported that there is an employee they can call with compute-related issues and problems. Differently, according to a study by Blankenship (1998), 89% of teachers know that there is an employee offered by the system of the school whom they named a technician. In addition, teachers were asked about the speed of getting support. 29,5% of teachers have not asked any computer-related questions. Plus, only 13,1% of teachers find the speed of getting help to be fast, whereas 23% find it slow. In comparison, according to studies at Field Research Corporation (1995), researchers found that 18% of teachers in the US believe inadequate technical support to be an obstacle to integrating computers in the classroom. By the end, teachers

were asked about the extent to which the administration is supportive of the use of computers. 27,9% do not find it to be supportive, while 26,4% find it supportive. To compare, 54% of teachers, according to Field Research Corporation (1995), find the school does not offer enough technical support to integrate computers into the classroom.

5.5. Teacher' Beliefs and Attitudes

The findings of this research have shown that teachers have very positive attitudes towards computer use. This enhances the integration of computers in the classroom. It shows the willingness and enthusiasm of teachers. This is an indicator that teachers are ready to use them, but access, training, and support are the real factors that affect them most. Moreover, they need to be provided with the necessary equipment, training, and support. In addition, this opens the door for curriculum designers to take this into their calculations while designing courses to incorporate technology. Plus, the government should prioritize investments in the development of technology such as hardware, software, and reliable internet access.

5.6. Access

Lately, several schools have worked on offering computers, which made most learners and educators able to use them at the time and the place they want to (Edwards, 2003; Lowther et al., 2003). Many researchers found that one-to-one access improved learners' and educators' technology integration in classes (Lowther et al., 2003). As already mentioned in the discussion, some schools offer various types of programs to educators and learners at a low- cost. In the same way, according to the National Center for Education Statistics (2005), students were given computers to learners by ten percent of public schools, while students were offered available computers by another three percent of schools.

5.7. Training

Before the school year starts, training may begin. Being classified into non-adopters or novice teachers, they might be asked to show up (with payment) at an essential computer-skills class with an instructor. All the while, teachers might be presented with some new software and hardware based on what they need in their classes. It is possible to schedule the training based on the curriculum area. For instance, in the first year, they may focus on languages. Then, concentrate on other subjects in the second year. After educators have decided on software that works better for them, a sequence number of sessions for teachers might be planned. In a half day each week, these sessions might be scheduled as they teach at the semester. Being trained a half day per week, educators would be allowed to adopt what they have grasped during the training and then come back to discuss the difficulties or problems they faced. A study might be conducted to measure the extent of integration of computers in the classroom before and after the training. As long as there is a crucial increase, teachers may keep receiving more training to increase and improve the incorporation of computers in the classroom. The more teachers see that the school system values the use of computers in the classroom, the more they are interested in learning more about it.

6. Conclusion

This research study was conducted to examine the extent to which teachers' beliefs and attitudes, access, training, and support contribute to the use of computers in the classroom. In contact with identifying the different variables that influence technology integration, a correlational-based study was to analyze the relationship between those four variables and computer use in the classroom. The hypothesis was tested based on the data collected from 61 Moroccan high school teachers of English. Overall, it was clearly illustrated that the incorporation of computers in the classroom is critically influenced by contextual factors more than personal factors.

The questionnaire of this study was a powerful tool for collecting data to describe the four different factors that affected computer use. Among all variables, the availability of computers was the top factor with the most direct influence on the integration of computers. Moreover, the training offered to teachers and support provided in the school proved to be influential factors that affected computer use by teachers. However, teachers' beliefs and attitudes did not seem to be obstacles. The vast majority of teachers have favorable attitudes towards computer use. Altogether, we can see that school-level factors were very influential on teachers' integration of computers in the classroom. Even though there is more to discover on the incorporation of technology (computers) by teachers, this study enlightens more on the factors that impact computer incorporation. To see the outcomes of investments in technology in Moroccan educational schools, the four mentioned factors need to be taken seriously. Computers are to be available to both teachers and students. Plus, educators should be offered training opportunities to master the use of technological tools in the classroom. In case a technical problem occurs, the school is to be ready to fix it and support the use of computers in the classroom.

7. Limitations of the Study

There were some limitations to this study. The first limitation is that the data collected in this study was from high school teachers of English only. As a result, it may not be possible to generalize the findings to the incorporation of computers in elementary schools or middle schools. Another related limitation is that we did not know where the participants are from, indicating that we

may not be sure about the possibility of generalizing the results to all Moroccan high schools. The third limitation is that this study analyzed only one teacher's level factor, which was attitudes and beliefs. There were more factors that we could have examined.

8. Recommendations for Future Research

The suggestions for future studies to conduct are the following:

1- This study could be repeated to involve a large number of high school teachers and to adopt a qualitative research approach. For example, a survey with interview questions might be used to provide more data on the current study.
2- This study might be repeated with college and elementary school teachers using the same collection data tool to see the degree of generalizing the findings to other schools.
3- This study can be repeated with university professors to measure the extent to which technology (computers) is integrated.

Funding: This research received no external funding.
Conflicts of Interest: The authors declare no conflict of interest.
Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers.

References

[1] Alessi, S. M., & Trollip, S. R. (2001). Multimedia for learning: Methods and development. Boston: Allyn & Bacon.
[2] Atkins, N. E., &Vasu, E. S. (2000). Measuring knowledge of technology usage and stages of concern about computing: A study of middle school teachers. *Journal of Technology and Teacher Education,* 8(*4*), 279-302.
[3] Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84, 191-215.
[4] Bandura, A. (1988). Organizational applications of social cognitive theory. *Australian Journal of Management, 13,* 275-302.
[5] Barron, A. E., Kemker, K., Harmes, C., & Kalaydjian, K. (2003). Large-scale research study on technology in K-12 schools: Technology integration as it relates to the national technology standards. *Journal of Research on Technology in Education,* 35 (*4*), 489-507.
[6] Becker, H. J., & Ravitz, J. L. (2001). Computer use by teachers: Are Cuban's predictions correct? Paper presented by at the Annual Meeting of the American Educational Research Association, Seattle, WA.
[7] Brickner, D. (1995). The effectiveness of first and second order barriers to change in the degree and nature of computer usage of secondary mathematics teachers: A case study. Unpublished doctoral dissertation, Purdue University, West Lafayette, IN.school districts. Sacramento, CA: California Department of English.
[8] Cuban, L. (2001). Oversold and underused: *Reforming schools through technology*, 1980 2000. Cambridge, MA: Harvard University Press.
[9] Cuban, L. (1993). *How teachers taught: Constancy and change in American classrooms* 1890-1990 (2nd ed.). New York, NY: Teachers College Press.
[10] Edwards, M. A. (2003). The lap of learning. School Administrator, 60(4), 6-8.
[11] Ertmer, A. A. (2005). Teachers' pedagogical beliefs: The final frontier in our quest for technology integration? Educational Technology Research & Development, 53(4), 25-39.
[12] Ertmer, P. A. (2005). Teacher Pedagogical beliefs: The final frontier in our quest for technology integration? Educational Technology Research and Development, 53(*4*), 25-39.
[13] Holland, P.E. (2001). Professional development in technology: Catalyst for school reform. *Journal of Technology and Teacher Education, 9*(2), 245-267.
[14] Hsu, P.S (2004). A case study of the change process of integrating technology into an elementary science methods course from 1997 to 2003. Unpublished doctoral dissertation, The Pennsylvania State University.
[15] Hughes,K.(2008).Amixedmethodscasestudy of the influence of teacher professional development for technology integration on subsequent student achievement. Norman, OK: University of Oklahoma.
[16] Lemke, C.,&Coughlin, E.C.(1998).Technology in American schools: Sevendimensionsforgauging progress, a policymaker's guide. Santa Monica, CA: Milken Exchange on Education Technology.
[17] Lowther, D. L., Bassoppo-Moyo, T., & Morrison, G. R. (1998). Moving from computer literate to technologically competent: The next educational reform. Computers in Human Behavior, 14(*1*), 93-109.
[18] Morris,M.(2002,August).Hownewteachersusetechnologyintheclassroom.Paper presented at Annual Conference of the Association of Teacher Educators, Williamsburg, VA.
[19] National Center for Education Information. (2005). Profile of teachers in the U.S. 2005. Washington, DC: National Center for Education Information.
[20] NationalCenterforEducationStatistics(2001).Teachertoolsforthe21stcentury: Areportonteachers' use of technology. Washington, National Center for Education Statistics.
[21] NationalCenterforEducationStatistics.(2000a).Teachers'useofcomputersandtheInternetinpublic schools. Washington, DC: Author.
[22] O'Dwyer, L., Russell, M.,&Bebel, D.(2004).Elementaryteachers ' use of technology: Characteristics of teachers, schools, and districts associated with technology use. Boston, MA: Technology and Assessment Study Collaborative, Boston College.
[23] Orill, C. H. (2001). Building technology-based, learner-centered classrooms: The evolution of a professional development

framework. Education Technology Research and Development, 49(1), 15-34.

[24] Pierson,M.E.(2001).Technologyintegrationpracticeasafunctionofpedagogicalexpertise.*Journal of Research on Computing in Education, 33(4*),413-430.

[25] Rogers, E. M. (1995). Diffusion of innovations (4th ed.). New York: The Free Press.

[26] Russek, G. E. & Weinberg, S. L. (1991). Mixed methods in a study of implementation of technology-based materials in the elementary classroom. (ERIC Document Reproduction Service No. ED 335 360).

[27] Sandholtz, J. H., & Ringstaff, C. (1996). Conversation: An essential element of teacher development. In C. Fisher, D. C. Dwyer, & K. Yocam (Eds.), Education & technology: Reflections on computing in classrooms. San Francisco: Jossey-Bass.

[28] Watson, G. (2006). Factors affecting teachers' level of classroom Internet use and teachers' self-efficacy regarding classroom Internet use. Unpublished doctoral dissertation, West Virginia University.

[29] Zhao, Y., & Frank, K. A. (2003). Factors affecting technology uses in schools: An ecological perspective. *American Educational Research Journal, 40*(*4*), 807-840.