

# **The Applicability of CALL in Teaching EFL Based on Sudanese Universities Teachers' Attitudes**

*Dr. Amir Mohammed Albloly<sup>1</sup>*

*University of Kassala, Sudan*

*Dr. Tag Elsir Hassan Bashoum El-Amin<sup>2</sup>,*

*University of Sudan of Science and Technology*

## **Abstract**

This research article tackles “the applicability of CALL in teaching EFL based on Sudanese EFL teachers’ attitudes”. The researchers utilized quantitative and experimental methods using two data gathering tools for the study in question: The first is the questionnaire which is administered to (50) different EFL Sudanese universities and colleges teachers, and the second one is pre and post-tests given to an experimental group consisting of (30) students of English in the second year selected from the Department of English in the Faculty of Education at the University of Kassala; they were taught reading comprehension lessons through the use of computers. The data obtained from the questionnaire and the two tests have been computationally processed with the SPSS program to check the truth of hypotheses, to reflect the Sudanese EFL teachers’ perceptions towards the integration of CALL in teaching EFL and to see to what an extent there is a significant impact on the integration of CALL on the students’ performance. Finally, Sudanese EFL teachers through this study recommend strongly the ultimate integration of CALL in teaching EFL.

**Keywords:** CALL, EFL Sudanese Teachers, EFL Teaching

## **Introduction**

The effectiveness of the use of computers in education may be regarded as an important factor in determining which countries will succeed in the future. Additionally, the development of new broadband communication services with computers have created numerous possibilities to use a variety of new technological tools for teaching and learning

systems. The integration of computers and communications offers unprecedented opportunities to the educational systems with its capacity to integrate, enhance and interact with each other in a meaningful way to achieve the teaching-learning objectives. However, as the case of developing countries, particularly in Sudan, the metaphor of the information age has generated a whole set of speculations about the need for educational system reformation. The reformation will accommodate the new tool. Education, thus, with regard to the use of computers in teaching is to increase teaching-learning gains. Also, the necessity of reformation is to prepare the coming generation for the mass use of computers and Android too. The global adoption of computer technology has been the landmark on the educational scene for the last few years.

## **Aims and Scope of the Study**

This study aims to explore the integration of CALL in teaching EFL from the perspective of Sudanese teachers of EFL. The scope of the study is limited to (50) different Sudanese EFL teachers selected on purpose as they have access to a computer and experience with using modern technology inside and beyond the classroom. Beside an experimental group of thirty (30) students of EFL from the second year in the Faculty of Education at the University of Kassala and who were taught through modern technology to measure how the potentials of CALL integration can be of importance in teaching EFL.

## **Literature review**

### **Identifying the Role of Technology in Education**

Dwyer, Ringstaff, & Sandholtz, (1991) remarked that technology has become an inseparable part of today's world and this is also true in the field of foreign language instruction. The use of technology in teaching and learning of foreign languages like English has always dominated the pedagogical debates and discussions. It has made the luminaries and pedagogues in the field to investigate the possible advantages and implications of this technology for effective and dynamic teaching and learning of foreign language like English. Such debates and studies have often ended on recommending the use of computer technology in foreign language instruction due to the several advantages this use can offer both for the EFL teachers and learners.

## **Computer-Assisted Language Learning (CALL)**

Richard, J. et al (1985), remarked that a computer can be used in the teaching or learning of a second or foreign language. CALL may take the form of:

- a* activities which parallel learning through other media but which use the facilities of the computer (e.g. using the computer to present a reading text).
- b* activities which are extensions or adaptations of print-based or classroom based activities (e.g. computer programs that teach writing skills by helping the student develop a topic and THESIS STATEMENT and by checking a composition for vocabulary, grammar, and topic development).
- c* activities which are unique to CALL.

## **Testing the Effectiveness of CAI**

Clarke (1987) states that evaluations of the effectiveness of Computer Aided Instruction (CAI) usually follow the psychometric tradition. This involves using standardized proficiency tests to measure the effects of instructional programs or methods on student learning outcomes and comparing the results. In the psychometric tradition, there will typically be two groups of students: one group will use a CAI program and the control group will be taught in the traditional classroom setting. Sometimes a pre-test is carried out whereby each group is examined on knowledge before partaking in the learning process. At the end of the instruction period, the two groups undertake a test to determine what has been learned. This type of evaluation of the CAI process is perhaps the most common because it follows traditional methods and is easiest and least labor intensive to perform. However, it has been recognized that the psychometric tradition alone cannot fully analyze CAI effectiveness as it is often too simplistic. With interaction analysis, the interaction between the learner and the CAI program is observed. Interaction analysis can be either pedagogically-motivated or psycho-linguistically motivated. Pedagogically motivated research tries to determine what works. What resources does the learner use? Is the program being used in the way that the designer intended? The psycholinguistically motivated

research aims to find out what learning strategies learners use. Clark, however, argues that any learning gain cannot be unambiguously attributed to the use of computers. He claims that it is very difficult to separate the computer from the other variables such as practice and reinforcement that affect the learning process. However, as it is generally agreed that CAI programs are at least as effective as traditional methods, it will be assumed that they are of benefit, especially where traditional methods may not be available.

### **Computer-Assisted Language Teaching (CAT)**

Coley, (1997) claimed that today teachers have access to innovative tools with which to enhance their curriculum. One of these technology tools is the computer, which has given students a new way to do research, allowed teachers to offer a wider topic range, and made available an endless amount of information. Additionally, the software connects teachers and students from all over the world so they can work collaboratively with other teachers and students anywhere in the world. Interactive whiteboards also allow students to touch the screen and participate in thought provoking activities prepared by teachers. Specifically, special education teachers have access to tools such as scanners that will read aloud and have applications that emphasize reading skills. These tools could be helpful to: a blind student listening to a book; learning-disabled students playing with reading software; and dyslexic students learning how to read with software.

Even though this statement is presently ten years old, it still rings true today. The computer plays a great and important role in EFL teaching and learning. It is used for practicing and teaching purposes. It has always been a widely contemplated subject among ELT researchers and pedagogues. However the use of computer technology in foreign language teaching, learning and assessment only started during the 1950s. It was not so widespread a practice then. It did not form a very important place in the teaching and learning process of EFL due to technology and infrastructure related issues. However, it is observed with the emergence of the first generation of personal computers in the 1980s. The use of computer technology in education, in general, and in EFL classrooms in particular, was accelerated. As this use proved fruitful, producing positive results in teaching, learning and testing processes, it paved the way to further research on possible exploitation of this technology for achieving maximum results. This resulted in people from varied fields like

computer engineers and software designers, applied linguists, academics, language teachers and assessment specialists to join their hands to use this technology for making the teaching and learning of foreign languages like English more innovative, dynamic, interactive, interesting, easier and learner-centered. Today computer technology enjoys a noticeable presence in second and foreign language teaching and learning processes. This is because of infinite benefits. This has uses for teaching and learning a foreign language like English. The use of computers, in EFL classrooms, can offer the delivery of a wide variety of multimedia content, with pedantic and authentic language models, accessed with individual control. It also presents another source of target language knowledge and examples, and relieves the EFL teacher as the sole font of target language knowledge in the classroom.

### **Computer and Teaching Methods**

Roshelle, Pea, Hoadley, Gordin, and Means (2000) indicated that computers can be used in collaboration with all subject areas, but teachers must take into account the different styles of teaching and the students' different styles of learning in order to use them effectively. Technological tools, especially personal computers, are often cited by educators and policymakers as magic-workers in literacy programs, providing great access to all students.

Blamires (1999) claimed that technological tools could help overcome skill-level barriers to learning. He went on to say computers could make us smarter, if not wiser.

Baker, Gearheat, and Herman (1990) have dedicated pages to the motivational qualities of learning with technological tools. Students are very familiar with how to work computers, which means students are more engaged when using these technology tools. Motivation and engagement are frequently identified as the major benefits of using technological tools to support literacy learning.

Andrews (2003) suggested that a common view is that in using computers, students are so engaged and motivated by a viewing text they hardly realize they are accessing, reading, decoding, and analyzing information. Why is it so engaging?

As previously mentioned, technological tools are everywhere in society and are part of our everyday lives. Hence, the use of technological tools in teaching and learning experiences directly relates to the real lives of students.

Reading information on a website advertised in a favorite skating magazine, downloading the latest hits from a radio website, and reading the latest gossip about film stars are just some examples that connect with students' real lives yet require active practice and development of literacy skills. Others have suggested using computers for literacy building and literacy practice also allows students to take more risks with their language because of less fear of embarrassing mistakes. The Read180 program that has been implemented in Department of Defense Education Activity Schools is a good example. The Read180 software creates games for students while improving their reading skills. This point is similar to that made in referring to the computer as a non-threatening center of attention. Perhaps the highest indication of motivation and engagement is that in studies comparing literacy classes that used technological tools to those that did not, researchers found that truancy levels were much lower in the technological tools focused classes.

This was especially significant when discussing students identified as "at risk" because one of the major focuses of the Systems Analysis Evaluation and Research (SAER) programs is reducing truancy rates.

Becker (2000) claims that "since computers are every day and ordinary, students would approach them as simply another tool, like a pen or pencil, and not an extrinsic motivational reward". This point can be true of all the new and innovative technology tools available today. Technology advances daily, and tools that are "new and improved" will always be a factor.

### **Using Computer in Language Instruction**

Swenson & Redmond (2009) stressed that the idea of incorporating computer technology in EFL has always been the focal point of discussion and debate for a very long period of time. This integration of computer technology into the domain of foreign language education began during the 1950s and since then, as computer technology witnessed drastic changes, this use also has undergone tremendous modifications and become the part and

parcel of the modern day education system. The result of all these has been evident on all those related to EFL instruction including teachers. The advent of computer technology in EFL instruction has to lead to significant changes in teachers' approaches, methodologies and strategies to teach a foreign language such as English. This has many practical benefits both for EFL teachers and learner.

Today, the use of computer technology in EFL teaching and learning has contribute to achieving the aims and objectives of EFL teaching and learning, and has been recommended strongly for effective and dynamic teaching and learning of foreign languages like English. Such arguments, including the advantages of the use of computer technology in EFL teachers and learners, encourage the use of computer technology in EFL teaching and learning,

### **Incorporating Computer Technology in EFL Teaching**

Barron & Goldman (1994) stated that teachers who reportedly value the integration of computer technology changed their teaching in order to better incorporate technology approaches. Software availability and teacher willingness to use the software can have positive effects on teachers' attitudes towards the adoption of computer technology in the classroom. Interactive venues and discussion boards can help teachers to learn with technology instead of solely using it to teach. Additionally, teachers who report a strong commitment to computer teaching, as well as their own professional development, have been found to integrate technology tools more readily.

Norum, Grabinger and Duffield (1999) studied the thoughts, perceptions, beliefs, experiences, knowledge, and growth of teachers studying and attempting to integrate the use of computers in their classrooms. The important theme they found running throughout this research was teachers' strong assertion that they needed to change personally and take on new roles if the technology was to be effectively integrated into their classrooms. Most of the teachers involved in this study saw themselves as the place where change efforts needed to begin. Experiences with computer technology planning highlight the well documented observation that teacher attitudes toward computer technology and computer integration seriously impact the success of professional development programs. They thus need to be seriously considered.

Albion, (1999); Ross, Hogaboam-Gray, & Hannay (1999) argued that positive attitudes toward computer integration enhance learning to use technologies in teaching and learning; negative attitudes constrain it. This does not necessarily mean that only teachers with positive attitudes should be included in computer technology training activities. It does mean that negative attitudes among participants need to be valued and addressed and that positive attitudes should be encouraged and developed. Teachers often recognize that their students do indeed need additional input and output activities to help them continue to improve their language skills, particularly pronunciation skills.

### **Implications of Computer Technology for EFL Teachers and Learners**

Blake (2008) argued that if computer technology is used wisely and creatively, it could play a very significant role in enhancing EFL learners' contact with the target language, particularly in the absence of the study abroad option. Such views signify the importance of computer technology in overcoming many prevailing problems in EFL situations and have many implications both for EFL teachers and learners. If EFL teachers and learners cooperate and use this technology wisely, it can play wonders in achieving the aims and objectives of the teaching and learning of foreign languages.

### **Teachers and Computer Literacy**

In Asan's (2003) study, primary teacher's perceptions and awareness level about specific technologies, and about the role of technology in education, and how they see the technological problems that are faced by basic education school systems were investigated. The results showed that many teachers were not computer users and lacked a functional computer literacy background upon which to build new technology and skills. The study also indicated that the use of computer and related technologies was not a routine part of their teaching and learning environment.

Cavas and Kesercioğlu (2003) investigated the teachers' attitudes toward computer-assisted learning (CAL). The results showed that the majority of science teachers had positive attitudes toward CAL and no gender difference exists between science teachers' computer-assisted learning attitudes.

Ocak and Akdemir (2008) expressed that teachers' computer literacy level is related to their computer use. Also, the computer literacy level of the teachers increases their integration of computer applications in their teaching. In the study, most of the teachers use internet, email, and educational software CDs as computer applications in the classrooms. They found statistical differences in the integration of computer applications as an instructional tool. Teachers' attitudes toward computer technologies are related to teachers' computer competence.

In their study of the correlation between teachers' attitude and acceptance of technology, Francis-Pelton and Pelton (1996) maintained that although many teachers believe computers are an important component of a student's education, teacher's lack of knowledge and experience lead to a lack of confidence to attempt to introduce them into their instruction. A large number of studies have showed that teachers' computer competence is a significant predictor of their attitudes toward computers.

### **Teachers and Computer Anxiety & Interest**

According to the report of International Society for Technology and Education (ISTE) (2001), relatively few teachers (20%) report feeling well prepared to integrate technology into classroom instruction. Although computers have been put in the classroom, many teachers are still skeptical of the value computers have provided for teaching and learning. Studies indicate that the level of feelings teachers have towards computer use range from euphoria to uncertainty, to hostility and fear.

Berson (1996) and Saye (1998) noted that "some teachers show little interest in using instructional technology, while others are obviously resistant to its use. Some positively accept the concept, but feel somewhat bound by lack of training for effective integration". Still, some teachers have ambivalent feelings toward technology. Feelings of uncertainty, hostility, and fear naturally lead to many teachers' reluctance or resistance to technological innovation. They will continue to adhere to their traditional practices with which they feel more confident and comfortable.

Teo, Lee, and Chai (2008) showed that "the effective use of technology enables teachers to facilitate and adjust their instructional strategies to optimise students' learning. In this respect, when teachers' role and their activity in the process is taken into account; it is

important to know teachers' interest in technology and their attitudes, and how this affects technology.

Erkan (2004), Rohaan, Taconis & Jochems (2010) and Kagan (1992) noted that "teachers' attitudes appear to lie at the heart of teaching and tend to be associated with a congruent style of teaching. Teachers' attitudes and emotions also build the meanings they bring to innovations such as technology integration. Hence, changes to teaching style, as might be required by working with technology, may necessitate changes to teachers' attitudes.

Anderson (2008) claimed that despite the clear demonstration of the benefits of using technology in education, there continues to be a marked reluctance by academics to engage in online learning.

### **Barriers to Teachers' Use of Computers**

Greener (2009) stated that new and improved models of teaching are often considered the best way to teach students; however, they change regularly, just as technology does. Other barriers to using technology in education include a lack of teachers' time, training, and support; limited access; high costs of equipment; lack of vision or rationale for technology use; and assessment practices that may not reflect what is learned with technology. In particular, the lack of teacher training and expertise is a major barrier to using computers and related equipment.

### **Sifting Through Computer Content**

Consideration must be given to how well the topic maps onto the computer environment. Tasks that demand a lower cognitive level (e.g. simple exercises) are well suited to CAI applications, as they are good for reinforcing basic fact-oriented learning. It is important that the CAI software fits well with the target user group. CAI is usually beneficial to lower achievers and those from lower economic strata. This is due to the fact that the features that are offered by CAI applications are those which suit these types of learners including drill and practice, privacy and immediate feedback and reinforcement. The target users of the template would typically share these characteristics.

In order to cater for different learning styles, different presentation formats and multimedia formats should be used where appropriate. Learners who live in developed countries and

are used to traditional learning methods may like to see textual information, along with visual and audio elements in CAI material. However, EL community members may have low literacy levels and thus may prefer the visual and audio elements of the textual information. Moreover, different cultures may prefer different presentation styles, with some preferring loads of information on the screen while others may prefer less information, presented in a more spacious manner. CAI can offer the learner control over the learning process. The degree of freedom or control available to the learner must be considered. Sufficient guidance must be provided for the lower-ability learner.

## **Materials and methods**

This study was mainly carried out with different Sudanese EFL teacher and students of EFL from the first year at the International University of Sudan. A purposive sample selected for this study includes (50) Sudanese teachers due to their use and experience of multimedia in teaching EFL. Additionally (30) EFL students were taught through multimedia to examine to what extent CALL can have an effective impact on the students' performance.

## **Tools of the Study**

The researcher used tests and questionnaires as the main tool to collect the data which was delivered to fifty (50) a purposive sample of Sudanese teachers in different universities. The test was administered to thirty (30) students who were taught as stated above through a computer. The researchers adopted the quantitative and the experimental methods for conducting this study.

## **Procedures**

The researchers used the questionnaire and the test as tools for data collection related to this study. The researchers designed the questionnaire to explore teachers' views and attitudes towards the use of CALL in teaching EFL. The test is used to support teachers' views and to mainly measure the influence in the students' performance that CALL can bring about. The tables and percentages below illustrate what has been stated above.

### **The Analysis of the Questionnaire and the Tests in Relation to the Hypothesis**

The first part of the questionnaire is an introductory section seeking information about the teachers. In fact, the items in this division elicit information about the targeted teachers in terms of their gender, qualifications, and years of teaching EFL experience through the computer. The teachers were requested to indicate their answers by ticking (✓) one of the five options: “Strongly Agree”, “Agree”, “Neutral”, “Disagree”, “Strongly disagree”.

**Table (1) Gender:** This table classifies the teachers questioned in terms of gender.

Gender	Frequency	Percent (%)
Male	16	32
Female	34	68
Total	50	100

**Table (2) Qualifications:** The table below classifies the targeted teachers in terms of their qualifications.

Qualification	Frequency	Percent (%)
PhD	13	26.0
MA	1	2.0
BA	31	62.0
Other	5	10.0
Total	50	100.0

**Table (3)** This table illustrates the targeted teachers according to their years of experience of using computers in teaching EFL.

Years of Experience	Frequency	Percent (%)
1-5 years	23	46.0
6-10 years	4	8.0
11-15 years	7	14.0
16-20 years	14	28.0
More than 21 years	2	4.0
Total	50	100.0

**H1: Sudanese English teachers are enthusiastic about incorporating CALL into teaching EFL.**

**Table (4) S1:** “Most Sudanese EFL teachers prefer using a computer in their teaching”.

Statement	Frequency	Percent (%)
Strongly disagree	6	12.0
Disagree	5	10.0
Neutral	5	10.0
Agree	18	36.0
Strongly agree	16	32.0
Total	50	100.0

The teachers' responses are displayed in table (4) above as it shows that 32% strongly agreed with the statement, and 18% agreed, whereas 10% were neutral. Thus, the teachers almost unanimously agreed that they prefer using multimedia in teaching reading skills. This absolute unanimity on the part of the teachers is in line with the first hypothesis of the research which reads: “*Sudanese English teachers are enthusiastic about incorporating CALL in teaching EFL*”.

**Table (5) S2:** “EFL teachers' performance is satisfactory when using CALL in teaching EFL”.

Statement	Frequency	Percent (%)
Strongly disagree	5	10.0
Disagree	4	8.0
Neutral	11	22.0
Agree	17	34.0
Strongly agree	13	26.0
Total	50	100.0

The teachers' replies are tabulated in table (5) above in which 26% of the teachers strongly agreed with the statement, 34% agreed, 22% of the teachers were neutral, 8% disagreed, and 10% strongly disagreed. The results indicate that this statement has aroused much controversy, as the teachers' responses range from 'strongly agreed' to 'strongly disagreed'. Nevertheless, there is a higher proportion of those who agreed, 56% (26% strongly agreed, 34% agreed) than those who disagreed, 18% (8% disagreed, 10% strongly agreed). This statement is also in support of the researcher's first hypothesis above.

**Table (6) S3:** “Adding CALL to learning and teaching EFL is time saving”.

Statement	Frequency	Percent (%)
Strongly disagree	6	12.0
Disagree	14	28.0
Neutral	14	28.0
Agree	7	14.0
Strongly agree	9	18.0
Total	50	100.0

The teachers' responses are grouped in table (6) above which shows that 18% of the teachers strongly agreed with the statement, 14% agreed, 28% of the teachers were neutral, 28% disagreed and 12% strongly disagreed. The fact that the teachers' responses range from 'strongly agreed' to 'strongly disagreed' implies that this statement is really divisive. However 40% disagree (12% strongly disagreed, 28% disagreed) and do not support the statement.

**Table (7) S4:** “CALL helps effectively deliver different EFL lessons”.

Statement	Frequency	Percent (%)
Strongly disagree	3	6.0
Disagree	5	10.0
Neutral	11	22.0
Agree	8	16.0
Strongly agree	23	46.0
Total	50	100.0

The teachers' opinions as revealed in table (7) above; the table illustrates that 46% of the teachers strongly agreed with the statement, 16% agreed, 22% of the teachers were neutral, 10% disagreed and 6% strongly disagreed. Thus, the results show that this statement has been supported, 62% (46% strongly agreed, 16% agreed). Those who agreed greatly outnumber those who were against the statement, 16% (10 disagreed and 6% strongly disagreed).

**Table (8) S5:** “CALL is highly required by most EFL teachers”.

Statement	Frequency	Percent (%)
Strongly disagree	2	4.0
Disagree	3	6.0
Neutral	11	22.0
Agree	21	42.0
Strongly agree	13	26.0
Total	50	100.0

The teachers' attitudes are grouped in the table (8) above as follows 26% of the teachers strongly agreed with the statement, 42% agreed, 22% of the teachers were neutral, 6% disagreed and 4% strongly disagreed. The results indicate that the agreement by the teachers is almost unanimous, 68% (26% strongly agreed, 42% agreed); 10% disagreed. These results signify the requirement of CALL in teaching reading skills.

**Table (9) S6:** “EFL teachers are enthusiastic to try the interactive CALL accessories in language classroom”.

Statement	Frequency	Percent (%)
Strongly disagree	2	4.0
Disagree	7	14.0
Neutral	17	34.0
Agree	16	32.0
Strongly agree	8	16.0
Total	50	100.0

Table (9) above indicated 16% of the teachers strongly agreed with the statement, 32% agreed, 34% of the teachers were neutral, 14% disagreed and 4% strongly disagreed. The results indicate that this statement has highly, if not sharply, split the teachers' opinions. However, the 48% who agreed (16% strongly agreed and 32% agreed) outnumbered those who disagreed (18%).

**Table (10) S7:** “Computer applications can be utilized in teaching language learning skills”.

Statement	Frequency	Percent (%)
Strongly disagree	7	14.0
Disagree	4	8.0
Neutral	10	20.0
Agree	16	32.0
Strongly agree	13	26.0
Total	50	100.0

The teachers' opinions are reflected in the table (10) above where 26% of the teachers strongly agreed with the statement, 32% agreed, 20% were neutral, 8% disagreed and 14% strongly disagreed. As such, the above statement seems to be very controversial, as the teachers expressed different attitudes towards it. However, the teachers who agreed with the statement 58% (26% strongly agreed, 32% agreed) outnumber those who disagreed, 22%.

**Table (11) S8:** “Most EFL teachers are capable of handling CALL lessons”

Statement	Frequency	Percent (%)
Strongly disagree	3	6.0
Disagree	9	18.0
Neutral	9	18.0
Agree	17	34.0
Strongly agree	12	24.0
Total	50	100.0

The teachers' views are gathered in the table (11) above in which 24% of the teachers strongly agreed with the statement, 34% agreed, 18% of the teachers were neutral, 18% disagreed and 6% strongly disagreed. Despite the fact that the teachers expressed different opinions about this statement, most of them, 58% (24% strongly agreed, 34% agreed) support the statement.

**Table (12) S9:** “EFL teachers are motivated to apply CALL accessories in teaching EFL”.

Statement	Frequency	Percent (%)
Strongly disagree	4	8.0
Disagree	6	12.0
Neutral	12	24.0
Agree	15	30.0
Strongly agree	13	26.0
Total	50	100.0

The teachers' opinions are shown in the table (12) above which demonstrates that 26% of the teachers strongly agreed with the statement, 30% agreed, 24% of the teachers were neutral, 12% disagreed and 8% strongly disagree. It is clear that despite the controversy created by this statement, most of the teachers, 56% (26% strongly agreed, 30% agreed) hold the same view expressed by the statement.

**Table (13) S9:** “Most EFL teachers can efficiently use CALL in teaching EFL”.

Statement	Frequency	Percent (%)
Strongly disagree	2	4.0
Disagree	7	14.0
Neutral	9	18.0
Agree	16	32.0
Strongly agree	16	32.0
Total	50	100.0

The teachers' answers are shown in the table (13) above and it reflects that 32% of the teachers strongly agreed with the statement, 32% agreed, 18% of the teacher were neutral, 14% disagreed and 4% strongly disagreed. Thus, the teachers' agreement with this statement is almost unanimous, 64% (32% strongly agreed, 32% agreed) agreed with the statement.

**Table (14) S10:** “Using CALL keeps EFL teaching up to date”.

Statement	Frequency	Percent (%)
Strongly disagree	7	14.0
Disagree	6	12.0
Neutral	10	20.0
Agree	13	26.0
Strongly agree	14	28.0
Total	50	100.0

The teachers' opinions are shown in the table (14): 28% of the teachers strongly agreed with the statement, 26% agreed, 20% were neutral, 12% disagreed and 14% strongly disagreed. As such, the above statement seems to be very controversial, as the teachers expressed different attitudes towards it. However, the teachers who agreed with the statement 54% (28% strongly agreed, 26% agreed) outnumber those who disagreed, 16%.

**Table (15): One Sample T-test for the First Hypothesis**

**H1: Sudanese EFL teachers are enthusiastic about incorporating CALL into teaching EFL.**

Expected mean	Observed mean	St.d	t-value	d.f	p-value
11	14.86	2.03	14.93	48	0.00

As Table (15) above shows, it is clear that the p-value (0.00) is less than the significance level; the observed mean (14.86) is greater than the expected mean (11). Consequently, these results verified the researcher's first hypothesis which reads: “*Sudanese EFL teachers are enthusiastic about incorporating CALL into teaching EFL.*”

**Table (16): One Sample T-test for the Second Hypothesis****H2: Using CALL in teaching English can be more helpful for Sudanese EFL teachers.**

Expected mean	Observed mean	St.d	t-value	d.f	p-value
11	13.48	2.31	6.40	48	0.00

As Table (16) above shows, it is clear that the p-value (0.00) is less than the significance level; the observed mean (13.48) is bigger than the expected mean (11). Thus, these results confirmed the researcher's second hypothesis which is "*Using CALL in teaching reading skills is more helpful for Sudanese EFL teachers*".

**Table (17): Independent Sample T-test between Pre & Post-test**

Test	Means	STD	T-test Value	Df	Sig
Pre test	4.33	2.26	4.81	58	0.00
Post test	7.03	2.07			

The result in above table shows that there is a significant difference between the means of the students' performance in the pre-test and post-test. It is noticed that the expected means in the post-test is greater than the expected means in the pre-test which reflects a significant difference between the students' performance in both tests where the significant value 0.00 is less than 0.05.

In conclusion, it is noticed that all the above discussed statements and hypotheses are in support of the track of the study which calls for the integration of CALL in the field of learning and teaching English as a foreign language in Sudan.

## Report Discussion

The collected data via the questionnaire and the test was analyzed in the light of the study's and the researchers' hypotheses which proved that CALL can successfully be integrated

into the domain of learning and teaching EFL as viewed by the Sudanese EFL teachers and proved by EFL students scores in the performance test. Finally, this study recommends strongly the urgent integration of CALL in learning EFL and teaching too in Sudan as it can play a significant role in promoting the overall standard of English in both universities and schools.

## References

Andrews, R. (2003). Where next to research on ICT and literacies? *English in Education*, 37(3), 28-41. Retrieved February 18, 2008, from <http://www3.interscience.wiley.com/journal/19823129/abstract>.

Albion, P. R. (1999). Self-efficacy beliefs as an indicator of teachers' preparedness for teaching with technology. Paper presented at the 1999 annual Society for Information Technology in Teacher Education Conference, San Antonio, TX.

Asan, A. (2003). Computer Technology Awareness by Elementary School Teachers: A Case Study from Turkey. *Journal of Information Technology Education*, 2, 150-163.

Baker, E., Gearhart, M., & Hennan, J. (1990). *The Apple Classrooms of tomorrow: 1990 UCLA evaluation study (Report to Apple Computer)*. Los Angeles: UCLA Center for the Study of Evaluation.

Barron, I., & Goldman, E. (1994). Technology and education reform: The reality behind the promise. In B. Means (Ed.), *Integrating technology with teacher preparation* (pp.81110). San Francisco: Jossey-Bass.

Becker, H. (2000). *Findings from the teaching, learning, and computing survey: Is Larry Cuban right?* Revision of paper written for the School Technology Leadership Conference of the Council of Chief State School Officers, Washington, DC.

Blamires, M. (1999). Developing literacy. In M. Blamires (Ed.), *Enabling technologies for Inclusion* (pp. 27-34). London: Paul Chapman.

Berson, M. J. (1996). The effectiveness of computer technology in the social studies: A review of the literature. *Journal of Research and Computing in Education*, 28(4), 486-489.

Blake, Robert, J. (2008). *Brave New Digital Classroom*, Washington, D. C.: Georgetown University Press.

Cavas, B., & Kesercioglu, T. (2003). Primary Science Teachers" Attitudes toward Computer Assisted Learning. *Ege Journal of Education*, 3(2), 35-43.

Clarke, Mark A. & Silberstein, S. (1987) "Toward a Realisation of Psycholinguistic Principles in the ESL Reading Classroom", in Michael Long and Jack Richards (Eds.) *Methodology in TESOL*, P.233-247). Boston: Heinle & Heinle Publishers.

Coley, R. (1997). Technology's impact: A new study shows the effectiveness and the limitations---of school technology. *Electronic School*. Retrieved March 12, 2007, from <http://www.electronic-school.com/0997f3.html>.

Dwyer, D., Ringstaff, C., & Sandholtz, J. (1991). Changes in teachers' beliefs and practices in technology-rich classrooms. *Educational Leadership*, 48(8), 45-52.

Francis-Pelton, L., & Pelton, T. (1996). Building attitudes: how a technology course affects pre-service teachers" attitudes about technology. Retrieved on 16 April 2004 from <http://web.uvic.ca/educ/lfrancis/web/attitudesite.html>.

Erkan, S. (2004). An analysis of teachers" attitudes towards the computer. Manas University, *Journal of Social Science*, 17(12).

Greener, S. (2009). e-Modelling - Helping learners to develop sound e-learning behaviors. *Electronic Journal of e-Learning*, 7(3), 265-272.

Ocak, M. A., & Akdemir, O. (2008). An Investigation of Primary School Science Teachers" Use of Computer Applications *The Turkish Online Journal of Educational Technology*, 7(4),6.

Norum, K., Grabinger, R. S., & Duffield, J. A. (1999). Healing the universe is an inside job: teachers' views on integrating technology. *Journal of Technology and Teacher Education*, 7(3), 187-203.

Richard, J. et al (1985) *Longman Dictionary of Applied Linguistics*. London: Longman.

Roschelle, J., Pea, R., Hoadley, C., Gordin, D., & Means, B. (2000). Changing how and what children learn in school with computer-based technologies. *The Future of children, Children, and Computer Technology*, 10(2), 76-101.

Swenson, P. W., & Redmond, P. A. (2009). Online, hybrid, and blended coursework and the practice of technology-integrated teaching and learning within teacher education. *Issues in Teacher Education*, 18(2), 3-10.

Teo, T., Lee, C. B., & Chai, C. S. (2008). Understanding pre-service teachers' computer attitudes: applying and extending the Technology Acceptance Model (TAM). *Journal of Computer Assisted Learning*, 24(2), 128-143.