

# The Effectiveness of Instructional Technology on English Language Learning in EFL Classroom

Muneera Mohammed

Assistant Professor of Applied Linguistics, Faculty of languages and Translation

Najran University, Saudi Arabia

E-mail: mahmohammed@nu.edu.sa

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## Abstract

The present study aimed to investigate the effectiveness of instructional technology on English language learning. It also examined the teachers' attitudes towards applying instructional technology. The study adopted the analytical descriptive and applied the quantitative and qualitative methods to collect data from the participants. Moreover, it used a questionnaire, an information form, and a classroom observation checklist as data collection tools. The population of the study numbered (392) English teachers at the basic schools in Khartoum State. The study revealed that applying instructional technology to language teaching and learning made learners more co-operative and participating in English language classes. Thus, they could improve their performance and competence.

**Keywords:** Outcome, Instructional technology, Educational technology, Output

## 1. Introduction

Instructional technology has recently been adopted in linguistics since it has proved effective in the development of language skills. It enhances a proper and flexible delivery of instruction. However, the development of skills is required to improve learners' abilities and to make language easily used for a variety of communicative purposes. These objectives are achieved through the learners' interaction with teachers, peers, and content almost based on applying instructional technology

The international trends concerned with English language learning confer a great responsibility on teachers who are recommended to use active learning processes instead of

using traditional forms of teaching. In other words, they have to apply instructional technology.

Therefore, the present study attempts, using various means, to investigate the status of applying instructional technology in English language learning at basic education schools; it further elaborates on this aspect.

Technology has caused radical changes in all educational fields, especially English as a Foreign Language (EFL), where the learners need an enjoyable and attractive environment. Albert and Thomas (1993, p.3) state that all educators should realize the importance of instructional technology in increasing the efficiency of achievement in the learning processes. Therefore, they began to consider the use of instructional technology, as a basic qualification for teachers all over the world.

### *1.1 Statement of the Problem*

Based on her reach experience as an expert in English language teaching, the author has noticed that EFL learners are low achievers of English. When the author worked in the Sultanate of Oman as an expert in English, she recognized that the lack of applying instructional technology in learning English in Sudan is the main reason for the low standard of learners in English.

### *1.2 Questions*

The study attempts to answer the following questions:

1. To what extent does instructional technology play valuable roles in the learning process?
2. What are the English language teachers' attitudes towards the effectiveness of instructional technology on enhancing the learning language skills?
3. Does instructional technology motivate EFL to learn English?
4. Are there any needs for applying instructional technology in language classes?
5. Does instructional technology make lessons more enjoyable?

### *1.3 Objectives*

1. The study gives a holistic picture of the concept and applicability of instructional technology in our condensed classes, in general.
2. It provides valuable data, which may help policy-makers evaluate the current status of English language learning. It provides a baseline for future assessments and makes coherent and cohesive plans to implement instructional technology in learning English.
3. It modifies the passive roles of both English language teachers and learners from depending on using the traditional method and techniques to applying active instructional approaches.

4. It raises awareness of English language teachers to use various techniques and methods in learning language processes in condensed classes. Consequently, the interaction process is facilitated and enhanced.

#### *1.4 Methodology*

The study adopted the analytical approach and used a questionnaire, an information form, and an observation checklist for data collection. Then, it applied a set of statistical methods for data analysis.

## **2. Literature Review**

This literature review addressed the basic concepts of instructional technology in contrast to the traditional methods. In addition, it covered previous studies on the roles of instructional technology in the learning process, the effectiveness of instructional technology in enhancing learning language skills, the motivation of learning language through instructional technology, and the need for applying instructional technology in language classes.

### *2.1 Concept of Instructional Technology*

Experts have various views about the definition of instructional technology. Although they seem different, they have a lot in common. For example, Whelan (2005, p. 13) defines instructional technology, as follows:

“Instructional technology is the problem analysis, solution design, development, implementation, management and evaluation of instructional processes and resources to improve learning and performance in education and at works.”

He believes that the distinction between the technological processes and the actual physical media is important. Whelan (2005), in a straightforward statement, emphasizes:

“Instructional technology is the use of a variety of teaching tools to improve students' learning. We usually think of computer and computer software when we think of Instructional Technology, but educational technologies are not limited to computers in the classroom. Instructional Technology describes all tools that are used for learning such as cameras, CD players, computer-based probes, calculators and electronic tools we have yet to discover.” (p.14)

The Association for Educational Communications and Technology (AECT) (2001) defines instructional technology as "the theory and practice of design, development, utilization, management and evaluation of processes and resources for learning".

Molenda (2003) sums up the ideas in his definition of instructional technology. He writes:

“Attempts at defining Instructional Technology may fail to distinguish between Instructional Technology as a theory and as a field of practice. Viewed as a theory, Instructional Technology can be seen as the proposition that some ways of creating and presenting instruction, are more efficacious than others. Instructional

Technology is what people do when they are applying the theory, analyze problems, plan solutions, and create materials and so on.” (p.3)

The author assumes that it is possible to construct a definition that addresses these difficulties quite explicitly, uniting theory and practice, encompassing both processes and things, as well as recognizing both the artistic and scientific elements.

Thus, instructional technology can be viewed as the art and science of designing, producing and using with economy and elegance, solutions to instructional problems. Those solutions may combine verbal or audiovisual media and maybe take the form of lessons, courses or whole systems that facilitate learning efficiently, effectively, and humanely.

McNeil (2005, p.2 - 4) defines instructional technology as "the systemic and systematic application of strategies and techniques derived from behavioral, cognitive and constructivist theories to the solution of instructional problems." According to Weller, Little, McAndrew, and Woods (2006), it is a "systematic application of theory and other organized knowledge to the task of instructional design and development" (p.138).

## *2.2 Instructional Technology in Learning Language Skills*

Gusfason and Branch (2002, pp.46-47) state that “the application of instructional technology in a foreign language also appears to influence the development of all linguistic skills. There is a lasting idea emerging from cognition is Robert Gagne's nine events of instruction”.

These events include:

- 1- Gaining attention: Helping the learner focus attention on the learning material.
- 2- Informing learners of the objectives: Stating what will be gained through learning.
- 3- Stimulating recall of prior learning: Reminding the learner of what was already covered.
- 4- Presenting the stimulus: The learning activities.
- 5- Providing learner guidance: Strategies to promote learning acquisition.
- 6- Eliciting performance: Getting the learner to practice what is to be learned.
- 7- Providing feedback: Further guiding learner practices.
- 8- Assessing performance: The learner demonstrates what is learned.
- 9- Enhancing retention and transfer: Helping the learner assimilate information.

Therefore, the author noticed that Gagne's events of instruction fit within a cognitive framework for several reasons. By gaining learner attention, sensory memory is aroused and focused on the presentation of information. Stimulating recall and stating objectives help learners situate information within already exiting memory structures and mentally prepare themselves for new content. Furthermore, they provide a mental map that learners can use to identify the direction of instructional materials. All of these events transfer the short – term

memory into the long – term memory. Finally, the learners are able to practice the skills being learned in a stress-free environment before they assess their acquisition of the content.

### *2.3 Needs and Objectives of Applying Instructional Technology in Language Classes*

Awad (2005, p.92) summarizes the needs and objectives of applying instructional technology in language classes in learning English in the following points:

#### 2.3.1 Objectives

- a. To create an effective learning environment.
- b. To generate a successful interaction between teachers and learners and among learners themselves.
- c. To handle the content in a joyful manner.
- d. To make the learning process more flexible.
- e. To have an easy and perfect daily assessment of the learner's progress.
- f. To develop human resources.
- g. To have a learner-centered education.
- h. To have more innovative and insight learning.

#### 2.3.2 Needs

##### 1. *Students' needs*

- a. To develop learners' skills and talents.
- b. To design learners' pace learning.
- c. To provide more individualization.
- d. To provide busy work.
- e. To expand learners' minds.
- f. To create an easy and joyful homework submission.
- g. To get rid of daily dreaming.

##### 2. *Teachers' needs:*

- a. To get rid of daily routine frustration.
- b. To design pace teaching.
- c. To develop more innovative teaching approaches.
- d. To provide busy work.
- e. To gain aspects.

- f. To design an easy and joyful homework.
- g. To develop a completely new performance.
- h. To diminish classroom barriers.

#### *2.4 Effectiveness of Instructional Technology on Language Classrooms*

Bear (2003, pp.297-300) reports the effectiveness of applying instructional technology on learning the English language, as follows:

##### 1. Changes to the learners' roles:

- a. They are in an active rather than a passive role of recipient of information transmitted by teachers, textbooks, or broadcasts.
- b. Acting thinking about the information and making choices.
- c. Performing authentic tasks.
- d. Defining their goals and making decisions.
- e. Evaluating their progress.

##### 2. Changes to teacher's roles:

The teacher role changes from a dispenser of information to a facilitator, setting goals of the projects, providing guidelines and resources, and asking about the reasons for various design choices.

##### 3. Increase motivation and self- esteem:

Increasing the competence that learners feel after mastering technology-based tasks and their awareness of the value placed upon technology enhances learners' sense of self-worth.

##### 4. Technical skills:

Learners acquire a basic understanding of how various classes of computer tools behave and feel confident about being able to learn to use new tools. Their learning of new software applications is supported.

##### 5. The accomplishment of more complex tasks:

Learners are able to handle more complex tasks and do more with higher-order skills because of the support and capabilities provided by technology.

##### 6. More collaboration with peers:

Through instructional technology, learners can work cooperatively and provide peer tutoring.

##### 7. Increase the usage of external resources:

Through technology, learners can get access to external resources for learning.

#### 8. Improve design skills:

Using multiple media gives learners choices about how to convey a given idea in a better way because they can produce more professional-looking products and tools to manipulate the way information is presented.

The author concludes that basic education schools should be provided with adequate and different instructional media, including audio/video recording, language labs, and computers. Thus, teachers should be familiar with a variety of instructional delivery methods.

#### 2.5 *Motivating Learning Through Instructional Technology*

Applying technology motivates students in different manners. For example, Green (2006) argues that students may have a chance to see the real world in the classrooms and motivated easily. Ellis (1994, p. 48) points out that creating challenging tasks and activities motivate language learners. Effective language teachers should be enthusiastic and creative because language learners may lose their motivation and desire easily. Movies, music and different materials can help students' psychological and social improvement. Therefore, the use of technology and online/distance education may provide a good opportunity to develop and create different and enjoyable tasks in EFL classrooms. Demiray and Sever (2009) argue that distance education has great potential for global learning. It can offer a new and active learning environment for language learners. Usun and Kömür (2009) claim that distance education and e-learning technologies can be used in ELT programs to motivate students.

#### 2.6 *Previous Studies*

Many studies were conducted on the use of instructional technology in teaching the English language. Some of them were in Sudan, whereas the others were conducted in foreign countries.

1. **Abubakar Tarig Al-Sheikh** (2000). *The effect of listing instructional technology method in music teaching at the basic level*. MA .Ed. University Of Khartoum, graduate college. Faculty of Education
2. **Osama Mudawe Nurain Mudawe** (2004). *The impact of using computer-assisted language learning on the achievement of EFL students*. MA thesis, Sudan University of science and technology, Graduate College Faculty of Education
3. **Ezzelden Ibrahim Mohammed Ibrahim** (2009). *Secondary school teachers' readiness for E. learning*. Ph.D. thesis. Sudan University of science and technology, graduate college, faculty of education
4. **Salim Muslim AL Kindi** (2007). *The reality of using educational technology in general education and their obstacles in the Sultanate of Oman*. Faculty Of Education – Nizwa.

5. **Sami Saeed Abdullah** (2008). *The reality of using educational technology and their availability, obstacles, and efficiency in teaching English in high secondary school*. International University of Africa, Graduate College, Faculty of Education, Elyman

### 2.6.1 Commentary

The author benefited from the previous studies in terms of information, data, elaboration of ideas, as well as enriching opinions and thoughts. Moreover, they stressed that further studies are needed to develop the teachers' and pupils' performance and competence of the language.

However, the previous studies only shed light on how instructional technology can be implemented for the purpose of improving teaching quality, experiences, motivating pupils, enhancing greater participation in classes and examining the importance of instructional technology. The present study gave a holistic picture of the status. First of all, the author endeavored to reveal the reality of applying instructional technology in acquiring the English language for EFL. Then, she explored the efficiency of implementing instructional technology in acquiring the English language for EFL to guide policy-makers to teach English for EFL. Thus, they can make master plans to implement instructional technology in learning English for EFL. Moreover, the author offered practical guidance for English teachers, in general.

The most important difference between the present study and literature is that the author put more emphasis on the fact that instructional technology does not mean devices and equipment in learning language processes and the interaction between these devices and learners. Rather, it has a broad definition that covers the teacher's and learner's behaviors, teaching methods, techniques, strategies, aids, environment, content, educational goals, and type of interaction between them in the classroom. Hence, learning can take place in a proper way.

## 3. Methodology

The author adopted the descriptive method in the theoretical framework, data collection, and data analysis.

### 3.1 *The Descriptive Method*

The author utilized the descriptive method for giving valid and factual results and findings. In this study, both quantities and qualitative methods were used to collect data from the selected participants. These methods assisted in building a base on a complete understanding of the study problem.

### 3.2 *Data Collection Methods*

#### a. The qualitative method

The use of this method enabled the author to study situations in their natural settings and related interpretation of teacher's teaching styles and learning strategies that they could offer to their learners and behaviors during lessons. Moreover, the study investigated teachers' application of and obstacles to instructional technology. For this method, the author used an



observation checklist that she developed with two English language inspectors. The author collected sufficient data to understand the research problem.

b. The quantitative method

In this method, data were collected using a structured questionnaire purposely designed for (200) English language teachers in Khartoum State. Furthermore, information forms were designed to (21) basic education schools in Khartoum. With these methods, sufficient data were collected giving a holistic picture of the study problem.

### *3.3 Tools*

The author used three tools:

- (a) A teachers' questionnaire.
- (b) An observation checklist.
- (c) An information form.

## **4. Population**

### *4.1 Teachers*

The population of the study comprised two categories. The first category was the teachers' population including all male and female English language teachers in public and private schools numbered (392) in Khartoum State in the academic year (2010 – 2011).

### *4.2 Schools*

The second category was the basic private and public schools numbered (201) in Khartoum State in the academic year (2010 – 2011).

## **5. Data Analysis**

In this study, data collected by the questionnaires, observation checklists, and information forms were analyzed using descriptive and interpretive analysis methods. These data were collected to examine the positive impact of the application of instructional technology on the EFL learners' achievement of the four skills of English. They could help identify the teachers' attitudes towards the usage of instructional technology in teaching English.

### *5.1 Questionnaire*

The data collected from the questionnaires were analyzed using SPSS. The measure of producing frequencies, percentages, mean value and chi-square revealed the results of each statement.

### *5.2 Information and Observation Checklists*

Information forms and observation checklists were manually analyzed by the author and her supervisor to have a holistic picture of the current situation concerning the schools and English teachers in Khartoum. They did analysis according to the main trends that the author

used to design the observation checklist and information form. Accordingly, the author concluded the results for both of them.

Table 1. Shows the result of the following statement

The usage of instructional technology increases learners' language learning.

<b>Options</b>	<b>No.</b>	<b>%</b>	<b>Mean</b>	<b>Chi – square</b>	<b>Result</b>
Strongly agree	84	42.4	4.2	186.7	Agree
Agree	90	44.7			
Not sure	4	2.4			
Disagree	16	7.5			
Strongly disagree	6	3			
<b>Total</b>	<b>200</b>	<b>100.00</b>			

The table shows that (42.4%) of the participants strongly agree, (44.7%) agree, (2.4%) are not sure, (7.5%) disagree, and only about (3%) strongly disagree.

Table 2. Shows the result of the following statement

The usage of instructional technology develops language four skills.

<b>Options</b>	<b>No.</b>	<b>%</b>	<b>Mean</b>	<b>Chi-square</b>	<b>Result</b>
strongly agree	96	47.5	4.4	231.9	Strongly agree
Agree	90	44.5			
Not sure	4	2.0			
Disagree	10	5.0			
Strongly disagree	2	1.0			
<b>Total</b>	<b>200</b>	<b>100</b>			

The table shows that (47.5%) of the participants strongly agree, (44.5%) agree, (2%) are not sure, (5%) disagree, and only about (1%) strongly disagree.

Table 3. Shows the result of the following statement

The usage of instructional technology shows a high level of motivation.

Options	No.	%	Mean	Chi - square	Result
Strongly agree	80	39.8	4.2	175.4	Agree
Agree	90	45.4			
Not sure	22	10.8			
Disagree	3	1.5			
Strongly disagree	5	2.5			
<b>Total</b>	<b>200</b>	<b>100</b>			

The table shows that (39.8%) of the participants strongly agree, (45.4%) agree, (10.8%) are not sure (1.5%) disagree, and only about (2.5%) strongly disagree.

Table 4. Shows the result of the following statement

Instructional technology should be applied in language classes.

Options	No.	%	Mean	Chi-square	Result
Strongly agree	80	40.5	4.2	179.5	Agree
Agree	98	48.5			
Not sure	14	7.1			
Disagree	6	2.5			
Strongly disagree	2	1.4			
<b>Total</b>	<b>200</b>	<b>100</b>			

The table shows that (40.5%) of the participants strongly agree, (48.5%) agree, (7.1%) are not sure, (2.5%) disagree, and only about (1.4%) strongly disagree.

Table 5. Shows the result of the following statement

The use of instructional technology makes lessons more enjoyable.

Options	No.	%	Mean	Chi - square	Result
strongly agree	95	47.3	4.4	238.8	Strongly agree
Agree	92	46.0			
Not sure	6	3.2			
Disagree	5	2.5			
Strongly disagree	2	1.0			
<b>Total</b>	<b>200</b>	<b>100</b>			

The table illustrates that (47.3%) of the participants strongly agree, (46%) agree, (3.2%) are not sure, (2.5%) disagree, and only (1%) strongly disagree.

To conclude, all the participants have positive attitudes towards the effective application of instructional technology in teaching English for EFL learners. Therefore, the statements are reliable and valid. All hypotheses proved positive and matched the predicted concepts of the study.

## 6. Conclusion

The author carried out this study because she believes that learning the English language is crucial and represents the current global needs. She claims that applying instructional technology in the English language acquisition process for EFL learners is important and leads to efficient and sufficient outputs. However, the reality of teaching English for EFL learners is inefficient. Thus, the present study mainly asks persons who are in charge of English language teaching to implement instructional technology in teaching English for EFL and to improve the current situation regarding the learning environment to get a high-quality education.

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