



The Role Of The Interactive Communication Technology In Strengthening The Educational Process

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Abstract:

The qualitative leap witnessed in information and communication technology, along with the rapid increase in user engagement worldwide, combined with its integration with the internet, has led to the emergence of new technological capabilities with limitless potential. This has contributed to increased interaction and closeness among individuals, opening up vast opportunities for educational systems to enhance their capabilities and move beyond traditional methods. Accessing databases and information sources has become easy, and the emergence of electronic libraries, software programs, platforms, and websites connected to the internet has significantly supported the educational process on a large scale that transcends narrow geographical boundaries. Consequently, what is known as distance learning or e-learning has emerged.

In this study, we aim to monitor the possibilities offered by interactive communication technology and various electronic media, as well as their effectiveness in the educational process.

Keywords: interactive communication, means of communication, education.

1 Introduction:

Technological and informational development is one of the most important characteristics of this era, and this development has touched various societies, penetrating the daily lives of individuals. This is evident in a range of technologies that have become indispensable due to their capabilities and features these made human life easier. Perhaps the most significant of these are communication tools, or what is known as interactive communication technology, which has contributed in creating a sense of closeness among people and increasing cultural exchange and interaction, while eliminating racial differences. Thus, it has become a necessary requirement for communication between individuals and has expanded its use in various areas of daily life, including media, politics, commerce, tourism, and more.

Education is among the sectors that have undergone significant changes due to this technological development. Interactive communication technology has contributed in creating a flexible virtual environment for education, where all parties involved in the educational process can meet. Currently, educational technology is characterized by its high ability to provide visual experiences that simplify knowledge and enhance the learning process. It encourages learners to use multiple methods through various educational technology tools. The importance of information technology depends on an individual's ability to retain information for as long as possible, develop and utilize it, and

provide opportunities for others to benefit from it and influence their learning. This is in term of the availability of modern and diverse learning methods both inside and outside educational institutions, which leads to an information society that transcends traditional educational methods and moves towards future-oriented educational approaches".¹

1- Definition of Communication Technology:

Communication technology is defined as "the devices, equipment, means, and tools used to convey and transmit a message that includes information or news from one place to another, regardless to the nature of the transmitted information, whether verbal or written"².

It includes various communication devices such as computers, smartphones, networks, applications, programs, television, radio, and satellite systems. Therefore, "the emergence of educational technology was a result of educational theories and practical practices within them, as well as the use of technology in different areas of life. Thus, its entry into the field of education became inevitable, with the aim of improving education, enhancing its effectiveness, and maximizing the benefits of scientific knowledge"³.

2- The importance of communication technology in the educational process:

Modern electronic media are regarded as innovative solutions to many educational problems, enhancing the efficiency of the educational process and increasing its effectiveness in a way that aligns with contemporary technological developments. The internet is considered as one of the most important communication technologies that has contributed to the exchange and dissemination of knowledge. It has also opened up vast opportunities for research and exploration through its advantages, such as interactivity, ease of access to information, and the exchange and discussion of opinions across various disciplines and fields. Education is among the areas that have greatly benefited from the internet, especially when it comes to virtual learning ,especially when it comes to virtual education, as in-person attendance is no longer necessary to receive education and obtain information. Consequently, new methods for handling educational activities have emerged, such as storage, processing, information management, and retrieval. This makes the learner active all the time. The recent studies have confirmed that the desire to learn increases when the educational process is supported by visual and auditory stimuli; learners acquire knowledge more through their senses of hearing and sight, followed by the senses of touch, taste, and smell.

Technology currently provides many means that help in developing and facilitating the educational process, as it works to achieve the educational goals easily and quickly. In doing so, it saves time and effort through the swift delivery of information. Many studies have proven that technology has benefits reflects on the quality of education.

3- The impact of social media on the educational process:

Social media networks can be considered as a system of electronic networks that allow participants to create their own personal site and then connect it through an electronic social system with other members who share the same interests and hobbies it is al ,i4" , k"t tat allow interaction and communication for their users at any time they wish and from anywhere in the world, and the reason it has gained a social description is that it enhances relationships between people".⁵

Therefore, it is a term used to refer to a collection of websites on the internet that facilitate communication among individuals in a virtual community, bringing them

together based on interest groups or affiliations such as country, university, school, or company. All of this is done through direct communication services, such as sending messages or viewing others' profiles to keep up with their news and the information they make available for viewing, among other services".⁶

Social media platforms currently offer variety of services in the field of communication between individuals, perhaps the most important of them are messaging, chatting, making acquaintances, and document sharing. They have also become a significant area for marketing, commerce, media, and education, as they have infiltrated all daily activities of individuals. One of the key reasons that has contributed to the widespread popularity and dissemination of social media is the speed of information delivery through various means, as they are supported by features such as video, images, and messages, they allow for commenting.

Social media should not be seen merely as virtual spaces for communication among individuals; but, they are effective educational tool that supports the learning process through interaction with diverse informational resources. The new perspective in the field of education "requires adopting a more open educational policy, especially with the increasing use of social media platforms like Facebook, YouTube, and Twitter by students, due to the effectiveness of this technology in achieving harmony among the parties involved in the educational process and its ability to stimulate discussions, constructive dialogues, the exchange of experiences, and mutual cooperation in electronic knowledge sites, in addition, it has encouraging creative thinking in various styles and methods ".⁷

Thus, communication and information technology has produced new communication tools that have merged with individuals' daily realities, and they have been adapted to serve various needs, including their incorporation into the field of education and learning. Currently, there are many social media platforms that differ in terms of features and services they offer, and here we mention some popular sites:

- Facebook:

Facebook is considered one of the most popular and widely used social media platforms. It is not just a tool for getting to know friends and communicating with them; but it becomes a tool for advertising and media promotion. It is used in many fields, including education, as an important resource for sharing and transferring information. This is done through creating groups for communication among users or establishing a page to display various educational materials. Additionally, it allows for sending videos, messages, and documents, and the site also provides a chat space equipped with a real-time translation feature.

- YouTube: Currently, YouTube is considered one of the most prominent and effective social media platforms, used by a large number of users across various fields. YouTube is distinguished by its feature of uploading videos, with the ability to share and exchange them with others and create responses to them. It is currently one of the most popular tools for e-learning and one of the most well-known free educational websites on the internet.

4- Electronic platforms and their role in the educational process:

Educational platforms represent one of the most prominent technological means currently relied upon for language learning. They are "educational websites that rely on

interactivity, encouraging students to exchange discussions, ideas, share educational content, distribute roles, and apply tests and assignments electronically"⁸. electronic platforms primarily rely on interactive media and electronic technologies; they serve as "an interactive learning environment that employs web technology and combines the features of electronic content management systems with social networks like Facebook. They enable learners to publish lessons and objectives, assign homework, implement educational activities, and communicate with teachers through various technologies. Additionally, they allow teachers to conduct electronic tests, distribute roles, divided students into workgroups, and facilitate the exchange of ideas and opinions between teachers and students, as well as share scientific content. They also enable parents to communicate with teachers and access their children's results, contributing to achieving high educational outcomes' quality".⁹

Here, we mention some currently popular online platforms:

- ANAS DIGITAL platform:

"It is a platform dedicated to teach the Arabic language to non-native speakers, relying on the latest advancements of technology in developing e-learning. This achievement has been contributed by many experts in various fields: Arabic language, educational sciences, computing, information and communication technology"¹⁰, the platform contains many sections, including teaching Arabic to children, which is conducted according to a well-thought-out strategy. It offers education through five progressive and sequential levels that include more than 250 educational units. The same applies in teaching Arabic to adults. The platform also provides training for teachers of Arabic as a foreign language, with the aim of enable educators to benefit from what digital technology and modern communication tools offer in the field of education.



**Figure (1): Interface of the ANAS platform
- The "Zeemish" platform**

It is a digital platform available on the internet. It specializes in teaching the most widely spoken languages in the world, such as English, Arabic, Spanish, Italian, and German. It offers a series of lessons from letters, words, sentences, phrases to conversations, The

Zeemish platform provides an educational program for learning the Arabic language that includes twenty-five sections, each section contains a set of words related to a specific field, such as technology, home, shopping, food, the human body parts, work, and tools. It also includes explanatory grammar lessons, morphological, and even phonetic rules to facilitate pronunciation.

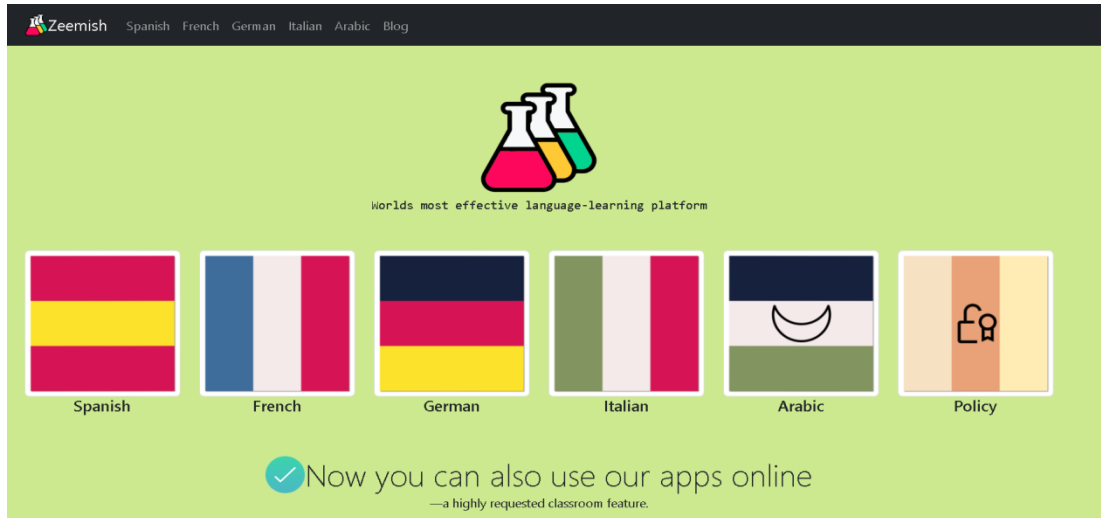


Figure (02): Interface of the Zeemish platform



Figure (03): Contents of the Zeemish platform

5- Educational Electronic Games:

Educational electronic games are currently one of the most successful means that contribute to improving the quality of the educational process, as they combine fun, entertainment, and education. They have also become an approved educational tool in many schools, especially for teaching languages and mathematics, due to their characteristics that help enhance learning motivation and facilitate the delivery of information.

Electronic games refer to all games available in a digital format, primarily aimed at education. They include computer games, smartphone games, and video games. They are typically characterized by a range of features such as audio and visual effects. The researchers agree that "they represent a form of learning based on a series of planned

steps and procedures performed by the learner on the computer, through adherence to specific rules to achieve a defined educational goal within an enjoyable competitive framework. This type of learning is centered around the learner ".¹¹

Many studies indicate that the effectiveness of playing educational electronic games in the learning process during early childhood. They effect in stimulating the learner to increasing their motivation , also, they achieves interaction through exploration-based play and enhance visual and motor thinking skills. Therefore, "electronic games are considered as enjoyable and one of the most exciting and engaging educational tools, as well as one of the means that stimulate the learner's thinking and contribute in their cognitive growth and creative thinking. This is because the child aligns their imagination with the game's objective and tries to come up with new ideas in play to achieve that goal. Additionally, electronic games are characterized by high flexibility; they are not restricted to a specific time, allowing the learner to play whenever they wish. They also help the child relieve psychological stress and assist in integrating knowledge and the educational process with skills such as logical thinking, problem-solving, planning and decision-making"¹².

Despite the effective role that educational video games play and their impact on achievement and skill development, the majority of them are commercial and lack regulation, missing many essential standards that should be met. Among the most important criteria that every game must fulfill are:

- **Educational Standards:** "These are the essential criteria that must be present in educational electronic games. The game's objective must be purely educational, and it should be in a language that the learner understands and interacts with. Additionally, the game must provide training processes, tests, and exercises based on a set of skills, as well as include feedback and a gradual presentation of information from easy to difficult. It must also align with the learner's external environment to facilitate their adaptation to the game"¹³.

-**Technical Criteria:** "Perhaps one of the most important criteria that must be met in any educational game to achieve good interaction is that it should include elements of excitement and reinforcement necessary for the user's continuous learning. It should allow the user the freedom to choose the game they want, provide diverse media such as videos, graphics, images with variety of colors and sounds with music. Additionally, it should be suitable for the user's age , it provides rules and instructions on how to use the game or offer a set of guidelines"¹⁴ .

Here we present a sample of the electronic games available on the internet:

- A **simple application:** Simple World is a free educational electronic game designed specifically for preschool children. The game consists of four groups of activities that focus on learning numbers, coloring, puzzles, and shapes. It offers a variety of interactive media such as animations, music, and encouraging and motivational sounds. The program also includes feedback reports that allow users to assess their level.



Figure (04): A simple site

Science Friends App:



Figure (05): Contents of the Science Friends Application

6- Electronic Libraries:

The education sector is currently witnessing a qualitative shift in the field of virtual education, as educational institutions strive to keep pace with various technological advancements that can be beneficial in the educational domain. This is aimed in enhancing and developing the educational process. Among the most significant digital technologies that can be greatly utilized in education are electronic libraries, as they provide a vast amount of e-books that can be accessed easily and quickly.

Electronic libraries emerged as a result of the widespread use of information and communication technology and the development of technical methods for storage, retrieval, and management. They work to manage, organize, and classify electronic information automatically. Thus, the electronic library is a system that provides information in a digital format. From the researchers' perspective, digital libraries should not be viewed merely as a collection of digital information sources and the tools related to managing this collection. Instead, they should be seen as an environment that brings

together collections, services, and people to support the entire cycle of data, information, and knowledge production, dissemination, study, collaboration, and utilization".¹⁵

Thus, the prevalence of the term "digital libraries" has emerged as a result of the advent of e-books and their availability on the internet. Given the increasing demand for them due to the ease of access and browsing at any time and place through various electronic devices, along with the availability of numerous applications for viewing this type of files and tools that facilitate reading, such as quick search and easy navigation between pages, it is impossible to deny the effective role of electronic libraries, which have become the primary destination for researchers and learners in various fields to access diverse new research and studies from different parts of the world.

In addition to the reasons that led to the establishment of digital libraries are the numerous problems faced by traditional libraries, such as the cost crisis that currently affects the purchase of collections and the provision of services, the increasing cost of library spaces in light of the growing number of beneficiaries, and the physical distances that separate beneficiaries from libraries wherever they are. Also, a fundamental reason is the information explosion in various disciplines".¹⁶

7- The Importance of the Internet in the Educational Process:

The internet has become an essential requirement in various aspects of life today, due to it provides services . The most notable service is electronic communication, which saves time, effort, and money, in addition to other services such as email and messaging others.

The internet technology offers an immense amount of information across various fields, as it "came as a culmination of the intense integration of the triad of computers, communications, and software. It has also become humanity's window to its noisy and turbulent world, through which individuals engage in most of their mental and scientific activities remotely. They retrieve information, shop, learn, socialize, and convey their presence without traveling, allowing them to share in the events and endeavors of others".¹⁷

Thus, with the emergence of the internet and the wide development of communication means that have enabled the majority of individuals to keep up with various innovations and new inventions, especially regarding communication and information technology. It invests them in different areas of life, including education. One of the most prominent services the internet offers in the education's field is email, mailing lists, chat programs, messaging, chatting, search engines, the World Wide Web, and other tools.

8- Uses of computers in the educational process:

The computer is considered one of the most important and effective tools in the educational process, "as it facilitates the student's work through ready-made software, which allows for the presentation of many educational processes. It is also used as an assisting tool in educational administration and teaching staff, by preparing all its correspondence, reports, budgets, plans, and all financial and administrative aspects represented by revenues, expenses, salaries, and more"¹⁸.

The use of computers aims to improve the overall level of students , develop their thinking skills and problem-solving methods.

-The computer can replace many educational tools and means, such as: television, videos, audio recordings, blackboards, drawings, murals, and other traditional methods.

- The computer has ability to stimulate the learner's motivation and capture their attention.

- The computer has ability to save the learner's time and the effort they exert.

- The computer has ability to provide various sources of information due to its access to the internet and its enormous storage capacity.

-The computer is used as an assistant in education by providing computerized lessons directly to students through the use of educational software. Educational software varies and takes many forms in the field of education, as it can present information to learners and also store it for them, allowing them to benefit from it when they needed them . Among the most prominent of these software are:

Exercise programs: The learner is provided with a series of exercises, questions, and drills from educational software. This software offers a distinctive pattern of interaction between the student and the computer, as it is used to train learners to master the academic content. It presents questions, and the learner must choose the correct answer, after that the software provides feedback on the accuracy of their response, or directs them to specific information that needs to be reviewed before continuing the training, until the learner reaches the desired level of understanding of the topic.

Educational game programs: They are a popular trend in the educational process, providing learners with motivation and making them more engaged, as they present educational materials in an entertaining and purposeful manner.

Simulation programs: They are among the most enjoyable and exciting programs, as they simulate reality and represent it on the computer screen, allowing the learner to gain experience in those real-life situations.

Problem-solving programs: These programs allow trainees to practice solving problems and issues related to specific educational topics according to certain solving strategies, teaching them how to think and how to use their mental and logical abilities to become better at problem-solving.

Educational management programs: These methods are for managing the educational process using computers, such as preparing tests, administering them, evaluating them, and presenting the results in a clear format for learners. They also include creating daily and weekly schedules and preparing monthly and annual reports on learners' performance.

10-Conclusion:

Technology in all its forms has become a common denominator in every aspect of life around us. It has also become a necessity in the educational process, a method of work, and a way of thinking. Perhaps one of the most important technologies is interactive communication technology, which plays an active role in facilitating the educational process and presenting information in a way that cannot be achieved through traditional teaching methods. This includes providing auxiliary tools such as still and moving images, sound alongside text, in addition to , educational videos, chats, and communication with teachers and students through the creation of groups. All of this has significantly contribute in improving the educational process.

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