



The Reality of Interactive Environments and Their Impact on Supporting E-Learning in Arab Universities

DALILA Meskine

University Mustapha Stamboul/Mascara

d.meskine@univ-mascara.com

RASELMA Ben Ali

Hassiba Benbouali University of Chlef, Algeria

b.raselma@univ-chlef.dz

Abstract

Higher education teaching has undergone several changes at the level of Arab universities. This is due to educational technology, which has become a real challenge for university teachers. Consequently, university professors have attempted to adapt the educational process to these current developments, managing it in light of the reality of interactive environments. They seek to digitize the educational content provided to students in an integrated manner, with the noble goal of ensuring the quality of higher education in line with modern requirements. In light of this, we have recently observed the emergence of intensive efforts by higher education institutions, led by professors, to program education by launching its content virtually through electronic platforms. These platforms are completely different from traditional, face-to-face education, which focuses on delivering lessons in real-world settings. This is due to several reasons, including : overcoming the dangers of diseases and viruses ; avoiding overcrowding in classrooms ; saving effort, time, and money, which hinders the smooth and efficient flow of education within university educational environments ; and providing effective means for distance learning.

Keywords: *higher education, interactive environments, e-learning, e-content, Arab universities.*

La réalité des environnements interactifs et leur impact sur le soutien à l'apprentissage en ligne dans les universités arabes

Résumé

L'enseignement supérieur a connu plusieurs changements au niveau des universités arabes. Cela est dû à la technologie éducative, qui est devenue un véritable défi pour les enseignants universitaires. Par conséquent, les professeurs ont tenté d'adapter le processus éducatif à ces évolutions actuelles, en le gérant à la lumière de la réalité des environnements interactifs. Ils cherchent à numériser le contenu pédagogique proposé aux étudiants de manière intégrée, avec le noble objectif d'assurer la qualité de l'enseignement supérieur en adéquation avec les exigences modernes. À cet égard, nous avons récemment observé l'émergence d'efforts intensifs de la part des institutions d'enseignement supérieur, menés par les professeurs, visant à programmer l'enseignement en lançant son contenu virtuellement à travers des plateformes électroniques. Ces plateformes diffèrent totalement de l'enseignement traditionnel en présentiel, qui repose sur la transmission des cours dans des environnements réels. Cela s'explique par plusieurs raisons, notamment : surmonter les dangers liés aux maladies et aux virus ; éviter la surcharge des salles de classe ; économiser les efforts, le temps et l'argent, ce qui entrave le bon déroulement et l'efficacité de l'enseignement dans les environnements universitaires ; et fournir des moyens efficaces pour l'apprentissage à distance.

Mots-clés : *enseignement supérieur, environnements interactifs, e-learning, e-contenu, universités arabes.*



Introduction:

Arab universities have realized the great importance of distance education, and thus rushed toward finding possible solutions and proposals to enhance this virtual mode of learning, especially with the emergence of the Corona pandemic, which pushed most Arab countries into a distinctive enabling environment in the field of e-learning. From this, we notice that the combination of face-to-face education and its virtual counterpart has become a necessary requirement “to open all channels of effective communication between administration, students, professors, and researchers in order to expand the horizons and outlets of acquiring knowledge, and not limit it to face-to-face education only. In a world where the element of time has become relative with the advancement of digital and communication means, and the availability of new educational tools and approaches, competition to develop, produce, and share knowledge has become sharper and faster, as it represents the wealth of knowledge societies and the foundation of their renaissance (Lakhder, 2023).”

Thus, the teacher in Arab universities moved in teaching educational contents in order to keep pace with that transformation from paper-based or traditional education to following a new and modern pattern, which is interactive e-learning. The latter had occupied a larger space in theoretical studies among Arab researchers, while its application remained absent for a long period due to several reasons, including: the lack of experts and specialists in the field of interactive environments to train and guide professors in teaching through them. On the other hand, it

was found only in a very small number of private institutions that imposed fees for it. But with the spread of technological means and progress, it became obligatory for the Arab individual to keep pace with this development, and learning to communicate through these means across different environments and contexts became a real gain for the producing party to promote it commercially. Consequently, higher and specialized bodies emerged calling from all sides toward enabling methods and skills of interactive communication, which has become highly and fundamentally relied upon given the positive results produced by information and communication technologies after receiving some form of distance education.

Thus, interactive learning posed a challenge with no alternative left for higher education institutions but to adopt it as one of the modern and effective patterns of university education.

This research required us to formulate a set of hypotheses, the most important of which are:

- The existence of a lack of interactive learning within Arab university environments.
- The weakness in the level of instructors who are supposed to have a high level of training in e-learning.
- The inability of some professors to use interactive platforms that support students' learning at the university level.
- The decline in the level of students who live with the technology of the era with all its tools and equipment, and yet are confronted with traditional classrooms where education is almost boring.

Our ultimate objective in this research paper is:



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- To contribute to creating an educational environment based on participation and interaction, making the student an essential element in it, thereby pushing him to break the monotony of education in the real environment, and enabling him to collaborate with educational teams through which they are prepared for the Arab and global labor market in the future, with the final outcome being the support of Arab culture and the reinforcement of its civilizational and social belonging.
- To enhance students' communication, linguistic, and social interaction skills, and to help them express their ideas freely and respect the opinions of others.
- To provide Arab university students with reinforcement of their educational and personal abilities through preparing interactive presentations and participating in their activities, which unleashes their creative energies and innovative abilities.
- To develop in them critical thinking and analytical thinking skills through interactive discussions, raising questions, purposeful dialogue, and analyzing information and data, which provides a good dimension for understanding the content of the material presented to them.
- To develop and support the quality of education in Arab universities in a way that corresponds with the educational visions of global university education.

Discussing these elements aims to reach the following results: Has Arab higher education succeeded in teaching students through interactive environments? And how has it

benefited from electronic platforms to advance and develop the level of university knowledge content?

1. The Concept of University E-Learning, Its Advantages and Objectives:

1.1. The Concept of University E-Learning:

The concept of e-learning has taken on many definitions, most of which indicated the use of contemporary technological media within educational environments. It has therefore been defined as “one of the forms of distance education using modern communication mechanisms in order to deliver information to learners as quickly as possible and at the lowest cost, in a way that allows the management and control of the educational process, and the measurement and evaluation of learners’ performance (Sharif Murad, Azzouz Mounir, 2018).” It is one of the latest methods through which we provide education based, for example, on laser discs or audiovisual tapes. Thus, university e-learning can be defined as education that relies on modern communication means to deliver lessons to students at this level, which often depend on the use of high-quality techniques oriented toward digitization, for both economic and knowledge purposes.

1.2. The Advantages of University E-Learning:

E-learning at the university level has several advantages, some of which are:

- a) It helps both professor and student diversify research sources and information based on its techniques that simulate contemporary reality.
- b) It provides students with a set of technical skills necessary for graduating human competencies that keep



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pace with current developments, through intensifying the use of electronic means in teaching and communication, and disseminating knowledge and information.

- c) University e-learning helps in: “transmitting educational experiences by presenting topics in a model manner (Mustafa, 2012).”
- d) It is characterized by the possibility of repeating outstanding educational practices (Mustafa, 2012), which increases the professor’s expertise because the presence of educational models enriches his teaching position, and such practices are facilitated for him through the repetition of his teaching actions.
- e) It contributes to reducing some of the professional burdens of the professor that usually waste his time, such as “the optimal use of audio and video techniques and related multimedia, and reducing the administrative burdens of the teacher, such as receiving assignments, and recording attendance... (Mustafa, 2012).”
- f) It creates for students an interactive learning environment, usually characterized by the presence of communication channels that encourage purposeful discussions and the exchange of educational experiences among them, such as virtual classrooms.
- g) It is considered an important element in planning the advancement of universities, as it helps higher and responsible bodies in universities to plan well to generalize electronic technologies across all higher education institutions, making them cover the largest part within the surrounding society.
- h) The organization of university institutions’

administrative work, linking them with society and the labor market, and contributing to their development and advancement.

2.3. The Objectives of E-Learning:

E-learning aims to support interactive environments in higher education institutions through: (Sharif Murad, Azzouz Mounir, 2018)

- a) Providing a flexible educational environment, and preparing a qualified teaching staff skilled in using modern teaching strategies and methods. Supporting the process of interaction between students, learners, and assistants through the exchange of experiences, opinions, and purposeful discussions and dialogues.
- b) Enabling teachers to acquire technical skills to use modern educational technologies.
- c) Enhancing the curriculum through engaging in electronic activities.
- d) Providing the learner with self-learning skills.
- e) Developing the role of teachers in the educational process so that it keeps pace with successive scientific and technological developments.
- f) Making training more flexible and freeing it from complex constraints, as study is characterized by the absence of temporal and spatial barriers such as the need to travel to university centers and training institutes.
- g) Developing the individual's personality spiritually, mentally, physically, and emotionally, and cultivating his inclinations and talents while advancing his abilities and skills.
- h) Providing students with information and knowledge that traditional education cannot deliver.



- i) Eradicating informational illiteracy among workers in all fields of education.

2. Interactive Environments: Their Concept, Positives and Negatives

3.1. The Concept of the Interactive Environment:

The interactive educational environment is considered one of the environments that ensures the education of students in a refined and diverse manner, adopting scientific methods that help in understanding educational contents at the university level, requiring active student engagement and participation with others while receiving scientific knowledge. Thus, interactive environments in their modern concept differ from old methods of education, as they provide direct education through advanced tools and platforms that contribute in one way or another to effectively involving the student in learning university educational content, where his learning revolves in a lively communicative environment in which he is the backbone, and the teacher a guide and mentor.

If the concept of e-learning is the delivery of educational content to students through more technological means relying on the tools and mechanisms of the digital age—defined as “education in which educational content is delivered through electronic media such as the Internet, intranet, satellites, laser discs, or audiovisual tapes, and can be defined as a method of education using modern communication mechanisms such as the computer, networks, and multimedia”—then interactive e-learning is: “the teacher directly interacting with students, and all students being able to interact with each other directly and

with the teacher at the same time. This mode of learning involves direct shared interactive indicators with sound and image; shared screens, and the possibility of storing information for future uses (Al-Saeed, 2013)."

From this we derive the concept of the interactive environment, and according to the definition of Mahwous Mohamed Mahwous Falah, it is: "a free educational network, a safe and easy method used to exchange ideas and share educational contents. It also provides an opportunity to access assignments and view the contributions and works of student groups. Parents can log in with their own accounts to see their children's grades and assignments, and the teacher can communicate with parents and notify them of late assignments and activities through the site. In addition, the teacher can communicate with his students in the classroom, and other students in other classrooms (Falah, Mahwous Mohamed Mahwous, 2009)."

Interaction is classified into two types, as illustrated in the following figure:

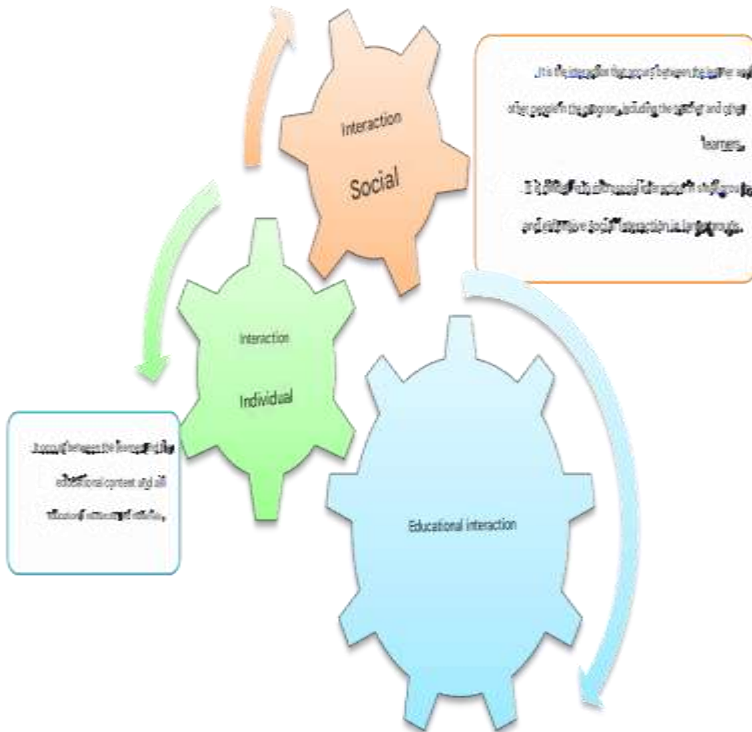


Figure No. (01): Types of Educational Interaction (Mahmoud, 2012).

Thus, interactive education constitutes an educational system in its own right that relies on what is called educational software, which represents an integrated whole in terms of the multiplicity of sources for delivering curricula to students on the internet, as well as educational programs and various educational activities. Thus, it constitutes synchronous and asynchronous learning, in

which the student is able to receive scientific knowledge in his field of specialization at any time and in any place using “educational technology tools, information, and interactive communication in a way that enables the teacher to evaluate the student (Hanan, 2018),” while overcoming the obstacles that prevent his interactive learning in real environments.

Given the importance of the topic of interactive environments in modernizing methods and strategies of university education, and because they contribute to transforming it from traditional education into a more developed and interactive one among its components during the teaching process, thereby making it distinguished by a qualitative shift from traditional systems to others, we will explain in the following section the positives and negatives of interactive environments in university education:

a) Positives and Negatives of Interactive Environments in Arab University Education:

1. Positives of Interactive Environments in Arab University Education:

These environments have been characterized by interactive features, whose necessity and importance have been emphasized within the teaching of knowledge content for university students, internet users, and faculty members. Those who expressed their appreciation for such environments in advancing and promoting the Arab university, especially in times of crises, as they found them an outlet for solving some of the obstacles to teaching and learning faced by the university professor and his students inside classrooms in reality. Perhaps the most important features of interactive education within university environments are:



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- Interactive environments encourage students to exchange ideas and knowledge information. They contribute to participation, and educational electronic platforms help in sharing content between the different educational and learning components across distances and places.
- Uploading lessons and lectures through secure and more interactive electronic platforms that represent their private environment, including an element of attraction in presenting their information and their own contents.
- They rely on teaching in the language they understand in addition to containing translation, as they provide contents in other languages for those studying in languages other than their own and for foreigners. This facilitates communication for them and speaking in a correct, expressive, and understandable language.
- They led to the creation of training rooms specialized for professors in the field of communication technology and linguistic communication.

Through examining the reality of the educational environment of our university institutions, we notice that there are several obstacles standing in the way of the effectiveness of distance education, the facilitation of digital transition, and the replacement of e-learning and distance education with the required effectiveness in the organizational and academic environment. Based on scientific observation, field monitoring, and through evaluating the experience of distance education during the Corona crisis, we can record a set of obstacles that prevent

the success or effectiveness of distance education in our universities, in order to alert officials to the need to work on addressing them, correcting imbalances, and preparing the appropriate ground for the success of this type of education.

3.2. Negatives of Interactive Environments in Arab University Education:

- a) They require the use of technological devices for long periods of time, causing students impaired vision and physical fatigue for both teachers and students, especially since they are available at all times, and some of them access them at very late hours of the night due to their special circumstances, such as working students. Thus, although positive, they cause health damages.
- b) Lack of training in dealing with these environments among most professors in Arab universities, which reduces the use of some professors of them, and this is due to their habit of traditional education.*
- c) The tools used are imported from foreign parties, requiring the activation of the Arabic language at times. Therefore, most programs compatible with these environments are programmed in languages other than Arabic.
- d) The interruption of the internet signal or its weak flow causes many troubles for all students, and thus wastes a lot of their time. This is because the majority of their basic education in Arab schools lacked such interactive environments, so their education was fundamentally based on traditional education.



Conclusion:

In general, we notice that Arab universities were prompted by special and very urgent circumstances to adopt education through interactive environments, among which we mention:

1. The openness of e-learning to various university environments, and it is no longer monopolized by foreigners.
2. The urgent need to improve the quality of training in line with the requirements of ensuring the quality of education and its nature in distance learning to keep pace with the development of universities in developed countries.
3. The abundance of problems and the pressures of pedagogical supervision and institutional management in light of the increasing number of students in classrooms.
4. The spread of infectious diseases and epidemics such as the Corona pandemic in the recent period, which required changes in many aspects of life: intellectual, cultural, political, and social, etc.

These and many other circumstances formed a strong motive for Arab higher education institutions to teach students through interactive environments, which led them to strive hard to add alternative methods with new intelligent procedures and applications that enhanced the pedagogical aspect across all its branches. They contributed to providing knowledge contents to students with more technical and advanced methods, undertaking to deliver

information to them in a constructive interactive way, indicating the extent of their success in attempting to localize the features of this educational pattern in university environments. What proves this is that they ensured the launch of supported electronic platforms for teaching university knowledge contents to students, such as the Moodle platform adopted in teaching students remotely in Algeria and other countries around the world.

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