

DIAGNOSTIC STUDY OF DIGITAL EDUCATION BARRIERS AMONG A SAMPLE OF PSYCHOLOGY DEPARTMENT PROFESSORS - UNIVERSITY OF ANNABA -. Dr. HARIOU DZAIR¹.

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Abstract:

The current study aims to diagnose the barriers of digital education among a sample of professors from the model "Department of Psychology and Artophonics - University of Annaba". This is achieved by identifying organisational barriers, human barriers and economic barriers. The study followed a descriptive approach and data collection was based on a questionnaire administered to a simple random sample of 35 professors, representing 53.84% of the total. For the statistical analysis, the percentage descriptive statistical method was used. The results showed the presence of organisational barriers, mainly the lack of infrastructure for digital education, the unavailability of technological resources and the infrequent updating of digital learning platforms. Human barriers included insufficient technological skills, lack of skills in designing digital learning content and insufficient training in digital learning software. Economic barriers included the high cost of communication bills and technological resources, and the inability to allocate a budget specifically for digital education.

Keywords: Digital education, organisational barriers, human barriers, economic barriers, professors.

Introduction:

Due to technological advancements that have impacted various aspects of life, especially higher education, there has been a constant influx of vast amounts of information. This necessitates the adoption of modern teaching methods to keep up with the ongoing explosion of knowledge. One of these modern teaching methods is digital education, which involves designing lessons and delivering their content through smart devices, the internet and computers. This approach allows students to actively interact with classroom content and gives them access to educational resources anytime, anywhere. To ensure the success and quality of digital education, it is essential to consolidate efforts between technical experts and stakeholders in the educational process. In addition, continuous evaluation of this type of education by specialists is crucial in order to identify and remove the barriers that hinder the digital education process.

First, the conceptual framework of the study:

1. Problem statement:

The use of digital education is not a new concept and has been in practice for several years. However, in the context of the global COVID-19 crisis, it became necessary to implement digital education in the Algerian context. In particular, the higher education sector has been forced to adopt digital education methods, which require the use of essential digital technology skills by both teachers and students. It also requires the provision of an organisational environment that meets all the requirements for successful digital education. Based on this premise, we conducted a diagnostic study of the barriers to digital education among professors. Our study is guided by the following research questions:

- What are the barriers to digital education among professors in the Department of Psychology and Artophonics at Annaba University?
- What are the organisational barriers to digital education among professors in the Department of Psychology and Artophonics at Annaba University?
- What are the human barriers to digital education among professors in the Department of Psychology and Artophonics at the University of Annaba?
- What are the economic barriers to digital education among professors in the Department of Psychology and Artophonics at the University of Annaba?

2. Objectives of the study:

The study aims to identify the barriers of digital education among professors in the Department of Psychology and Artophonics at the University of Annaba by investigating:

- The organisational barriers of digital education among professors in the Department of Psychology and Artophonics at the University of Annaba.
- The human barriers to digital education among professors in the Department of Psychology and Artophonics at the University of Annaba.
- The economic barriers to digital education among professors in the Department of Psychology and Artophonics at Annaba University.

3. Procedural concepts of the study:

3.1 The concept of digital education:

Digital education refers to the type of education that takes place at a distance between the two parties involved in the educational process, namely the teacher and the student, using modern electronic media.

3.2 Concept of barriers to digital education:

In this study, barriers to digital education are defined as obstacles that hinder the process of digital education and have a negative impact on its effectiveness. These barriers include

3.3 Concept of Organisational Barriers:

Organisational barriers refer to the obstacles that hinder the process of digital education, such as the lack of infrastructure for digital education, including classrooms and laboratories, weak Internet connectivity, infrequent updating of educational platforms, and difficulties in providing timely maintenance.

3.4 The concept of human barriers: Barriers include obstacles created by individuals, both students and teachers. These barriers include lack of technological skills, lack of training, insufficient focus on digital education, reluctance to engage in digital education and inability to design digital lessons effectively.

3.5 The concept of economic barriers:

Economic barriers refer to the collection of obstacles that hinder the process of digital education. These barriers include expensive telecommunication costs, high prices of technological devices, financial constraints of Algerian households, and the inability to allocate a specific budget for digital education.

Previous studies:

Numerous studies and research have addressed the issue of barriers to digital education, including both Arab and foreign studies. Here we aim to provide an overview of some of these studies:

Arabic studies:

- **Rady, Mervat and Shahin, Ibrahim (2010):** "Barriers to the use of e-learning in the technological education programme and strategies to overcome them at Palestine College". The purpose of this study was to identify the barriers to the use of e-learning in the technological education program and to explore strategies to overcome them at Palestine Technical College in Deir Al-Balah. The researchers used a descriptive-analytical methodology with a sample size of 37 participants. The findings revealed the existence of administrative barriers, including a lack of targeted training programmes for staff and inadequate funding for e-learning needs. Other barriers were related to trainers, such as their limited awareness of educational culture. Infrastructure and technical support barriers included limited financial resources and the lack of a media production centre. Finally, student-related barriers included their limited awareness of e-learning culture and their inconsistent ability to use e-learning skills.

- **Al-Hawamdeh, Mohammad Fuad (2011):** "Barriers to the use of e-learning from the perspective of faculty members at Al-Balqa Applied University". This study aims to identify the barriers to the use of e-learning and examine the impact of academic specialisation and obtaining the International Computer Driving Licence (ICDL) on these barriers. The study used a descriptive methodology and data was collected using a questionnaire distributed to a sample of 96 participants. The results showed that teachers face several barriers, including administrative and financial barriers, barriers related to e-learning itself, and barriers related to teachers and students. Furthermore, the study found no statistically significant differences between the mean estimates of faculty members in scientific academic disciplines and those in literary academic disciplines regarding barriers to the use of e-learning across all study dimensions. Similarly, there were no statistically significant differences between the mean ratings of faculty members who had obtained the ICDL and those who had not.

- **Al-Maliki, Hanan (2019):** "Challenges facing families in the era of digital education and the dilemma of private tuition". This study aimed to identify the challenges facing families in the digital education era, particularly in relation to private lessons. The study used a descriptive-analytical methodology and employed observation and interviews as data

collection tools. The sample consisted of 21 parents. The findings revealed the existence of challenges such as constant network interruptions and high costs associated with internet bills.

- **Conna, Julie K. (2007):** "Integrating Live Interactive Electronic Courses into the High School Curriculum". The purpose of this study was to identify barriers to the use of live interactive electronic courses in high schools. An electronic survey was sent via e-mail to high school principals in Iowa, Missouri, and Nebraska. The study sample consisted of 270 principals from these states, and the responses were evenly distributed. The majority of schools included in the study were small and rural schools, accounting for 86% of the sample. The results showed that the most significant barriers were financial barriers, followed by technology-related barriers. Barriers that were considered moderate included teachers' beliefs about the quality of online learning and their concerns about student motivation.

- **Anderson, Terry (2008):** This study aimed to identify the main challenges faced in e-learning courses in Sri Lanka. The study involved 1,887 participants and data was collected from 2004 to 2007. The study covered the perspectives of both students and teachers. Quantitative methods were used to identify the most important factors, followed by qualitative analysis to explain the significance of these factors. The study identified seven key challenges in the following areas: student support, flexibility, teaching and learning activities, inputs (infrastructure and computer networking), academic credibility (student quality and prior subject mastery), local language and attitudes.

Second, the theoretical framework:

1- Definition of digital education:

The Arab Organisation for Administrative Development defines digital education as: "A method of teaching and learning that uses technological media to transfer information between the teacher and the learner, such as computers, networks, and media such as audio, visual, electronic libraries, the Internet, and others. This use can be as simple as using these electronic media to present and discuss information in classrooms, or it can extend to what are known as virtual classrooms, where the educational process takes place through network technologies, video and others". (Baji Abdelqader et al., 2022, p. 3)

It is also defined as: "Instant electronic communication between the teacher and the student through communication networks via the Internet, making the college a networked institution." (Jabouri Ismail et al., 2022, p. 8)

Researcher Laajrash defines it as: "A method of teaching using modern communication tools such as computers, networks, and various media such as audio, visual, graphics, research tools, electronic libraries, as well as electronic portals, whether at a distance or in the classroom, using technology in all its forms to deliver information to the learner in the shortest time, with the least effort and the greatest benefit." (Laajrash, 201, p. 21)

Some argue that: "The provision of electronic educational content through multimedia on computers and their networks, enabling the learner to actively interact with this content, with the teacher and with peers, whether synchronously or asynchronously. It also enables the completion of this learning at a time, place and pace appropriate to their circumstances and abilities, and the possibility of managing this learning through these media". (Khasaf Hamid Zainab, 2020, p. 373)

Therefore, digital education is the parallel and complementary education to formal education that uses a range of available technological media to deliver educational content under the best conditions for the learner, while ensuring their interaction with the teacher and peers.

2. Characteristics of digital learning: Digital learning has several characteristics that distinguish it from traditional education and allow for a new virtual learning environment. These unique characteristics of digital learning can increase students' love of learning and improve educational outcomes, especially as today's generation finds itself in the midst of these communication and technological innovations that are essentially part of their environment. Some of these features are: (dahmani samir .2019 ,p:32).

- **Multimedia:** (One of the most important characteristics of digital learning is its flexibility in use and learning, as well as optimal interaction with educational content due to the abundance of available alternatives in presentation, which increases the efficiency of the educational process).

- **Interactivity:** (Interactivity is achieved in digital learning when there is interaction between the learner and another party, or between the learner and the educational content, as well as between the learner and the tool carrying the content, which is a unique feature of modern communication technology and increases the strength of the learning relationship).

- **Flexibility:** (Flexibility is a feature of digital learning that is manifested in the student's ability to access educational content regardless of the method of its presentation. This is a feature of modern communication technology that allows students to make choices, to meet their needs and to increase their motivation to learn. It also allows easy access to multiple sources).

Empowering learners: Digital education relies on advances in digital technology such as sound, images, video, the Internet, computers and supported media. All these elements increase the empowerment of learners and extend their access to the educational material provided, whether in terms of presentation methods, timing or even the method of presenting and explaining the content they want, if available, such as reading a written topic and then having access to a video explaining the same topic they read. The characteristics of digital education also include

- **Accessibility:** (One of the most important features of digital education is the ease of access to its elements. Electronic educational elements can be published and downloaded on the Internet, making them easily accessible, usable and useful in different educational situations). (Jabouri Ismail et al., 2022, p. 11)

- **Utilisation and re-use:** (It is possible to make some minor modifications to the content of any element of digital education, allowing it to be used in another educational setting). (Baji Abdelkader et al., 2022, p. 4)

- **Adaptability:** (Some characteristics of each digital educational element, such as colour, size, font type and size, can be changed to suit the educational situation).

- **Uniqueness:** (This means that this element can be run directly without the need to use any programs to run or open it. In some cases, modern technologies such as smart applications are used).

- **Interactivity:** (One of the most important features of digital education is interactivity, where this feature allows the learner to interact with the learning element by dragging and dropping, placing a frame around the image or writing a comment on it. The learner is active and interactive as he/she can, for example, communicate with the teacher or leave comments on a topic that deserves the learner's special attention).

And there are those who add the following characteristics:

- Strengthening individual formation and providing communication and mutual interaction.
- Moving from a knowledge transfer model to a guided education model.
- Encouraging dynamic and lively learner participation.
- Emphasis on skills, especially higher order thinking skills.
- Provide multiple levels of interaction and encourage active learning.
- Focus on the educational process of discussing and studying real life problems for learners. (Khasaf, Hameed, Zainab, 2020, p. 373)

The set of characteristics discussed regarding digital education confirms its existence as an inevitable alternative to traditional education. It efficiently delivers content to ensure the quality of the educational process.

3- The importance of digital education:

Digital education has become an integral part of the education system and has significantly changed the way we perceive education in today's world. It brings many benefits and advantages that countries, communities and students can benefit from in the future. (Khasaf, Hameed, Zainab, 2020, p. 382) The importance of digital education is evident from what Al-Qarni pointed out as follows: (Kensara, Hussein bin Ali, 2022, pp. 495-496)

- **Increased connectivity among students:** Digital education helps to increase students' communication with each other and with educational institutions, and encourages students to participate in the issues at hand.
- **Facilitating diverse student perspectives:** This is achieved through instant forums such as discussion boards and chat rooms, which provide an opportunity to exchange views on the issues being discussed.
- **Promote a sense of equality:** Digital communication platforms allow every student to express their opinions without hesitation, unlike traditional classrooms where seating arrangements, weak voice projection or shyness may limit their ability to speak.
- **Easy access to teachers:** Digital education allows quick access to teachers as students can send their queries via email. This is a convenient feature for both teachers, who don't need to be tied to their offices, and students, who can send queries at any time.
- **Flexibility in teaching methods:** It is possible to deliver content in a way that suits individual students. Students can benefit from visual, auditory or textual methods according to their preferences. This allows digital learners to use the resources in a variety of ways.
- **Suitable for a range of learning styles:** Digital education allows learners to focus on important ideas when writing and compiling lectures. It also accommodates students who have difficulty concentrating, as content is visually organised and key elements are clearly defined.

- **Availability of curricula throughout the day and every day of the week:** This benefits individuals who prefer to study at specific times and those who have personal responsibilities and commitments. It allows them to learn at a time that suits their circumstances.

- **Continuity of access to curricula:** Students can access the information they need at a time that suits them.

- **Independence from physical presence:** Modern technology has provided means of communication without the need to be present at a specific place and time.

In light of these points, digital education improves performance and creates an environment of creativity, innovation, excellence and competition. It improves the ability to plan effectively and encourages students to prepare for e-learning.

4- Aims of digital education:

Digital education aims to provide educational content to learners through a range of technological media in order to achieve several goals, including the following main objectives (Al-Ahmari, Saadia, 2015, p. 4):

- Creating an interactive learning environment through new electronic technologies and diversifying sources of information and experience.

- Improving the relationship between parents and the school and between the school and the external environment.

- Encouraging interaction between pupils, teachers and assistants through the exchange of educational experiences, opinions, discussions and targeted dialogues using various communication channels such as e-mail, chat and virtual classrooms.

- To equip teachers with the necessary technological skills to use modern educational technologies.

- To equip students with the skills and competences necessary to use communication and information technologies.

- To model and deliver education in a standardised way.

- Developing a role for learners in the development of the educational process to keep pace with continuous scientific and technological advances.

- Expanding students' communication networks through global and local communication platforms, not limiting knowledge acquisition to teachers alone, by linking educational websites to other educational platforms for students to access additional resources.

- Creating educational networks to organise and manage the work of educational institutions.

- Providing education that is appropriate for different age groups, taking into account individual differences between learners.

By examining these objectives, it becomes clear that digital education aims to ensure the improvement of competences related to the educational process, as a higher goal that leads to innovation in the field.

5- Advantages of digital education:

Digital education has several advantages that help institutions to use it effectively according to their needs. It allows for the modification of its components to suit the nature of the institution's work. The main advantages of digital education are:

- **Flexibility:** It offers learners the opportunity to learn regardless of the constraints of time and place.

- Impact and effectiveness: Research on digital education systems has shown that they match or exceed traditional education systems in terms of impact and effectiveness, especially when these technologies are used efficiently.
- Cost-effectiveness: Many forms of digital education do not require significant financial investment.
- Overcoming barriers: Digital education is not constrained by time or place (Baji, Abdul Qadir, et al., 2022, p. 5).

6- Digital education skills:

The digital education skills required of teachers in educational institutions include (Burkesa, 2013):

- Ability to create and use email accounts.
- The ability to use search engines and browse websites.
- The ability to support activities with modern multimedia files such as images, audio and video.
- Ability to download and upload books and software from the Internet.
- Be familiar with different methods of communication on the Internet.
- Use computer programmes to prepare daily and periodic plans for activity content.
- Ability to search electronic library indexes through educational institutions' websites.
- Ability to convert educational activity content into simplified and engaging electronic lessons.
- Ability to use graphic editing and digital imaging programs such as Photoshop.
- Follow conferences and recorded audiovisual materials online.
- Register in educational and specialised blogs on the Internet to participate in and benefit from the latest applications in teaching methods.
- Use multimedia programmes such as Premiere.
- Use email to communicate with students and for teaching purposes.

7- Challenges to digital education:

There are several obstacles that hinder the achievement of digital education, including

- Factors related to human resources (teachers, students) and material resources (equipment, laboratories, software and infrastructure including communication networks).
- Hardware-related barriers to the use of digital education. There are also barriers related to software, in terms of its novelty and inappropriateness to the level of the students.
- Lack of computer skills.
- Insufficient training courses for teachers on electronic programmes.
- Lack of teachers specialised in digital education.
- Weak Internet network and frequent interruptions.
- Power cuts.
- Lack of student enthusiasm for online learning.
- Limited ability to effectively deliver content using digital education.
- Busy daily schedules that prevent the use of digital education.
- Insufficient availability of computers provided by school management.
- Lack of physical resources to support digital education.
- Lack of incentives for teachers to use digital learning.

- Lack of dedicated computer labs.
- Difficulties in implementing digital education for students with special needs.
- Digital education requires additional efforts (Hamid Al-Jumah, Safaa Abdul Zahra, 2019, p. 116).

3. Field procedures of the study:

Spatial field of the study:

The study was conducted at the Department of Psychology and Artophonics, Faculty of Humanities and Social Sciences, Baji Mokhtar University, Annaba.

Time frame of the study: The study lasted from 4 March 2023 to 2 April 2023.

Methodology of the study: The study adopted a descriptive methodology, which is known for its focus on studying a phenomenon as it exists in reality. It aims to provide a detailed qualitative and quantitative description of the phenomenon. Qualitative expression describes the phenomenon and clarifies its characteristics, while quantitative expression provides a precise numerical description, illustrating the magnitude of the phenomenon or its correlation with other phenomena. This methodology goes beyond the collection of information on the phenomenon in order to explore its various aspects and relationships. It also involves an objective analysis and accurate interpretation of the information collected in order to reach conclusions that form the proposed framework (Fouzi Gharabia et al., 2007, p. 77). This methodology is appropriate to the nature and characteristics of the subject of the study.

Research community and sample:

The research community consisted of 65 professors in the Faculty of Psychology and Artophonics from different specialities. A simple random sampling method was used and a sample of 35 professors was selected, representing 53.84% of the total research community. The characteristics of the study sample are presented in Table 01, which illustrates the variable of gender.

Table 01: Characteristics of the study sample in relation to the gender variable

Gender	Frequency	%
Male	13	37.14
Female	22	62.85

Table (01), which illustrates the characteristics of the study sample in terms of the gender variable, shows that the majority of the study participants are female.

Table 02: illustrates the characteristics of the study sample in terms of the variable age.

Age groups	Frequency	%
28-38	18	51.42
39-49	13	37.14
50-60	04	11.42

Table (02), which illustrates the characteristics of the study sample in terms of the variable of age, shows that the majority of the study sample falls within the age range of 28-38 years, indicating that the study sample is predominantly composed of young individuals.

Table 03: illustrates the characteristics of the study sample in terms of the variable of seniority in the workplace.

Years of Work Experience	Frequency	%
Less than 5 years	14	40
6-11 years	08	22.85
12-17 years	11	31.42
18-23 years	02	5.71

Table (03) shows that the majority of the study participants have less than 5 years of seniority in the workplace.

Data collection tools: The survey tool was used, which is defined as a set of written questions or statements, provided with possible answers or opinions, or left blank for response. Respondents are asked to indicate what they consider important, applicable or the correct answer. (Saleh Assaf, 1995, p. 311).

The survey covered four dimensions, the first of which related to personal variables such as age, gender and length of service. The second dimension focused on organisational barriers to digital literacy, the third dimension addressed human barriers to digital literacy, and the fourth dimension addressed economic barriers to digital literacy.

Table (04):The distribution of survey items across the study dimensions

Dimensions	Items
Organizational Obstacles	S1-S2-S3-S4-S5
Human Obstacles	S6-S7-S8-S9-S10
Economic Obstacles	S11-S12-S13-S14

Statistical analysis methods:

Percentages were used for data processing in the study.

Fourth: Framework of the study

Presentation of the study data and discussion and analysis of the results in the light of the study objectives.

Table (05) illustrates the responses of the study participants to the dimension of organisational barriers.

Items	Yes		No	
	F	%	F	%
Our university does not provide modern electronic resources that we rely on for digital learning.	31	88.57	4	11.42
The poor availability of the Internet network hinders my digital learning process.	29	82.85	6	17.14
The lack of updating of e-	29	82.85	6	17.14

learning platforms in our university hinders the digital learning process.				
The lack of digital learning infrastructure in our university hinders my digital learning process.	26	74.28	9	25.71
Difficulty in providing timely maintenance by specialists hinders the digital learning process	23	65.71	12	34.28

Based on the responses of the study participants regarding organisational barriers, it is evident that the majority confirm the existence of organisational barriers that hinder the process of digital education among psychology professors at Annaba University. Specifically, 88.57% of the study participants indicated that the university does not provide them with electronic resources to assist them in online teaching, while 82.85% perceive a weakness in the Internet network and lack of updating of educational platforms by the university as causing significant problems in the process of digital education. In addition, 74.28% said that the university does not provide them with the necessary infrastructure, such as technological equipment, classrooms, laboratories and other conditions that facilitate the process of digital education. In addition, 65.71% of them believe that the lack of rapid maintenance by specialists disrupts the process of digital education.

It can be concluded that the organisational barriers to digital education identified in our study can be attributed to the university's inability to provide the aforementioned factors due to its limited budget. Furthermore, the sudden introduction of digital education due to the pandemic conditions requires preparation, time and effort. Therefore, these results are consistent with the findings of the studies conducted by Kona (2007), Anderson (2008), and Hanan Al-Maliki (2019), all of which confirmed the existence of administrative barriers and others related to infrastructure, such as continuous internet disruptions.

Table (06) illustrates the study participants' responses to the human barriers dimension.

Items	Yes		No	
	F	%	F	%
6. My lack of professional skills in using technology hinders the digital learning process.	29	82.85	6	17.14
7. My inability to design digital lessons makes it difficult for me to deliver them.	23	65.71	12	34.28
8. The lack of training in	31	88.57	4	11.42

digital learning leads to stagnation in the educational process.				
9. My lack of interest in digital learning makes it difficult for me to engage in it.	24	68.57	11	31.42
10. Students' lack of interest in digital learning reduces their active engagement in digital education.	25	71.42	15	42.85

Based on Table 06, it is evident that the majority of the study variables indicate the presence of economic constraints that hinder digital education. About 88.57% of the participants confirmed that the high cost of communication bills and expensive technological equipment and accessories are the main obstacles to digital education. In addition, the economic situation of Algerian families does not allow them to afford a digital learning environment as long as digital education takes place everywhere and away from universities. In addition, 85.71% of the participants stated that the inability of educational stakeholders to allocate a budget specifically for digital education hinders its progress.

It can be concluded that these types of constraints affect different segments of society, given the high standard of living, purchasing power and insufficient income to meet basic needs. In addition, the lack of motivation for digital education and the lack of awareness about it contribute to the obstacles. These findings are consistent with the results of previous studies conducted by Mohamed Fouad Al-Hawamdeh (2011), Kuna (2007), and Rady Marfoua and Shahin Ibrahim (2010).

In conclusion, digital education is seen as a modern educational method that has brought quality improvements to the teaching and learning process.

It has contributed to the advancement of educational technology and has eliminated many of the negative aspects associated with traditional education. However, it still needs to be restructured, especially within our local community, in order to improve it. The results of our study have revealed several barriers to digital education in the study area, which mainly include organisational barriers, such as the lack of infrastructure for digital education, the unavailability of technological resources and the constant updating of digital learning platforms. Human barriers include a lack of professional skills in the use of technology, insufficient skills in the design of digital educational content and insufficient training in digital educational software. Economic barriers include the high cost of communication bills and technological equipment, as well as the inability to allocate a specific budget for digital learning resources. Based on the findings of the study, we propose the following recommendations:

Based on the responses of the study participants regarding human barriers to digital education among psychology professors at Annaba University, it is evident that the majority of the responses confirm the existence of human barriers. Specifically, 88.85% of the study

participants perceive a lack of training courses related to digital education, which hinders the process of digital education. In addition, 82.85% of them believe that a lack of professional skills related to the use of technology hinders digital education. Furthermore, 71.42% of the participants in the study stated that students' reluctance to engage in digital education reduces active interaction between the parties involved in the educational process. In addition, percentages ranging from 65.71% to 67.57% confirm that a lack of skills in designing digital lessons makes it difficult to deliver them effectively.

It can be concluded that these human obstacles, originating from individuals, whether professors or students, can be attributed to different factors. Since individuals are products of their environment, if students or professors are in an advanced environment that fosters productivity, it can have a positive impact on them, and vice versa. Therefore, individuals need to pursue self-development, seek opportunities for improvement and take advantage of them. This proactive approach can lead to positive outcomes, rather than waiting for others to initiate change. Consequently, these results are consistent with the findings of studies conducted by Mohammed Fuad Al-Hawamdeh (2011), Rady Marfot and Shahin Ibrahim (2010) and Anderson (2008).

Table (07) illustrates the responses of the study participants to the dimension of economic barriers.

Items	Yes		No	
	F	%	F	%
11. The high cost of communication bills hinders the digital learning process.	31	88.57	4	11.42
12. The exorbitant cost of technological resources hinders digital learning.	31	88.57	4	11.42
13. The poor financial status of families makes it difficult to provide an environment conducive to digital learning.	24	86.57	11	31.42
14. The inability of both parties involved in the educational process to allocate a budget specifically for digital education.	30	85.71	5	14.28

Based on Table No. (07), which illustrates the responses regarding the impact of economic barriers on digital literacy, it is clear that the majority of study participants acknowledged the presence of economic barriers to digital literacy. Specifically:

- 88.57% of the sample confirmed that the high cost of internet bills and the expensive prices of technological devices and accessories hinder digital education. In addition, the financial situation of Algerian families does not allow them to provide a digital learning environment until digital education is accessible everywhere and outside the university.

- 85.71% of respondents stated that the inability of educational stakeholders to allocate a specific budget to digital education hinders its progress.

This type of obstacle affects different segments of society due to the high standard of living, purchasing power and low income that does not cover basic needs. In addition, a lack of motivation for digital education and a lack of awareness about it contribute to these barriers. Consequently, these findings are consistent with the results of previous studies conducted by Mohammed Fuad Al-Hawamdeh (2011), Kuna (2007), and Rady Mervat and Shahin Ibrahim (2010).

Conclusion:

In conclusion, digital education is seen as a modern educational method that has brought about qualitative changes in teaching and learning approaches.

However, it requires restructuring, especially in local society, in order to increase its effectiveness. The results of the study reveal various obstacles to digital education, including organisational obstacles such as the lack of infrastructure for digital education, the unavailability of technological resources and the failure to continuously update digital learning platforms. There are also human barriers, such as a lack of technological knowledge, insufficient skills in designing digital learning content, and insufficient training in digital learning programmes, as well as economic barriers, such as the high cost of internet bills and technological equipment, and the inability to allocate a specific budget for digital learning.

Based on the findings of the study, the following recommendations are proposed:

Recommendations:

- It is crucial that the university allocates a specific budget for digital education to meet the needs of both teachers and students.
- Provide the necessary infrastructure, including technological resources and equipment, to create an appropriate organisational climate for teachers.
- Provide continuous training in the use of technology for those involved in education.
- Provide electronic maintenance specialists.
- Improving living standards and income levels to meet the needs of individuals in society, particularly in terms of modern equipment and technological resources.

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