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The Role of Digital Technology Use in Fostering Digital Citizenship Values at Mohamed Cherif Messaadia University, Souk Ahras

MANAMANI Nadia

University of Mohamed Cherif Messaadia Souk Ahras, Algeria

n.manamani@univ-soukahars.dz

Abstract

This study examines the role of digital technology in promoting digital citizenship values among students at Mohamed Cherif Messaadia University, Souk Ahras. It assesses the level of digital technology adoption and the university's contribution to strengthening digital citizenship. A descriptive-analytical approach was used with a random sample of 66 students during the 2022/2023 academic year. The findings reveal that digital technology has only a limited contribution to achieving digital citizenship objectives. University publications have a weak impact on students' understanding of digital citizenship concepts, while efforts to develop digital skills through distance learning systems and internet services remain modest.

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1. Introduction

In the contemporary era, the use of technology is no longer confined to a specific social class or group; rather, it has become equally accessible to both the rich and the poor and is now deeply integrated into all regions of the world. Human life, along with nearly every aspect of daily activity, has become increasingly digital. Expressions of patriotism and national belonging have also taken digital forms, manifested through online support, digital advocacy, and virtual engagement. Similarly, loyalty to particular institutions or causes is often expressed through likes, comments, and other forms of online interaction. Even personal preferences and everyday consumption patterns are now digitally mediated through recommendations, delivery services, and digital commerce (Sharifi, 2017).

In this context, digital citizenship refers to the conscious and responsible use of digital technology, the ability to engage effectively with its tools, and the competent participation in virtual digital environments. It also involves maximizing the benefits of digital interactions while avoiding the risks associated with cybercrime. However, the continuous and uncontrolled use of digital technology may generate a globally connected generation with a weakened sense of belonging to a specific community, thereby shifting the concept of citizenship from one rooted in historical, cultural, and civilizational identity to one increasingly shaped by the digital sphere.

Accordingly, a responsible digital citizen must adopt appropriate security measures to protect personal data and privacy from external threats. Digital citizenship has therefore become an essential necessity across all societies, particularly during times of crisis. The COVID-19 pandemic provided clear evidence of this transformation, as the world rapidly moved toward digitalization in general and higher education institutions in particular became increasingly dependent on distance learning technologies, enabling remote interaction without the need for physical attendance (Abdelrahman & Ibrahim, 2018).

2. Research Problem

This study seeks to examine the extent to which the university integrates digital technology and to assess the current state of digital citizenship within the digital academic community, as well as the university's role in promoting it. Accordingly, the following central research question was formulated:

"To what extent does the use of digital technology contribute to fostering digital citizenship values at Mohamed Cherif Messaadia University, Souk Ahras?"

This central question gives rise to the following sub-questions:

a) To what extent does digital technology contribute to achieving the objectives of digital citizenship among students at Mohamed Cherif Messaadia University, Souk Ahras?
b) To what extent does digital technology contribute to achieving the core dimensions of digital citizenship among

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students at Mohamed Cherif Messaadia University, Souk Ahras?

c) How does digital technology contribute to strengthening digital citizenship values among students at Mohamed Cherif Messaadia University, Souk Ahras?

3. *Reasons for Selecting the Topic*

a. The motivation behind selecting this topic stems from the desire to expand knowledge in this field and to keep pace with contemporary global trends aimed at equipping citizens with the competencies required for the digital world, thereby ensuring the responsible and effective use of digital technology.

b. Another key reason lies in the intention to both contribute and benefit by proposing a practical framework for enhancing the role of Mohamed Cherif Messaadia University, Souk Ahras, in fostering digital citizenship values among its students. As members of this academic community, both researchers and students can directly benefit from such initiatives.

c. It is also essential to examine the level of awareness at Mohamed Cherif Messaadia University, Souk Ahras, regarding the importance of digital technology in the contemporary era, its educational role, and its relationship with digital citizenship in improving the quality of the educational process and achieving the fundamental objective of education: shaping students' personalities in a manner consistent with the demands of modern society.

d. This study also seeks to draw attention to the concept of digital citizenship and to promote its effective implementation.

4. *Significance and Objectives of the Study*

4.1 Significance of the Study

a) The significance of this research stems from the importance of the issue it addresses, namely digital citizenship and the role of the university in promoting it amid contemporary challenges. The findings may support higher education policymakers and administrators in designing strategies and making informed decisions to provide the necessary mechanisms for fostering proper digital citizenship practices.

b) The study may also assist program planners and curriculum designers in developing academic programs and training courses that contribute to preparing and empowering responsible digital citizens.

4.2 Objectives of the Study

Academic research aims to satisfy intellectual curiosity, uncover truth, and clarify ambiguous issues while shedding light on important dimensions of the phenomenon under investigation. In this context, the present study aims to:

a. Clarify the concept of digital citizenship and emphasize the growing necessity of adopting it in an era characterized by the extensive use of digital technology across various sectors.

b. Examine the current role of Mohamed Cherif Messaadia University, Souk

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Ahras, in fostering digital citizenship values among students.

c. Propose a practical framework for strengthening the university's role in instilling digital citizenship values among students.

5. Definition of the Study Concepts

Conceptual clarification constitutes a fundamental step in scientific research, as it enables the researcher to accurately define the terminology of the study both theoretically and operationally. In the present study, the main concepts are identified as follows: use, digital technology, higher education institutions, value, and digital citizenship.

5.1 Concept of Use

5.1.1 Linguistic Definition

Linguistically, the term "use" refers to employing or utilizing something for a specific purpose. In Arabic usage, it also denotes taking someone into service or requesting assistance from another person (Boulos Motran, 1986, p. 171).

5.1.2 Conceptual Definition

The concept of usage emerged in the French language during the seventeenth century and has since referred to a social activity observed through its recurrence and frequency. It denotes the use of something for a specific practical purpose in order to satisfy a particular need. In usage studies, the concept refers not only to practice itself but also to behaviors, habits, and attitudes.

Lacroix defines usage as follows: "Social uses are patterns of utilization that appear with sufficient regularity to become integrated habits in the daily life of the user. These practices impose themselves within pre-existing cultural patterns, reproduce them, and may even resist other competing or related practices" (Noui, 2012, p. 23).

5.1.3 Operational Definition

In this study, use is operationally defined as the process through which students browse the official websites of Mohamed Cherif Messaadia University, Souk Ahras, in order to follow the latest university news, announcements, and developments.

5.2 Concept of Digital Technology

5.2.1 Conceptual Definition

Alia Al-Jundi defines digital technology as the methods through which devices and tools are managed and operated using numerical systems (Al-Jundi, 2000, p. 12). Bouchareb Lazhar defines digital technology as the process of converting specific forms of information—such as text, images, and sound—into binary codes composed of zeros and ones. It may also be described as a technical language based on the binary system (0–1), through which electronic messages are encoded, stored in computer memory, transmitted remotely, and retrieved when needed (Bouchareb & Bouloudani Lazhar, 2015, p. 178).

5.2.2 Operational Definition

Operationally, digital technology refers to technologies that transform information into numerical data stored in computer systems, enabling access, retrieval, and use at any time and from any location.

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5.3 Concept of Higher Education Institutions

5.3.1 Terminologically

Higher education refers to academic instruction provided in colleges and university institutes after obtaining the secondary school certificate. The duration of study in these institutions generally ranges from two to four years, and it represents the final stage of formal education (Al-Abadi, 2008, pp. 62–63).
In addition to universities, other common forms of higher education institutions include colleges and academies, which typically focus on one or two specialized fields of knowledge (Arab World Encyclopedia, 1999, p. 25).

5.3.2 Operationally

Higher education institutions provide specialized academic training across various disciplines, preparing students to enter the labor market and contribute effectively to political, economic, and social activities. Accordingly, countries strive to provide sufficient educational capacity to accommodate these students, who constitute the backbone of social development and national progress.

5.4 Concept of Values

5.4.1 Linguistically

The term "value" refers to the worth or significance of something. Anis et al. state that the value of a thing is its importance, while the value of goods refers to their price. It is also said that a person "has no value," meaning that they lack stability or consistency in a particular matter (Anis et al., 1979, p. 768).

5.4.2 Terminologically

Conceptually, value has multiple definitions. Al-Kafi defines it as "a belief that reflects a personal or social preference for a specific behavior or goal rather than another behavioral pattern or alternative objective" (Al-Kafi, 2005, p. 50).

5.4.3 Operationally

In this study, values are operationally defined as a set of human preferences—whether innate or acquired—based on religious, social, cultural, or moral foundations. These preferences create within the individual a conviction and awareness of their importance, making them a reference framework that shapes behavior and interaction within the surrounding environment.

5.5 Concept of Digital Citizenship

5.5.1 Concept of Citizenship

5.5.1.1. Linguistically

The term citizenship is a modern expression in Arabic adopted to represent the Greek word *politeia*, the French term *citoyenneté*, and the English term *citizenship* (Jarrar, 2010, p. 51).

Allah the Almighty states: "Indeed, Allah has granted you victory in many places" (The Holy Qur'an, Surah At-Tawbah, Verse 25).

5.5.1.2. Terminologically

Citizenship refers to participation in social life through the continuity of generations

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across multiple geographical spaces within stable conditions and established standards. It represents the right to coexist with others under environmental, economic, and legislative conditions that ensure justice and fairness among citizens (Darwish, 2009, p. 13).

5.5.5.3. Operationally

Operationally, citizenship refers to the set of principles, responsibilities, and obligations that university students must observe when using digital technology, along with an awareness of the rights they are entitled to while engaging within the digital environment.

5.5.2 Digital Citizenship Concept

5.5.2.1. Operational Definition

The researcher defines it operationally as "a set of principles that university students must observe when using digital technology, encompassing the duties they are required to fulfill during their use of technology, as well as an awareness of the rights they are entitled to while interacting with it."

6. Field Study

6.1 Methodological Procedures of the Study

Based on the research problem and its associated questions, the study population was identified, and an appropriate sample representing that population was selected. This process subsequently guided the selection of the appropriate research methodology and data collection instruments, followed by the statistical analysis of the collected data in order to derive the final results of the study.

6.2 Study Method

The present study falls within the framework of descriptive research, which is concerned with describing both tangible and intangible phenomena and any subject with observable effects. Scientific description is fundamentally based on analysis and cannot be considered scientifically valid unless it is preceded by analytical examination (Al-Samadi, 2018). Accordingly, this study adopts the descriptive-analytical method, as it is among the most widely used approaches in social and human sciences. This method allows for both quantitative and qualitative analysis of the phenomenon under investigation and provides numerical indicators for examining the use of digital technology in higher education institutions and its role in fostering digital citizenship values, as well as assessing the extent to which the first variable influences the second. It also enables the interpretation and analysis of data and findings in order to reach accurate conclusions and answer the study questions.

6.3 Research Population

6.3.1 Research Population

The research population consists of students at Mohamed Cherif Messaadia University, Souk Ahras, during the 2022/2023 academic year.

6.3.2 Study Sample

The study sample was selected through random sampling from the students of the research population and comprised 66 students. An electronic questionnaire was administered using the PORSLINE platform and was distributed across several

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student pages and groups, in addition to being published on the official pages of Mohamed Cherif Messaadia University, Souk Ahras.

Initially, 69 responses were collected. After careful review and screening, the final valid sample was reduced to 66 responses, while 3 questionnaires were excluded due to their unsuitability for scientific analysis, particularly because of inconsistent and contradictory responses.

6.4 Study Boundaries

The study boundaries were classified into spatial, temporal, and human dimensions.

6.4.1 Spatial Boundaries of the Study

- ***Establishment and Development of Mohamed Cherif Messaadia University – Souk Ahras***

Mohamed Cherif Messaadia University in Souk Ahras is considered one of the most significant academic achievements in Souk Ahras Province. It was established in 1998 as an annex affiliated with Badji Mokhtar University of Annaba, initially comprising 270 students, three academic specializations, and five faculty members. It later gained administrative independence under Ministerial Decree No. 270/01 issued on September 18, 2001.

Student enrollment subsequently reached 1,418 students supervised by 91 permanent and associate faculty members across 20 specializations in various academic disciplines. On June 17, 2010, following an official declaration by the Minister of Mujahideen, the university center in Souk Ahras was named after the late Mohamed Cherif Messaadia, with the endorsement of the former President of the Republic, Abdelaziz Bouteflika.

The university administration made significant efforts to strengthen institutional development through the management, supervision, and implementation of several investment projects involving construction, infrastructure development, and equipment provision, which contributed to elevating the institution to the status of a major university.

These achievements enabled the university center to provide the necessary resources for improving pedagogical performance. On December 14, 2011, former President Abdelaziz Bouteflika officially announced the promotion of the university center to a full university under Executive Decree No. 244-12 dated June 4, 2012, concerning the establishment of Souk Ahras University.

The university's infrastructure was further strengthened through the establishment of the Institute of Agricultural and Veterinary Sciences in Taoura, with a capacity of 1,000 pedagogical seats beginning in the 2013/2014 academic year.

Currently, Mohamed Cherif Messaadia University includes the following faculties and institutes:

- Faculty of Arts and Foreign Languages
- Faculty of Humanities and Social Sciences
- Faculty of Law and Political Science
- Faculty of Economic Sciences, Political Sciences, and Management Sciences
- Faculty of Natural and Life Sciences
- Institute of Science and Technology
- Institute of Agricultural and Veterinary Sciences

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- Institute of Sciences and Techniques of Physical and Sports Activities (University of Souk Ahras Official Website, accessed April 12, 2023)

6.4.2 Temporal Boundaries of the Study

The temporal boundaries refer to the period during which the study was conducted, extending from the beginning of February to the beginning of June. During this period, scientific materials were collected, the theoretical framework was prepared, and field investigation was carried out. With the supervisor's guidance, the questionnaire was refined and its content was analyzed. In addition, the content of the university's official Facebook page was examined, interviews were conducted to collect the required data, and the collected data were classified, analyzed, and presented systematically.

7. Statistical Processing of the Field Study

The statistical analysis was performed based on the data collected through the Porsline platform (Porsline, 2023), with the aim of achieving the objectives of the study. The study employed a set of statistical methods to conduct both descriptive and inferential analyses of the questionnaire items, including:

a) Frequencies and percentages, used to describe the study sample and determine participants' response patterns.
b) Arithmetic means, used to rank participants' responses to the items corresponding to the study dimensions.

8. Presentation and Analysis of Field Study Results

8.1 Presentation and Analysis of the Exploratory Phase (Observation and Interview)

8.1.1 Observation

Participant observation was employed as a complementary and supportive tool to verify the findings of the study. Our close engagement with Mohamed Cherif Messaadia University in Souk Ahras, including its administrative departments, faculty members, staff, and students—and considering that we are part of this institution—enabled us to derive the following findings:

a) Both the university and its students demonstrate a tendency toward embodying the values of digital citizenship. Although the concept itself is not explicitly recognized, digital citizenship is practiced in one form or another. These values are already present among students, although generally at a moderate and sometimes weak level.
b) Mohamed Cherif Messaadia University, Souk Ahras, shows limited efforts in fostering digital citizenship values among students, despite the fact that many members of the institution may not fully realize that they are already engaged in such practices. This is further influenced by limited technological resources and insufficient expertise among some faculty members and administrators.
c) The university can achieve this important objective—namely fostering digital citizenship values among students—through the development of

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a clear and well-structured strategic plan with both short-term and long-term goals. Short-term objectives include accelerating the integration of information technology into the educational process and expanding the use of e-learning through its various strategies and models across university systems and operations. Long-term objectives extend toward future-oriented planning by investing in youth potential, creativity, and innovation through effective technological integration.

8.1.2 Interview

Following repeated examination of the interview content and through the application of content analysis, which is considered an important scientific research method, the researcher can employ this approach across various research fields to describe both the explicit content and the apparent meaning of the material under analysis in terms of form and substance. This serves the research objectives formulated in the study questions or hypotheses according to objective classifications established by the researcher (Badawi, 1986, p. 66).

The following categories were identified:

a) The concept of digital citizenship.
b) The contribution of the university's digital technology to achieving the objectives of digital citizenship among students.
c) The most frequently used digital communication technologies within the university.
d) The university's contribution to developing digital citizenship values among university students.
e) The methods and approaches adopted by the university to implement the principles and values of digital citizenship among students.
f) The digital technical resources relied upon by the university to foster digital citizenship values among students.
g) The obstacles limiting the role of digital technology in promoting digital citizenship values among university students.

8.2 Presentation and Analysis of Questionnaire Data

Following the verification of the normal distribution of the sample and the identification of the statistical methods appropriate to the study, the results obtained from the questionnaire were analyzed.

8.2.1 Analysis of Results Related to the First Dimension: Sociodemographic Information

Table 1. Distribution of the Study Sample by Gender

Response	Frequency	Percentage
Male	15	22.7%
Female	51	77.2%
Total	66	100%

Source: Prepared by the researcher based on the field study.

Comment:

The table indicates that the proportion of female students in universities is considerably higher than that of male students. This may be attributed to several

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factors highlighted in previous studies and research. Specialists in psychology and sociology have explained that the nature of upbringing received by females, which differs significantly from that of males, often promotes greater behavioral discipline, making female students generally more academically committed and disciplined than male students.

Table 2. Distribution of the Study Sample by Age

Response	Frequency	Percentage
18–23 years	10	15.1%
24–29 years	35	53%
30–35 years	14	21.2%
Above 35 years	7	10.6%
Total	66	100%

Source: Prepared by the researcher based on the field study.

Comment:

This table illustrates the age distribution of the study sample. The largest proportion of respondents falls within the 24–29 age group, representing 53%, while 21.2% are between 30 and 35 years old, followed by those aged between 18 and 23 years. The smallest proportion belongs to participants above 35 years of age, accounting for 10.6%. This distribution reflects the nature of the respondents and the characteristics of the available sample.

Table 3. Distribution of the Study Sample by Educational Level

Response	Frequency	Percentage
Licence's Degree	10	15.1%
Master's Degree	50	75.7%
Doctorate	6	9%
Total	66	100%

Source: Prepared by the researcher based on the field study.

Comment:

The data presented in the table clearly indicate that Master's students constitute the dominant category within the study sample.

Table 4. Distribution of the Study Sample by Faculty Variable

Response	Frequency	Percentage
Faculty of Science and Technology	3	4.5%
Faculty of Natural and Life Sciences	4	6%
Faculty of Economic Sciences, Commercial Sciences, and Management Sciences	7	10.6%
Faculty of Law and Political Science	6	9%
Faculty of Arts and Languages	9	13.6%
Faculty of Social and Human Sciences	34	51.5%
Institute of Agricultural and Veterinary Sciences	2	3%
Institute of Sciences, Techniques, Physical and Sports Activities	1	1.5%
Total	66	100%

Source: Prepared by the researcher based on the field study.

Comment:

The data clearly show that, despite the variation in percentages, the sample included all faculties and institutes of Mohamed Cherif Messaadia University in Souk Ahras. The highest percentage was recorded for the Faculty of Social and Human Sciences, representing 51.5% of the total sample, which indicates its greater representation in the study population.

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8.2.2 Analysis of Results Related to the Second Dimension: The Achievement of Digital Technology in Fulfilling the Objectives of Digital Citizenship at Mohamed Cherif Messaadia University – Souk Ahras

Table 5. Distribution of the Study Sample According to Their Understanding of Digital Citizenship

Question: What is your understanding of digital citizenship?

Response	Frequency	Percentage
Defining rights and duties through digital technology	24	36.3%
Defining social responsibility through digital technology	17	25.7%
Acceptable use of digital technologies	15	22.7%
Defining laws and ethical regulations in the digital world	9	13.6%
All of the above	1	1.5%
Total	66	100%

Source: Prepared by the researcher based on the field study.

Comment:

Based on the responses obtained and presented in the table, Shaltout states that an individual is classified as a digital citizen when they are capable of using digital devices, interact with them from an early stage, and possess the awareness and knowledge that enable them to deal with them effectively (Shaltout, 2016, p. 104).

Table 6. Distribution of the Study Sample According to the Extent of the Contribution of Digital Technology Used by the University in Achieving the Objectives of Digital Citizenship

Question:Does the digital technology used by the university contribute to achieving the objectives of digital citizenship?

Response	Frequency	Percentage
Yes	42	64%
No	24	36%
Total	66	100%

Source: Prepared by the researcher based on the field study.

Comment:

Despite the existence of some negative views regarding the university's contribution to achieving the objectives of digital citizenship through the digital technology it uses, the majority of the study sample expressed a positive opinion on this issue. This highlights the importance of promoting digital citizenship objectives among students. Digital citizenship has become closely associated with digital life, and the primary educational goal of digital citizenship is to improve learning outcomes and prepare students within a framework of appropriate and responsible technology use, enabling them to become responsible citizens of the twenty-first century.

Table 7. Distribution of the Study Sample According to the Most Frequently Used Digital Technology

Question:What are the digital technologies considered the most frequently used? Rank them from 1 to 6.

Choice / Priority	1	2	3	4	5	6	Total Score	Mean Ranking
Facebook	58	6	2	0	0	0	76	1.15
Instagram	3	51	7	1	3	1	151	2.29
YouTube	2	8	52	2	1	1	193	2.92
Twitter	1	1	1	45	17	1	277	4.20
Telegram	2	0	2	17	43	2	303	4.59
LinkedIn	0	0	2	1	2	61	386	5.85

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Source: Prepared by the researcher based on the field study.

Comment:

Based on the presented data, it is evident that the majority of the sample members agree that Facebook is the most frequently used digital technology. This is consistent with what is observed in reality, where the majority of Algerians use Facebook extensively compared to other platforms due to its multiple functions and features, such as social communication, interaction with family and friends, entertainment, learning, and marketing. It is also noticeable that Mohamed Cherif Messaadia University makes extensive use of its Facebook page to provide information and present various activities, in line with the platform most commonly used by students.

Table 8. Distribution of the Study Sample According to the University's Contribution to Enhancing the Principles of Digital Citizenship Among University Students Through Digital Technology

Question:Does the university contribute to enhancing the principles of digital citizenship among university students through digital technology?

Response	Frequency	Percentage
Yes	35	53.03%
No	31	46.96%
Total	66	100%

Source: Prepared by the researcher based on the field study.

Comment:

From the data presented in the table, it can be concluded that a considerable proportion of students are not fully satisfied with the university's role, through digital technology, in enhancing the principles of digital citizenship among them. This may be attributed to several reasons, which will be discussed later.

8.2.3 Analysis of Results Related to the Third Dimension: The Achievement of Digital Technology in Fulfilling the Core Dimensions of Digital Citizenship at Mohamed Cherif Messaadia University – Souk Ahras

Table 9. Distribution of the Study Sample According to the University's Contribution Through Its Publications to Developing Digital Citizenship Concepts Among University Students

Question:Does the university contribute, through its publications, to developing digital citizenship concepts among university students?

Response	Frequency	Percentage
Yes	48	72.7%
No	18	27.2%
Total	66	100%

Source: Prepared by the researcher based on the field study.

Comment:

Most members of the study sample believe that the university contributes significantly, through its publications, to developing digital citizenship concepts among university students, with a percentage estimated at 72.7%, while 27.2% of respondents believe otherwise, indicating that the university does not contribute through its publications to the development of digital citizenship concepts among students.

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Later, we will identify how the university contributes to developing digital citizenship concepts among university students, as well as the reasons for the lack of contribution, according to the perspectives and responses of the study sample members.

Table 10. Distribution of the Study Sample According to How the University Contributes Through Its Publications to Developing Digital Citizenship Concepts Among University Students

Question: If your answer is "Yes," how does this occur?

Response	Frequency	Percentage of Respondents	Percentage of Total Responses
Diversifying student activities in political, cultural, scientific, and social fields and encouraging participation in them	29	60.41%	47.54%
Diversifying knowledge and making it accessible to all students, such as relying on distance education	5	10.41%	8.19%
Developing a sense of ethical responsibility by involving students in everything related to the university's goals and projects	26	54.16%	42.62%
All of the above	1	2.08%	1.63%
Total Responses	61	127.06%	
Total Respondents	48	100%	

Source: Prepared by the researcher based on the field study.

Comment:

Based on the data presented in the table, it is observed that the university's contribution through its publications to developing digital citizenship concepts among university students occurs primarily through diversifying student activities in political, cultural, scientific, and social fields and encouraging participation in them, according to respondents' answers, with a percentage of 47.54%.

This is followed in second place by developing a sense of ethical responsibility through involving students in matters related to the university's goals and projects, with a considerable percentage of 42.62%. Next comes diversifying knowledge and making it accessible to all students, such as through distance education, with a lower percentage estimated at 8.19%.

Finally, the lowest percentage, estimated at 1.63%, indicates that some respondents believe the university contributes through all of the above-mentioned methods.

Table 11. Distribution of the Study Sample According to the Reasons for the University's Lack of Contribution Through Its Publications to Developing Digital Citizenship Concepts Among University Students

Question: If your answer is "No," why?

Response	Frequency	Percentage
Lack of interest by those responsible for communication in developing the concept of digital citizenship among students	11	61.11%
Students' lack of seriousness and lack of interest in the publications	2	11.11%
Absence of a sense of responsibility among those responsible for communication	5	27.77%
Total	18	100%

Source: Prepared by the researcher based on the field study.

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Comment:

From the data presented in the table, it is observed that the responsibility for the university's limited contribution through its publications to developing digital citizenship concepts among university students lies with both the communication staff within the university and the students' lack of seriousness and interest. Therefore, greater attention should be given to spreading awareness and knowledge, providing the necessary training for both parties, and seeking the support of specialists in the field in order to achieve the desired objectives.

8.2.4 Analysis of Results Related to the Fourth Dimension: The Contribution of Digital Technology to Embodying the Values of Digital Citizenship at Mohamed Cherif Messaadia University – Souk Ahras

Table 12. Distribution of the Study Sample According to the Digital Skills that the University Seeks to Develop Among University Students to Instill the Values of Digital Citizenship

Question: What are the digital skills that the university seeks to develop among university students in order to instill the values of digital citizenship?

Response	Frequency	Percentage of Respondents	Percentage of Total Responses
Creating an effective digital service and controlling and managing it	12	18.18%	15%
Ability to market digital services creatively	22	33.33%	27.5%
Distance education	45	68.18%	56.25%
Remote scientific discussions (Bachelor's, Master's, Doctorate)	0	0%	0%
Remote meetings	0	0%	0%
Opportunity to move to a new job and a new position	1	1.51%	1.25%
Total Responses	80	121.2%	
Total Respondents	66	100%	

Source: Prepared by the researcher based on the field study.

Comment:

From the content of the table, it is observed that the most important digital skill that the university seeks to develop among university students in order to instill the values of digital citizenship is distance education, with a high percentage estimated at 56.25%. Distance education is considered one of the main forms of learning in which knowledge and educational content are delivered through technological means and communication systems using modern tools and techniques.

In second place comes the ability to market digital services creatively, with a moderate percentage of 27.5%, followed in third place by creating an effective digital service and controlling and managing it, with a percentage of 15%, which is considered one of the essential skills that should be learned in light of ongoing technological development.

A very low percentage of 1.25% was recorded for the category of opportunity to move to a new job and a new position, while the percentage was completely

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absent in both the category of remote scientific discussions (Bachelor's, Master's, Doctorate) and the category of remote meetings. These last two categories are still almost absent, especially at the national level, and if they do exist, they remain very limited. It is hoped that they will be used more extensively in the future.

Table 13. Distribution of the Study Sample According to the Digital Technical Facilities Relied Upon by the University in Implementing and Instilling the Values of Digital Citizenship Among University Students

Question:What are the digital technical facilities that the university relies on in implementing and instilling the values of digital citizenship among university students?

Response	Frequency	Percentage of Respondents	Percentage of Total Responses
Internet services	24	36.36%	28.57%
Good design of the university website	6	9.09%	7.14%
Reliance on Internet, Intranet, and Extranet	0	0%	0%
Reliance on distance education systems	28	42.42%	33.33%
Reliance on digital university identification tools (magazine, brochures, guide)	0	0%	0%
Organizing virtual seminars and conferences to connect the university with the external digital environment	0	0%	0%
None of the above	26	39.39%	30.95%
Total Responses	84	127.26%	
Total Respondents	66	100%	

Source: Prepared by the researcher based on the field study.

Comment:

From the data presented in the table above, it is observed that the digital technical facilities most relied upon by the university in implementing and instilling the values of digital citizenship among university students are distance education systems, according to respondents' answers, with the highest percentage estimated at 33.33%.

This is followed in second place by the category indicating that the university does not rely on digital technical facilities in implementing and instilling digital citizenship values among university students, with a relatively high percentage of 30.95%. Next comes the category of Internet services, with a close percentage estimated at 28.57%.

Internet services at the university include a wide range of services and resources that allow students, faculty members, and staff to access information, communicate, and benefit from modern technologies, such as university email, electronic learning platforms, online registration systems, and online academic schedules.

A smaller percentage of respondents, estimated at 7.14%, believe that the university relies on the good design of its website. A simple and well-organized website design is essential, as it enables students and faculty members to access and use information and services quickly and easily.

Meanwhile, the percentages for the categories of reliance on Internet, Intranet, and Extranet, reliance on digital university identification tools (magazines, brochures, and guides), and organizing virtual seminars and conferences to connect the university with the external digital environment were completely absent.

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Table 14. Distribution of the Study Sample According to the Obstacles Limiting the Role of Digital Technology in Instilling the Values of Digital Citizenship Among University Students

Question:In your opinion, what are the obstacles that limit the role of digital technology in instilling the values of digital citizenship among university students?

Response	Frequency	Percentage of Respondents	Percentage of Total Responses
Misuse of media and communication technology	29	43.9%	21.1%
Weak user trust in the published information	19	28.7%	13.8%
Confidentiality of the identities of those responsible and the lack of clarity of their objectives	17	25.7%	12.4%
Absence of a clear legal framework that protects the rights of those responsible for these media and defines their duties	43	65.1%	31.3%
Expression of ideas and attitudes that conflict with prevailing beliefs and common values	29	43.9%	21.1%
Total Responses	137	207.5%	
Total Respondents	66	100%	

Source: Prepared by the researcher based on the field study.

Comment:

As shown in the table, one of the most significant obstacles limiting the role of digital technology in instilling the values of digital citizenship, according to the responses obtained from the study sample, is the absence of a clear legal framework that protects the rights of those responsible for these digital media and clearly defines their duties. This ranked first with a high percentage estimated at 31.3%.

In second place, with equal percentages of 21.1%, came both the misuse of media and communication technology and the expression of ideas and attitudes that conflict with prevailing beliefs and common values.

This was followed by weak user trust in the published information, which ranked third with a moderate percentage of 13.8%.

Finally, the category related to the confidentiality of the identities of those responsible and the lack of clarity regarding their objectives ranked last with 12.4%, as people often tend to avoid trusting or engaging with individuals who conceal their real identities or use pseudonyms.

9. Main Findings of the Study

a) The university does not provide sufficient electronic communication to ensure effective interaction with its students, which creates a gap between students and the objectives the university seeks to achieve.

b) The dimensions of digital citizenship that the university seeks to introduce to university students are represented in the following:

- Legal Dimension: Through raising awareness of rights and duties by means of digital technology.
- Social Dimension: Through strengthening students' sense of belonging to the state via digital technology and shaping their social identity.
- Cultural and Behavioral Dimension: Through achieving the integration of the individual within the customs and traditions of society and enhancing the

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practical application of digital citizenship principles in real life.

- Political Dimension: Through contributing to the formation of the political system.

c) The results of the study showed that the university contributes to a limited extent, through its publications, to developing digital citizenship concepts among university students. This occurs through diversifying student activities in political, cultural, scientific, and social fields, encouraging participation in them, and developing a sense of ethical responsibility by involving students in everything related to the university's goals and projects.

d) The university seeks to develop students' digital skills in order to instill the values of digital citizenship, although to a limited extent, through reliance on distance education systems and the provision of internet and intranet services.

e) There are several obstacles that limit the role of the university's digital technology in instilling the values of digital citizenship among university students, including the expression of ideas and attitudes that conflict with prevailing beliefs and common values, the misuse of media and communication technology, as well as students' lack of interest in following the university's websites and publications.

10. Suggestions for Future Studies

The current study proposes conducting future research related to the following topics:

a) The use of digital technology in another university within the country and its role in instilling the values of digital citizenship among university students, with a comparison between its findings and those of the current study.

b) The role of faculty members in promoting the values of digital citizenship among students.

c) Research on new concepts such as digital terrorism, cyberbullying, and digital duty.

d) The degree of awareness among university students regarding the concept of digital citizenship.

e) Conducting studies that address the manifestations of universities' interest in digital citizenship.

11. CONCLUSION

Recent years have witnessed rapid and successive transformations toward globalization and the information revolution, which requires universities today to prepare competent students capable of interacting positively with globalization without abandoning the values, practices, and behaviors prevailing in their society and environment. The university's role is reflected in preparing students who are open-minded while simultaneously supportive of cultural specificity, considering that the university environment is the framework within which students grow, acquire experiences, refine their knowledge, and develop values, attitudes, and various behavioral patterns.

Digital citizenship is considered one of the relatively new concepts within the university environment. However, the

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university's adoption of this concept through teaching, development, and reinforcement among students, as well as raising their awareness of their duties and responsibilities while dealing with technological developments, reflects its commitment to graduating active individuals who contribute positively to society. This is because the university is an institution that produces educated, aware individuals who keep pace with modernization while remaining responsible and competent digital citizens.

Finally, this research paper recommends that parents, teachers, faculty members, and all members of society work together to strengthen the culture of rational and beneficial use of digital technologies among younger generations. They should also train them to practice all aspects of digital citizenship through appropriate educational activities, based on the urgent and necessary need to prepare and educate young people for digital citizenship so that they can live safely and responsibly in the digital age.

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