

# STUDENTS AND FACULTY LEVEL OF KNOWLEDGE AND AWARENESS OF DIGITAL CITIZENSHIP IN DISTANCE LEARNING ENVIRONMENT

## THE CASE STUDY OF AL-QUDS OPEN UNIVERSITY

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### **Abstract**

COVID-19 pandemic has changed the education landscape and increased the acceptance and adoption of distance educations by both individuals and academic institutions. The rise in e-learning and distance education and the increased access to the Internet and learning technology, it becomes critical that provide positive, safe, legal, and ethical behavioural online. While COVID 19 acerated the use and adoption of online learning, it also highlighted the importance of fostering effective digital citizenship given the level of misinformation and conspiracy theories generated spread on the Internet and social media about the pandemic. In this study, the researcher examined the students and faculty perception of digital citizenship practices in distance learning environments at Al-Quds Open University. The study used a mix method approach with 8 faculty participating in the qualitative interview and 559 students participating in the quantitative survey. The study's findings revealed that while students and teachers were aware of digital citizenship principles, they lacked in-depth understanding and knowledge of topics like digital rights, digital security, and digital ethics. Faculty and students both believed that digital citizenship is vital and required for protecting students' privacy and cultivating ethical technology use. Students and faculty both agreed on the importance of incorporating digital citizenship skills like digital rights, digital security, and digital ethics within e-learning curricula.

**Keywords:** digital citizenship, distance learning, e-learning, mixed method, Al-Quds Open University

## **1 INTRODUCTION**

To understand the concept of digital citizenship, it is important to put it in context. We all know that living in a country does not entitle you to citizenship. It is only when you meet certain legal and administrative requirements that you become a citizen. Once you have become a citizen you are now entitled to more benefits and privileges but at the same time you have certain obligation to the community. As we become active users and participants of the digital information, we become entitled to the benefits and privileges the digital world offer. As digital citizens, we also have certain, legal and ethical obligations to the digital community. Rahman

(2014) defines the concept of Distance learning as “it is becoming more dependent on ICT (information and communication technology),” P162”. There are advancements in technology and education alike with the introduction of various strategies and techniques for educators and learners to increase their knowledge. Almarashdeh and Alsmadi (2016) reviewed the Learning Management System (LMS) facilitating distance learning program. LMS has a critical role in the play. It channels the interaction between learners and instructors and is a kind of a platform in universities to bridge learners’ needs to the curriculum requirements. Therefore, LMS serves the purpose of an interactive medium between students and instructors. Snyder (2016) defines digital citizenship as “the ethical, moral, and responsible use of technology to ensure the safety of oneself and others while collaborating in an increasingly digital, networked, and global society.”

As per the study of Ata and Yıldırım (2019) digital citizenship has been based on positive engagement with digital technologies, including sharing, investigating, learning, and communicating. As previously mentioned, LMS is one of the examples of positive engagement of students with digital technologies. The research by Ata and Yıldırım (2019) concludes after a systematic analysis that Turkish pre-service teachers had a positive perception and were highly informed about digital citizenship. It is due to a significant factor that they had a participatory attitude towards digital technologies. The article by Clough and Closier (2018) discusses the approaches that the Open University (UK) library has taken to ascertain that distance learning students must acquire all the necessary digital skills for studying at the university, to work as a professional, and to commit themselves to lifelong learning. This perception of the Open University library is an indicator of a holistic view expressing the direction taken by the developed country’s university management to ensure their students achieve digital citizenship.

Snyder (2016) thesis refers to the Ribble and Bailey (2005) proposed a teaching solution referred to as digital citizenship where proper technology behaviour is taught. Snyder's study also includes relevant and pressing need for networked communications via social media, reaping positive outcomes related to education in global settings. The research conducted by Martin *et al.*, (2020) considers middle school students' perception as it relates to their digital citizenship practices. The study results indicate that mobile devices' use among students has increased; therefore, the parents bear the responsibility to check on their children's online behaviour, and 37.1% of the students revealed that they were taught digital citizenship in their schools. The study concludes that students lack an understanding of digital citizenship practices, which has wide-ranging implications for teachers, administrators, and parents (Martin *et al.*, 2020).

However, in the wake of the COVID-19 pandemic, government agencies, NGOs, and civil society are occupied with the urgent need to deliver education remotely through a technological mix to ensure continuity of study (based on curriculum guidelines) and learning (UNESCO, 2020). The study conducted by Jwaifell and Alkhales (2019) compares the appropriate use of technology as an indicator of digital citizenship in two different universities in Jordan and Palestine. Digital citizenship is defined in terms of nine elements, including etiquette, communication, and access; the study results indicate a lack of knowledge because they do not adequately use technology as a digital citizenship indicator. Teachers' perception of their students' digital citizenship status remains an essential criterion for promoting distance learning.

## **2 LITERATURE REVIEW**

Cubukcu & Bazyan, (2016) assessed the awareness level of adults in Turkey on the concept of information technology and its usage via the digital literacy model. The study was more focused on adults who are most commonly referred to as "digital immigrants" in the digital

citizenship environment. The results of the study concluded that even though many adults are warming up to the concept of digital citizenship, however, the digital literacy level and the level of digital ethical values is still unknown by a large portion of individuals. Pedersen et al., (2018) presented a technical innovation in the field of education by introducing the concept of hybrid education in digital citizenship. The hybrid concept of education was defined as an on-site and online learning model, increasing digital citizenship awareness as well as bridging the gaps of distance learning. The study conducted workshops and training on the effectiveness of the hybrid model and concluded that the model was successful in strengthening the gaps that were part of the digital citizenship and distance learning platform. Fields & Hartnett, (2018) discussed the concept of digital fluency in the distance learning model. The editorial covered the aspects of distance and moreover flexible learning combination on the current education system. It concluded that with the current times, the students employ all the tools at their disposal, whether it be distance learning or face-to-face, thus creating a concept of flexible learning that creates wider knowledge and clears the boundaries of education.

Xu et al., (2019) examined the social media competence (SMC) with relation to digital citizenship amongst students. 722 college students were selected for the study and evaluated on the individual's social media competencies on their digital citizenship. The research concluded that out of six competency criteria examined, five were the predictors of an individual's digital citizenship. The findings identified that there was a relationship between the SMC and the digital citizenship of students, and these competency criteria must be kept in mind by the teachers when formalizing educational programs and designing curricula for improving digital citizenship. Suson (2019) employed the model of Ribble and Bailey for digital citizenship in schools in the Philippines. The research was based on the awareness of teachers and students on the concept of digital citizenship in a select sample study area. The study concluded that the students and teachers alike were moderately aware of digital

citizenship in schools and that even though many are aware of the concept, there is still lacking in the field of digital law and digital safety that leads to a high-risk factor. Nikolaeva & Kotliar, (2019) conducted a study addressing the issues of civic education in the digital culture environment. They identified the problem that the countries having a relatively lower media presence are at risk of getting left behind in the digital citizenship environment and that the only way to walk with the times is to understand this issue and work on developing the lacking that is being faced by such countries. In a study conducted by Al-Abdullatif & Gameil, (2020) concerning the students' knowledge and their perception of digital citizenship in higher education. The study comprised of 204 undergraduate students that were selected via purposeful sampling, and evaluated the population on the knowledge and practice of eight of the nine elements of digital citizenship. The study concluded that even though many of the students are aware of the concept of digital citizenship, however, there is a wide gap in knowledge and practice regarding the security and the authenticity of information amongst students. It showed that the usage of the internet does not increase the digital citizenship of an individual if it is not utilized properly, however, the nature of academic specializations and knowledge do contribute to the digital knowledge of an individual.

ELMALI et al., (2020) determined the perceptions of pre-school teachers regarding digital citizenship and their level of digital citizenship. The study consisted of 80 teaching candidates, employing the quantitative and qualitative methods, employing the use of surveys and interviews to better understand the perceptions of the participants. It was concluded from the study that the perceptions of digital citizenship of the participants were above average, however, a lacking was in the form of digital rights and responsibilities as well as digital security.

Akcil and Bastas (2021) examine and test the relationship between digital citizenship and e-learning. This study was conducted on college students. The study found a positive relationship

between digital citizenship behavior and e-learning attitudes. Furthermore, it observed that students' negative anxiety due to the pandemic was reflected in their e-learning process. Overall, the results suggest that digital learning about digital citizenship behavior could be a positive response to the COVID-19 lockdown phase.

Ruenphongphun et al. (2022) developed a model and evaluated the applicability of the Digital Citizenship Skills (DCS) model for online teaching of undergraduate students in Thailand. The analysis uses in-depth interviews and content analysis of seven Thai academic experts in 2020. Descriptive statistics including mean and standard deviation (SD) were used to assess the results on the five-point agreement scale used. The final DCS model consists of five parts. These include learners (L), trainers (I), internet, intranet and extranet network components (I), online learning platform components and information communication technology (ICT) devices (P) and personalized learning (P) (LIIPP model). Overall, the applicability of the model was rated as very high according to expert opinion (mean = 4.61, SD = .51).

### **3 RESEARCH OBJECTIVES**

1. To examine the levels of awareness and knowledge of faculty members on digital citizenship in a distance learning environment.
2. To determine the levels of awareness and knowledge of students on digital citizenship in a distance learning environment

### **4 RESEARCH QUESTIONS**

1. What are the perceptions of Al-Quds Open University teachers and about students' development as digital citizens when engaged in the technology offered by distance learning?
2. What are the perceptions of Al-Quds Open University students about digital citizenship, when engaged in the technology offered by distance learning

3. Is there a difference between the students practice of digital citizenship in distance learning based on their age, gender or study level?

## **5 DEFINITION OF TERMS**

- Digital Citizenship: The norms of behavior with regard to technology use. It is defined as the a way of understanding the complexity of digital citizenship and the issues of technology use, abuse, and misuse (Ribble, Bailey and Tweed,2004)
- The way in which learning or teaching is given to those often isolated by space and time from those who are teaching training.(Rahman, 2014).
- New generation of distance learning: New generation of distance learning uses information technology to enrich teacher-student distance interaction and the development of highly interactive self-paced learning packages used in the distance learning environment. (Rahman, 2014).

## **6 METHODOLOGY**

### **6.1 Research Methods**

Mixed method approach integrating qualitative and quantitative data collection and analysis is used in this study (Saunders et al, 2016). This research article's selected method is a mixed technique with both qualitative and quantitative methods, and the study was conducted at Al-Quds Open University (QOU) in Palestine during the fall semester of the year 2020 where the university well known as first open and distance learning in the region. The case study method is utilized as the study is based on the research experience and teachers' opinions on students' evolution and students' experiences as digital citizens in distance learning.

The structured interviews, and digital citizenship scale were served as the main instrumentation of this study. The digital citizenship scale used to collect data from the students, the scale modified based on the interview with the teachers, experts and decision makers.

### **6.2 Participants and Sampling**

The study participants were selected from Al-Quds Open University with diverse population of students. Non-probability sampling, to be specific purposive sampling technique was used to select the faculty members for the interview. Under this sampling technique, the researchers used their own judgement for the selecting of sample based on the research questions.

Purposive sampling technique depends on the researcher's judgment so as to effectively collect data from the experienced and relevant teachers and students. Online interview technique through ZOOM was used due to the current situation with COVID 19. The Zoom connection is the current preferred method the qualitative research approach. The researcher interviews 8 faculty members in total from the Al-Quds Open university (QOU). in which two of them were females and six of them were males as shown in Table 1a

**Table A.**

Participant No.	Gender	Major
1	Female	Faculty member of Education Science Faculty
2	Male	Head of ICT Research Unit and Faculty member in Technology and Applied Science faculty.
3	Male	Faculty member in Technology and Applied Science Faculty
4	Male	Faculty member in English Department
5	Male	Dean of Media Faculty
6	Male	Faculty member /Technology and Applied Science Faculty.
7	Male	Faculty member/Educational Science Faculty
8	Female	Faculty member/Technology and Applied Science Faculty

For the quantitative part of the study, online survey was employed to provide a complete understanding of the student's awareness, knowledge of digital citizenship in distance learning environment. The survey constituted 559 Students from different age, gender and study levels from Al-Quds Open university (QOU) responded,

A simple random sampling technique was employed in order to select the respondents and each student had an equal chance of being selected from a total of 44,305 from the Al-Quds Open university (QOU).

## **7 RESULTS**

### **7.1 Students Awareness, Knowledge of Digital Citizenship**

#### *7.1.1 Demographic characteristics of the respondents:*

The sample was collected from Al-Quds Open University with total number of the enrolled sample was 557 students out of the 44,305 students. the sampled was consists of (374, 67.6%) females and (178, 32.4%) males, the enrolled sample was varied in age groups, (214, 69.1%) out of the total students were between 18-22 years old, while (83, 15.6%) were more than 26 years old, the remaining of the sample (89, 15.3%) were belonged to age group 23-25 years old.

Regarding the study level of the sample, the majority of the respondents were in first and fourth year of study (250, 44.5%) and (167, 29.9%), respectively. While only (61, 11.1%) and (78, 14.5%) were in second and third year of study, respectively.

The scale was consisting of 25 items, the first item assessing the respect other people in the e-learning and distance learning environment, most of the respondents agree (268, 48.1%), the second and third items assessing the engagement in bullying behavior in -learning and distance learning, and responsibility for their own online activities, the participants strongly agree and agree (253, 45.4%) and (279, 50.1%), respectively. Table B

**Table B. The Al-Quds Open University participants' respondents.**

Item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I respect other people in the online environment.	250 (44.9)	<b>268</b> <b>(48.1)</b>	33 (5.9)	3 (0.5)	3 (0.5)
I do not engage in bullying behavior in an online environment.	<b>253</b> <b>(45.4)</b>	170 (30.5)	46 (8.3)	30 (5.4)	58 (10.4)
I am responsible for my own online activities	254 (45.6)	<b>279</b> <b>(50.1)</b>	15 (2.7)	6 (1.1)	3 (0.5)
I am aware of the order of others in the online environment.	193 (34.6)	<b>322</b> <b>(57.8)</b>	32 (5.7)	5 (0.9)	5 (0.9)
I obey the order in the environment.	152 (27.3)	<b>350</b> <b>(62.8)</b>	45 (8.1)	4 (0.7)	6 (1.1)
I use digital technology to achieve various goals.	155 (27.8)	<b>286</b> <b>(51.3)</b>	91 (16.3)	21 (3.8)	4 (0.7)
I immediately manage unnecessary files and programs on my computers.	93 (16.7)	<b>267</b> <b>(47.9)</b>	130 (23.3)	59 (10.6)	8 (1.4)
I use the Internet to access more information about domestic and international issues.	175 (31.4)	<b>309</b> <b>(55.5)</b>	54 (9.7)	13 (2.3)	6 (1.1)
I express my opinions online and learn and share my expertise.	112 (20.1)	<b>301</b> <b>(54.0)</b>	101 (18.1)	37 (6.6)	6 (1.1)
I purchase legitimate goods during e-commerce activities.	59 (10.6)	<b>194</b> <b>(34.8)</b>	133 (23.9)	124 (22.3)	47 (8.4)
I am aware of my own health problems caused by the abuse of digital devices, such as addiction and stress.	191 (34.3)	<b>278</b> <b>(49.9)</b>	42 (7.5)	36 (6.5)	10 (1.8)
I establish my own beliefs and values about the digital environment.	50 (9.0)	<b>238</b> <b>(42.7)</b>	180 (32.3)	78 (14.0)	11 (2.0)
I immediately delete emails from suspicious senders.	206 (37.0)	<b>231</b> <b>(41.5)</b>	70 (12.6)	38 (6.8)	12 (2.2)
I present my feelings, thoughts, and opinions while posting text, photos, music, or videos online.	87 (15.6)	<b>230</b> <b>(41.3)</b>	140 (25.1)	71 (12.7)	29 (5.2)

I belong to an online community related to social or political issues.	70 (12.6)	<b>193</b> <b>(34.6)</b>	169 (30.3)	80 (14.4)	45 (8.1)
I always check the price on the Internet when purchasing goods.	119 (21.4)	<b>240</b> <b>(43.1)</b>	125 (22.4)	52 (9.3)	21 (3.8)
I work with others online to solve social or my university problems.	52 (9.3)	<b>221</b> <b>(39.7)</b>	177 (31.8)	80 (14.4)	27 (4.8)
I take care of the computer immediately if something goes wrong.	166 (29.8)	<b>294</b> <b>(52.8)</b>	64 (11.5)	29 (5.2)	4 (0.7)
I am active in social network services such as Facebook and Twitter.	90 (16.2)	<b>203</b> <b>(36.4)</b>	144 (25.9)	95 (17.1)	25 (4.5)
I have prior knowledge that Digital citizenship is to engage in appropriate and responsible behavior when using technology.	59 (10.6)	<b>232</b> <b>(41.7)</b>	194 (34.8)	62 (11.1)	10 (1.8)
Digital citizenship brings positive social change.	58 (10.4)	<b>277</b> <b>(49.7)</b>	183 (32.9)	31 (5.6)	8 (1.4)
Digital citizenship promotes ethical and moral use of technology in distance learning.	57 (10.2)	<b>313</b> <b>(56.2)</b>	146 (26.2)	29 (5.2)	12 (2.2)
Digital citizenship promotes cyber-security and social responsibility in distance learning.	76 (13.6)	<b>297</b> <b>(53.3)</b>	145 (26.0)	29 (5.2)	10 (1.8)
Instruction in digital citizenship should be included in existing distance learning curricula.	99 (17.8)	<b>293</b> <b>(52.6)</b>	115 (20.6)	36 (6.5)	14 (2.5)

## 7.2 Faculty Awareness and Knowledge of digital citizenship.

### 7.2.1 Al-Quds Open University

1. **Faculty Members Knowledge of Digital Citizenship:** The first question in the interview was about if the faculty member has any idea about digital citizenship, results showed that only one member had no idea what digital citizenship is. Three members explained their ideas of digital citizenship based on the integration and usage of technology in which they included several aspects such as culture, privacy, morals, and economy. While two members defined it based on the general society citizenship. One defined it based on the skills of students through the usage of digital platforms. This indicates that there is a discrepancy in the level of knowledge of faculty members in digital citizenship.

- 2. *Importance of Good Digital Citizenship:*** The second question was about the importance of good digital citizenship for students, results showed that all interviewed faculties members find good digital citizen is very important, in which only one finds it important in the assessment and evaluation. Seven participants find it important to enhance student's knowledge of the internet usage. Six participants find it important for the student's privacy and safety. Two participants find it important to enhance the behavior and skills of the students. One participant finds it important to improve the society and cultural perspective about technology and internet usage.
- 3. *Students Equipped to Engage Responsibly in Digital Citizenship:*** Interviewed faculties members stated mainly that students aren't equipped with digital citizenship, students don't even have the knowledge or the orientation about it.
- 4. *The Differences Between Students Practice According to Sex, Age and Study Level:*** Results showed that five out of eight of participants stated that there is a difference due to sex, females have higher commitment than males while one participant stated that females have higher level of privacy on the contrary another participant stated that males have higher level of security. All participants stated that there is a difference due to age, younger students have better practice of digital citizenship, but older students are more serious. Two participants stated that there is no difference due to study level, another two participants stated that there is a difference due to study level, 4<sup>th</sup> year students have better practice and experience than 1<sup>st</sup> year students. The other four participants didn't mention study level. In addition, two participants stated that there is a difference due to place of residence, students who live in the city have better practice than those who live in the village. On the other hand, two participants mentioned that culture high impact on digital citizenship, one of the participants added religion and values.

5. ***Digital Citizenship in Distance Learning***: Results showed that interviewed faculties members have different opinions for the definition of student's digital citizenship knowledge. One participant defined it based on the student's questions, three participants added to the definition the student's citation for the borrowed text, two participants defined it through students' knowledge of cybercrimes. One participant defined it through the society interaction on digital platforms. One participant defined it based on the usage of e-learning tools and resources.
6. ***Teaching Students How to Be Good Citizens***: Results showed that interviewed faculties members have different opinions about how they would teach good digital citizenship, three participants stated that teaching should include digital behavior and skills, one participant added communication ethics and behavior punishment another participant added teaching cybercrimes. One participant said that methods should include the skills of gathering information, analyzing and evaluating this information. Two participants would teach it through discussion method. Two participants stated that teaching it should be through course and classes implementation, two participants mentioned activities, one participant added workshops and awareness lectures.
7. ***Digital Citizenship Integration into the Curriculum***: Results showed that interviewed faculties members have mainly stated that digital citizenship integration curriculum is important and necessary. Three participants stated that it can be integrated through "Learn how to learn" course. Three participants stated that it needs a separate course to be integrated. Two participants stated that integration can be done through one-unit implementation
8. ***Resources Available for Teachers to Incorporate Digital Citizenship***: Results showed that interviewed faculties members have different opinions on the available resources. One participant said through social media, another participant said through authentic

resources such as YouTube. Two participants said that there are many resources in English language but not in Arabic language, language still a barrier for the students as the concept is new in Palestine. Two participants said that there are no resources.

**9. *Tools to be used in Digital Citizenship Promotion:*** Results showed that interviewed faculties members have different opinions, all of them agreed on using the university digital platforms, such as Moodle, Zoom, YouTube. Three participants mentioned through courses. Two participants said it could be promoted through workshops. Three participants mentioned social media such as Facebook and What's App

**10. *Changes Needed in Curricula for Digital Citizenship:*** Results showed that interviewed faculties members have all agreed on the need to integrate digital citizenship into the curriculum through a separate course or by updating the courses. One participant added updating or changing teaching methods and two participants added the need for equipment on the teacher's behalf such as the resources, protocols, policies, guidelines ... etc.

## **8 DISCUSSION**

The study results revealed that the students at Al-Quds Open University were about the digital citizenship. This is mainly due to the positive attitude of the participants towards digital technologies. This is also in line with the finding of study conducted by Al-Abdullatif & Gameil, (2020) concerning the students' knowledge and their perception of digital citizenship in higher education, the study concluded the many of the students are aware of the concept of digital citizenship. The students have no restrictions on joining an online community related to social or political issue. The students agreed on the value of digital citizenship in distance learning, especially in terms of fostering ethical and moral use of technology in distance learning, as well as cyber-security and social responsibility. This findings with line of study

results conducted by Pedersen et al., (2018) who concluded that the hyper model was successful in strengthening the gaps that were part of the digital citizenship and distance learning platform.

According to Faculty Awareness and Knowledge of digital citizenship results, it is clear that the faculty members lack sufficient awareness of the concept of digital citizenship. However, they have a wider range of the idea about the resources and concept integration. It's clear that culture has a high impact on the technology usage.

One of the faculty members in QOU summarized the interview by *“The concept of digital citizenship is new at our university even for educational leaders, and we should focus on this group. there is an urgent need to have digital citizenship under the use of e-learning, where the percentage of who knows the right and wrong way of using technology is very little, and this requires adopting some policies and procedures”*

It's clear that the concept still new, but the faculty members agreed on teaching the concept basics due to several aspects. The faculty members agreed on losing the time with students on solving technical issues such as joining a call or a group for e-learning. On the other hand, the faculty members was concerned about teacher's knowledge about digital citizenship and they provided their opinions about the tools and resources that can be used for teaching the concept of digital citizenship such as social media, YouTube, Zoom, Moodle.

## **9 CONCLUSIONS**

The concept of distance learning refers to the learning style that does not require individuals' physical presence as a compulsion. The distanced learning concept is related to digital citizenship in terms of safety and precautionary online information measures. The majority of the answers related to digital citizenship were in favor of implementing digital citizenship for the safe and ethical use of digital content and information. It was also noticed that the issue of unethical use of information is recognized and acknowledged by the interviewees.

The study pointed out the two sides of the same coin, the faculty members and the students. The concept of digital citizenship by the interviewed participants from faculty was also put forward that some individuals claim to practice digital citizenship while not knowing the precise boundaries of using digital media. However, the students had a different experience altogether, with some claiming that distance learning created a higher level of social interaction and cooperation amongst individuals. In contrast, others perceived it as a lesser motivation and had issues with distance learning tools rather than distance learning. It was pointed out that if incumbent efforts are made to enhance distance learning tools, it could become a Digital Citizenship Practice pioneer. Findings from the survey have led to the conclusion that young students respect the order of others in the distance learning environment. It was also apparent that these students are aware of their health problems in the distance learning environment. Finally, the university must incorporate digital citizenship as an essential component of the distance learning program and be equipped to overcome challenges to students taking on these responsibilities. The results of this study could be useful in guiding the university's efforts to incorporate digital citizenship into distance learning by updating and developing new courses and improving teaching methods. Furthermore, it may be critical to the university to design standards, procedures, and regulations for promoting digital

## **10 RECOMMENDATION**

- Several ideas should be discussed at the norm level, as well as issues related to information security, information privacy, and the rights and responsibilities of technology users and technology providers, when it comes to the measures that must be considered when integrating digital citizenship.
- The teaching methods need to be revised or changed, and the procedures, regulations, and standards should be created to promote digital citizenship.

- Distant learning curriculum should be updated, and government policies for digital citizenship in distance learning should be developed and implemented.
- Guidelines for digital citizenship in distance learning should be created to guide the students in the distance learning environment.

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