



Digital Citizenship: Between The Necessity Of Practicing It And The Need To Learn It In Algeria

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Abstract:

The current era is witnessing significant transformations driven by technological and digital advancements, leading to it being referred to as the "digital age." Dependence on technological tools has become an essential necessity encompassing various aspects of life. In this context, the concept of the "digital human" or "digital citizen" has emerged, referring to individuals who find themselves required to interact with a digital environment parallel to their physical environment. This necessitates adopting digital citizenship practices and acquiring the necessary knowledge about them.

This study, entitled "Digital Citizenship: Between the Necessity of Practicing It and the Need to Learn It," aims to clarify the concept of digital citizenship and highlight the importance of its practice in the Algerian context. It also seeks to discuss the educational measures that the state should adopt to promote the positive values of digital citizenship among members of society. The research addresses the definition of digital citizenship, the theories explaining it, the digital transformation in Algeria and its impact on societal behaviors, as well as reviewing the stages of learning digital citizenship and the requirements for preparing digital citizens to keep pace with current developments.

Keywords: Digital citizenship, digital citizen, the necessity of practice, the need to learn digital citizenship.

Introduction:

The contemporary world is witnessing unprecedented qualitative transformations driven by rapid technological advancements that have fundamentally changed patterns of communication and interaction. Social media networks have spread globally, transforming the vast world into a small, interconnected village where distances are minimized, and cultural proximity is enhanced. These networks have opened new horizons for human interaction, becoming platforms for expressing ideas, exchanging opinions, and discussing political and social issues, surpassing geographical boundaries and entering unregulated digital spaces. Their impacts are not limited to individuals but

extend to governments, which use these tools to achieve their objectives and strengthen their communication with societies.

In this context, the concept of the "digital society" has emerged, giving rise to the notion of the "digital citizen."

However, the digital evolution, which originated primarily in Western societies, did not pose significant identity or value challenges for them, as these societies were gradually prepared to embrace these transformations. In the Arab context, particularly in Algeria, digital technologies were introduced abruptly as a result of importing them from Western societies at advanced stages of their development. Consequently, Algerians found themselves using these technologies without gradual adaptation or clear frameworks, leading to their employment in spontaneous and unorganized ways. This situation has generated numerous challenges, most notably value and identity issues, especially among youth, in an era dominated by globalization and where global cultural and media industries seek to penetrate national cultures and marginalize local specificities.

Given these challenges, there is an urgent need for well-thought-out solutions and mechanisms to promote positive digital citizenship values and protect Algerian national identity from the impacts of cultural intrusion. Therefore, this study aims to address the topic of digital citizenship from multiple perspectives by defining the concepts of citizenship, digital citizenship, and the digital citizen. It also analyzes digital citizenship using sociological theories such as functionalism, the uses and gratifications theory, and the social control theory. Furthermore, the study focuses on the necessity of digital transformation in Algeria, the importance of practicing digital citizenship, and the need to learn it, while elucidating the stages of learning and the requirements for embedding these values in the Algerian context.

2. The Study Concepts:

2.1. Citizenship:

In the sociology dictionary, is defined as the position or social relationship that exists between an individual and a political community (state). Through this relationship, the first party (the individual) offers loyalty, and the second party (the state) provides protection. This relationship is regulated by law.

It expresses the individual's sense of belonging to a social group with a shared culture, history, and common destiny. This sense of belonging is organized socially, legally, and politically, and the individual actively contributes to social life through this affiliation. (Mohammad Obaid Al-Saai and Mohammad Ali Al-Dawahi, 2017, p. 20).

2.2. Digital Citizenship:

Shuler (2002) defined digital citizens as "a characteristic of a true digital city." Digital citizenship is generally defined as "those who use the internet regularly and effectively." A digital citizen should possess certain traits, such as understanding human, cultural, and societal issues, practicing legal and ethical behavior, advocating for and practicing the safe, legal, and responsible use of information and technology, demonstrating a positive attitude towards using technology that supports collaboration, learning, and productivity, and showing personal responsibility for lifelong learning. (Aytekin & Ozlem, 2014, p. 73).

2.3. Digital Citizenship:

Digital citizenship can be defined as the rules of behavior that define the use of technology. The practice of digital citizenship has been outlined with nine general areas of behavior that constitute digital citizenship:

- Etiquette (electronic behavior or conduct standards),
- Communication (electronic exchange of information),
- Education (teaching and learning about technology and its use),
- Access (full electronic participation in society),
- Commerce (electronic buying and selling of goods),
- Responsibility (electronic responsibility for actions and practices),
- Rights (extension of freedoms to all individuals in the digital world),
- Safety (well-being in the world of digital technology),
- Security (self and collective protection in the digital world): (precautions to ensure safety).

(Mike S, Gerald D, & Tweed W, 2004, p. 7)

It refers to the ability to use technology efficiently, interpret and understand digital content, assess its credibility, create and search for information, communicate using appropriate tools, critically think about the ethics, opportunities, and challenges of the digital world, make safe, responsible, and respectful choices online, and clearly understand the characteristics of digital citizens and digital citizenship based on previous works. (Aytekin & Ozlem, 2014, p. 73).

3. Theories Explaining Digital Citizenship:

3.1. Functionalist Constructivist Theory:

According to Parsons' perspective, people internalize societal values, meaning they make the social values embedded in the cultural system their own, through learning from other actors in the social system what is expected of them. In other words, they learn role expectations. Thus, values come from the cultural system, role expectations, and normative expectations that align with the cultural values learned within the social system. The individual's identity comes from the personality system, and the sociological tool comes from behavioral membership. (Tawil, 2016, p. 223)

From this perspective, Parsons views society as a comprehensive system consisting of a set of integrated sub-systems. The roles of actors in these sub-systems are determined through learning and social interaction processes, where individuals derive their values from the cultural system, while their functions are defined within the social system. Their identity is shaped through the personality system. This integration between different systems is essential to achieving societal goals, such as adaptation, integration, maintaining the general pattern, and managing social patterns.

When we apply this analysis to mass communication, the functionalist theory highlights the role of these media as a crucial element in building modern society. Mass media are not just tools

for transmitting information; they are an integral part of the social structure, and achieving stability without them is difficult. Therefore, mass communication can be considered a social approach to understanding the digital social structure, with the digital society being one of the interacting sub-systems of the overall system.

In this context, the digital citizen is viewed as one of the main actors in the digital system. They learn their roles in practicing digital citizenship through interaction with other actors in the system, which is no longer defined by a single culture but reflects the interactions of multiple cultures imposed by digitization. This new digital reality transcends temporal and spatial boundaries, placing Algerian society in front of significant challenges.

These challenges lie in adapting to the digital system while maintaining integration with the other sub-systems that make up society, and striving to preserve the general cultural pattern, including principles, values, beliefs, and national culture. This is crucial in light of the effects of globalization and digitization, which may carry cultural and intellectual invasions that threaten the cultural privacy of communities. To clarify further, the explanation can be made through the following points:

- **Society as a Comprehensive System**

According to the functionalist constructivist theory, society is a comprehensive system consisting of a set of integrated sub-systems that perform essential functions to ensure the continuity of the social system. In the digital context, the digital society can be considered a new sub-system within the broader social system. The digital citizen is one of the actors in this digital system, playing a role that integrates with the roles of other actors to ensure the stability of the digital system and achieve its goals.

- **Roles of the Digital Citizen**

From the perspective of functionalist constructivism, the digital citizen learns their roles through interaction with other systems (cultural, social, and personality). For example:

- ✓ Cultural System: It provides the values and norms that govern digital behavior, such as respecting others' rights in the digital space (privacy, intellectual property).
- ✓ Social System: It defines digital roles, such as participating in online discussions, expressing opinions, or using digital technologies to perform social duties.
- ✓ Personality System: It shapes the individual's digital identity through the interaction between the personal self and prevailing digital norms, creating a sense of belonging and responsibility within the digital community.

- **Integration Between Systems**

According to Parsons, integration between systems is essential for the stability of society. In the digital context:

- ✓ At the individual level, the digital citizen must align with digital cultural values (such as respect and cooperation).
- ✓ At the collective level, digital communities need to promote a culture of self-discipline and adherence to digital laws (such as combating cyberbullying or fake news).

- ✓ At the institutional level, digital policies (such as data protection laws) contribute to regulating digital interactions and enhancing integration between the digital society and the real-world society.

- **Adapting to Digital Transformations**

The functionalist theory suggests that adaptation is a core function of any system. The Algerian digital society, as an emerging system, faces challenges in adapting to global digital transformations. The digital citizen here is a key element in this adaptation:

- ✓ By learning to use technology effectively.
- ✓ By contributing to achieving the digital goals of society (such as digital transformation in education and healthcare).
- ✓ By helping integrate local values with the global digital environment to preserve cultural identity.

- **Preserving Cultural and Value Patterns**

The functionalist theory emphasizes the importance of preserving cultural and value patterns for the continuity of society. In the digital space, this is a significant challenge due to the diverse cultural influences imposed by digital globalization. From the perspective of functionalist constructivism:

- ✓ The digital citizen needs to acquire "cultural filtering" skills to maintain their principles and values in the face of the global cultural flow.
- ✓ The state plays a central role in promoting positive digital values through digital education and digital governance policies.

- **Managing the Overall Pattern**

Managing the overall pattern in the digital system requires achieving a balance between preserving local identity and being open to the global space. In this context, the Algerian digital citizen needs to:

- ✓ Acquire advanced digital skills to enhance their role as a digital actor.
- ✓ Strengthen digital citizenship values, including respecting others' rights, digital social responsibility, and positive participation.

3.2. Uses and Gratifications Theory

The Uses and Gratifications Theory is one of the functionalist approaches that looks at the relationship between media content and the audience from a new perspective. It assumes that people's values, interests, concerns, tendencies, and social roles have the most influence on their communication behavior. It focuses on studying mass communication from a functional point of view, concentrating on the primary functions that media serve from the perspective of individual users and consumers of its content.

Essentially, this approach seeks to answer a fundamental question: how and why do people use the media? In other words, what are the motivations that drive people to engage with the media? (Al-Dulaimi, 2016, p. 249).

The application of the Uses and Gratifications Theory develops through three stages:

-The first stage refers to the division of the audience's relationship with media into a set of concepts, which led to the creation of a range of "typologies" of gratifications that media can help achieve.

-The second stage refers to efforts aimed at explaining how the audience uses media to satisfy their human needs. (Al-Dulaimi, 2016, p. 253).

Through this theory, we can explain that the digital transformation in societies, including Algerian society, came to meet the needs of the government primarily in order to transition to a digital economy and digital governance for development and to keep pace with developed countries. It also addresses the needs of individuals in society to communicate with their families and friends in other countries, their need for fast access to information and news, and their need to express their political opinions and ideas. In this context, modern technological means, in all their forms, were the tools that met these needs.

The Uses and Gratifications Theory provides a theoretical framework for understanding individual behavior in the digital environment and explaining the concept of digital citizenship. The theory is based on the fundamental assumption that individuals seek to use media and technology to satisfy their human and social needs, which can be directly linked to digital citizenship as a result of this purposeful use.

Digital Citizenship as a Process of Satisfying Human Needs

From the perspective of the theory, one of the main aspects of digital citizenship is that it satisfies various human needs, such as:

- The need for social communication: Digital platforms contribute to enhancing social relationships, both locally and internationally, fostering a sense of belonging to a diverse digital community.
- The need to express opinions: Digital spaces provide unlimited opportunities for individuals to express their political and social opinions and discuss their issues freely.
- The need for learning and knowledge: The digital citizen can acquire skills and knowledge through access to diverse sources and educational content available on digital platforms.

Dimensions of Gratification in Digital Citizenship

Digital citizenship can be analyzed through the dimensions of gratification provided by digital technology:

- Cultural Dimension: Digital tools provide individuals with the opportunity to explore new cultures and engage in global cultural interaction, while preserving their own cultural identity.
- Social Dimension: Interaction on social networks strengthens the sense of belonging to digital communities and contributes to building new relationships.
- Personal Dimension: The digital citizen can enhance their personal and professional skills through the use of digital tools dedicated to education or professional development.

The Digital Citizen and the Motivations for Using Technology

The theory suggests that the motivations for using digital tools play a key role in shaping digital citizenship. Some of the most prominent motivations include:

- **Personal Motivation:** This is reflected in the pursuit of acquiring new skills or achieving professional advancement through the use of digital technology.
- **Social Motivation:** This is expressed in the desire to communicate with others and participate in group activities on digital platforms.
- **Political Motivation:** This appears through the use of digital tools to engage in political discussions or influence decision-making through online campaigns.

The Digital Citizen as a Social Actor

According to the theory, the digital citizen is viewed as a social actor who chooses to use digital tools in ways that satisfy both their individual and collective needs. On the other hand, digital communities provide a fertile environment that allows individuals to express themselves and build a collective digital identity that reflects their values and beliefs.

Digital Transformation as an Expression of Digital Citizenship

Digital transformation emerges as a practical example of how digital tools address the needs of society. Digitalization in societies, such as Algerian society, has responded to multiple needs:

- **Government Needs:** The transition to a digital economy and digital governance to achieve development and keep pace with developed countries.
- **Individual Needs:** Interacting with family and friends, quickly accessing news and information, and expressing opinions.

An example of the above is how the COVID-19 pandemic highlighted the crucial role of digital citizenship in meeting the needs of individuals:

- Distance learning became a necessity to ensure the continuity of education.
- Digital platforms became the primary means of social communication during lockdown periods.
- E-services provided channels for citizens to access their needs without putting themselves at risk.

Digital Citizenship: Challenges and Opportunities

Applying the Uses and Gratifications Theory to digital citizenship shows that the digital citizen is an active individual who uses technology purposefully to fulfill their needs. However, there remain challenges, such as promoting digital ethical values, protecting cultural identity, and ensuring responsible technology use.

3.3. Social Control Theory

According to Paul Landis in his 1939 book *Social Control, Social Organization, and Social Disintegration*, the theory of social control presents a comprehensive understanding of how social processes hold individuals accountable to society, maintain social order, and shape individual personalities through socialization. Social control is defined as a series of social processes that make the individual responsible to society, evaluate and maintain the social system, and contribute to

creating a more complete social order. It emphasizes that a well-organized society and a well-rounded individual personality cannot exist without a set of accompanying values (social, 2014, p. 48).

Social control, according to various control theories, includes the behavior of individuals in society, which must be healthy and voluntary, based on norms shaped by values, customs, traditions, social norms, and laws, and according to the norms formed by criminal law (social, 2014, p. 63).

Social control theories are fundamental in sociology for understanding how societies regulate the behavior of their members to maintain order and social balance. From this perspective, these theories can be applied to explain digital citizenship, which represents a new form of citizenship where individuals interact with a digital society that differs from traditional society in terms of tools, spaces, and controls.

According to social control theory, every society contains a set of controls aimed at guiding and regulating the behavior of its members. These controls can be:

1. Legal Controls: Such as criminal laws that define penalties for violating behaviors.
2. Social Controls: Such as customs, traditions, and norms that regulate social interactions.
3. Value-based Controls: Such as ethical and religious values that shape the collective conscience and guide individuals towards acceptable behavior.

When transitioning to digital citizenship, it becomes clear that the digital environment requires a new form of social control that aligns with its nature, while maintaining the social roots and traditional values of society.

Digital Controls as an Extension of Traditional Controls

In the digital world, new social and legal controls emerge to regulate the behavior of digital citizens. These controls manifest in:

- Cybercrime Laws: Such as personal data protection, preventing hate speech, and combating cybercrimes.
- Digital Norms: Such as etiquette for interacting on social media, respecting digital privacy, and professional conduct on digital platforms.
- Digital Citizenship Values: Such as ethical responsibility, mutual respect, and positive participation.

Mechanisms of Social Control in the Digital Space

- Voluntary Control: Individuals apply controls themselves based on their awareness of digital values such as digital security, ethical responsibility, and compliance with laws.
- Institutional Control: This involves the role played by governments and digital platforms in setting laws and regulations to ensure proper digital behavior, such as privacy policies and content monitoring.

- **Collective Control:** This occurs when digital communities themselves act as regulators of behavior, where inappropriate behaviors are criticized or individuals violating community rules are banned.

Building the Responsible Digital Citizen

Through the process of digital control, the traditional citizen is transformed into a responsible digital citizen capable of interacting with the digital community in a way that balances:

- **Adaptation to the digital environment:** By acquiring digital skills and understanding the controls that govern the digital world.
- **Commitment to traditional community controls:** Such as ethical and religious values that preserve cultural identity.

Social control theory interprets digital citizenship as an organizational process aimed at creating a disciplined digital community where its members interact responsibly with the digital environment, while maintaining societal values and controls. This interpretation highlights the importance of developing integrated controls that take into account the peculiarities and challenges of the digital space, ensuring a balance between the individual and the digital community.

4. Digital Transformation in Algeria and the Necessity of Practicing Digital Citizenship

4.1. The Necessity of Digital Transformation in Algeria

In light of technological transformation and the rapid development of communication tools, the world has shifted towards adopting modern technologies and directing them towards the development of societies. This has led to the emergence of concepts like the digital economy, digital governance, and digital education, among others related to digitization.

In this context, Algeria adopted a specific policy for developing the telecommunications sector in 2000, aiming to provide a legal and institutional environment that allows for enhanced competition and access to various communication services. However, Algeria did not have a clear strategy that would provide a suitable and supportive digital environment. Therefore, in 2008, it developed a gradual strategy known as "e.Algerie 2013," which aimed to generalize internet connectivity, digitize public services, and improve the legal framework for these services (Bishari, 2020, p. 587).

The necessity of adopting digitization across various life sectors, both official and unofficial, in Algeria increased after the spread of the COVID-19 pandemic. The state found itself facing a significant challenge in devising strategies to keep its structures functioning under this situation. It was forced, not by choice, to shift towards the digital world and widely adopt digital solutions across various sectors, starting with families, education, public service institutions, commercial practices, and economic transactions.

As a result, individuals in Algerian society, from all walks of life, had to transition from living a physical reality to embracing a digital one. Students and pupils found themselves compelled to engage with digital tools for learning, employees in various fields carried out their tasks through technological means, and government institutions and agencies followed suit. In this way, Algerian

society transitioned into a digital one, with digital citizens, especially as the use of digitization by Algerian individuals became intertwined with all elements of digital citizenship.

4.2. Practicing Digital Citizenship in Algeria

Despite Algeria's adoption of digitization and its integration into national development since 2008, with the implementation of the "e.Algerie2013" digital strategy, the rapid pace of application and the necessity of practice imposed by the COVID-19 pandemic, the way Algerian citizens interact with digitization remains somewhat deficient. This is because the population was not fully prepared to deal with modern technological tools, nor were they ready to live as digital citizens.

Digital Access: Not all Algerian citizens had regular and continuous access to digital networks, which limited their ability to perform their roles effectively. "Limited internet access does not enhance participation in a democratic society, and the ability to benefit from increasing internet access depends on digital literacy" (Matthew N. O., Mahamadou, & Sarhan M, 2018, p. 19).

Digital Commerce: As ordinary commercial transactions moved to digital platforms, there were no laws or regulations to govern them, resulting in chaotic practices, often reaching the level of fraud and theft. E-commerce regulation is still in its infancy.

Digital Communication and Information Exchange: Algerian digital citizens found themselves navigating a vast, borderless digital world where different cultures intersected, affecting their identity. Despite the benefits of digital communication, such as exposure to other cultures and social connections across countries, the lack of sufficient control mechanisms for accessing the digital world created "difficulties in dealing with digital media, including legitimate concerns about the 'dark side' of digital media. The necessary training is not available for many users to make informed decisions when faced with multiple digital communication options" (Matthew N. O., Mahamadou, & Sarhan M, 2018, p. 19).

Digital Awareness and Literacy: Although educational institutions have made significant strides in promoting and utilizing technology, there is still much to be done. The focus should shift toward what technologies to acquire, how to operate them, and the best ways to benefit from them. Some technologies, such as video conferencing and online collaboration tools, are being used in professional fields but not in educational institutions. Many workers across different sectors still need timely information and require skills in complex research and processing (including information literacy) (Al-Dahshan, 2016, p. 83).

Digital Laws: Responsibility in digital actions is part of the digital legal framework, which addresses ethical conduct within the technology community, exposing unethical uses such as theft or digital crimes. Proper use is evident through adherence to digital community laws. Users should be aware that stealing or damaging others' property, work, or identity online is a crime under the law (Al-Dahshan, 2016, p. 84). However, this is still not widely recognized among many Algerian citizens, as there are numerous instances of digital theft of ideas and information, and many people operate under fake identities. Despite the international legal system for addressing cybercrime and Algeria's efforts to address gaps with Law No. 9-4, dated August 5, 2009, regulating the prevention and fight against crimes related to information and communication technologies, the issue remains. According to statistics from the Directorate General of National Security for 2017, there were 1,635 cybercrime cases, including: 28 cases of cyberattacks on information systems and websites, 49 cases involving minors related to immoral and indecent acts, 47 cases of blackmail (mostly related to fake

job offers for financial gain), and 1,511 cases of crimes against individuals (defamation, privacy violations) (Loshni, 2021, p. 702-703).

Digital Rights and Responsibilities: Based on the previous cybercrime statistics, it is clear that Algerian citizens lack adequate awareness of their online rights and responsibilities. For many, the use of technology infringes on the personal freedoms of others.

Digital Health and Safety: In terms of digital security (self-protection), Algeria has not yet fully implemented protective measures for its citizens. There has been little adherence to suggestions by researchers who advocate teaching individuals how to safeguard their digital security. "Researchers recommend integrating digital citizenship and cyber safety into curricula. Students should learn the responsibilities and obligations of being responsible and productive citizens" (Matthew N. O., Mahamadou, & Sarhan M, 2018, p. 19).

5. The Necessity of Learning Digital Citizenship in Algeria

Spreading the culture of digital citizenship within households and among students in schools has become an urgent necessity. This should be translated into programs and projects in our schools and universities, alongside initiatives from civil society organizations and media institutions. Only by doing so can we effectively protect our societies from the growing negative impacts of technology, while simultaneously maximizing its benefits to contribute to the development of the knowledge society and the building of a national digital economy.

Therefore, what we need now is a structured approach to equip children, youth, and individuals with the competencies required to become healthy and responsible digital citizens in the online environment. "Regarding the methods of teaching and clarifying the components and areas of digital citizenship, experts believe that it can be achieved through three concepts: respect, which includes (respecting oneself and others, digital access, digital etiquette, digital values, and laws); education, which includes (digital commerce, digital communication, digital literacy); and protection, which includes (protecting oneself and others, digital rights and responsibilities, digital security, digital health and safety)" (Al-Dahshan, 2016, p. 86).

Based on this, we can outline the requirements for preparing a digital citizen in Algeria according to these three concepts, which we will explain in the following, after clarifying the stages involved in preparing the digital citizen.

5.1. Stages of Learning Digital Citizenship and Preparing the Digital Citizen:

5.1.1. Stage of Awareness

The stage of awareness is the initial step in learning digital citizenship, where individuals begin to recognize the importance of the digital world and their role within it. In this stage, the focus is on raising awareness about the digital environment, its tools, and the potential benefits and risks involved. Individuals, especially young people, need to be informed about the basics of using technology responsibly and safely.

Key aspects of the awareness stage include: **understanding the digital world:** Introducing individuals to the concepts of the digital space, including the internet, social media, and digital communication tools, **awareness of risks:** Teaching individuals about potential dangers in the digital world, such as cyberbullying, identity theft, and exposure to harmful content, **ethical**

considerations: Introducing the concepts of respect, privacy, and the importance of maintaining integrity in digital interactions, **the importance of digital literacy:** Understanding that digital citizenship requires not only the ability to use technology but also the ability to use it responsibly and ethically.

The goal of this stage is to lay the foundation for a responsible approach to technology and set the stage for more in-depth learning about digital citizenship and its various aspects.

5.1.2. Stage of Confrontational Practice

It refers to the ability to use technology in an environment that encourages risk-taking and exploration, while also allowing individuals to discern what is appropriate and inappropriate in technological use. (Abd Al-Zahra Jabeer, 2021, p. 12). In other words, the digital citizen reaches a point in their practice and digital behaviors where they are guided towards the correct and positive use of technology in accordance with laws and regulations.

5.1.3. Stage of Role Modeling and Exemplifying

When the digital citizen reaches an advanced level of awareness regarding the laws and rules governing digital behaviors and becomes well-versed in their rights and duties, they transform into a role model. In this stage, the digital citizen serves as a positive example from whom others learn how to properly practice digital citizenship. This is evident through their commitment to positive practices in virtual social life, as well as in professional and educational digital fields, which contributes to fostering a healthy and advanced digital environment.

5.1.4. Stage of Feedback

This is the final stage in preparing the digital citizen, where the individual reviews their experiences and learns from the experiences of others in practicing digital citizenship.

Feedback manifests in the evaluation of the positives and negatives resulting from digital practices, which allows for reinforcing positive behaviors and correcting negative ones. This stage also includes the role of the government and responsible entities in establishing appropriate laws and regulatory frameworks aimed at regulating digital behaviors of citizens and ensuring their alignment with the required digital values and principles.

5.2. Requirements for Preparing the Digital Citizen in Algeria

To prepare an effective digital citizen in Algeria who can keep up with global technological developments and engage with them professionally and ethically, enabling them to contribute positively to the digital space, it is necessary to build strategies and plans in various fields. It also requires a set of mechanisms, which we can outline in its different aspects as follows:

5.2.1. Requirements for Preparing the Digital Citizen in Terms of Respect and Values

Building the ethical and value-based aspect of the digital citizen is extremely important, as the behaviors and practices of the digital citizen stem from the values and principles they carry. Instilling the values of integrity and digital honesty in the individual is essential, as "digital interactions behind the screens, if not characterized by honesty, can cause significant harm in the short and long term due to the rapid spread of information and news in the digital world" (Abdul Aziz Al-Ahmadi, 2020, p. 503). In addition, the value of respect is critical, manifested in respecting

oneself and others in the digital world, by understanding and learning the limits of digital freedoms—where individual freedom begins and where it ends—along with recognizing the responsibilities and rights of the digital citizen, which are tied to digital access, eventually leading to digital accountability.

Building this aspect requires activating digital awareness processes across various institutions in Algerian society, starting with the family, which is the first station in preparing citizens, followed by other institutions. The media plays a significant role in this process, as it is an integral part of the digital world.

5.2.2. Requirements for Preparing the Digital Citizen in Terms of Digital Skills

This aspect includes digital literacy, which is "a comprehensive term encompassing a connected series of meanings that extend across the ability to use digital devices or software, enabling one to consume and produce digital content, in order to engage meaningfully in digital communities" (Nascimbeni, 2019, p. 10). This includes "skills related to using technology to empower users to find, evaluate, organize, create, and communicate information; to develop digital citizenship and the responsible use of technology." Digital literacy is much more than mastering isolated computer skills. Certainly, these basic skills are crucial; however, the essence of what digital literacy means is recognizing the importance of these skills in specific contexts and the individual's ability to apply them creatively and succeed in the digital space. Digital spaces and media require a variety of competencies, ranging from literacy skills and technical skills to social and cultural awareness. This relies on both the foundational and the most recent research that addresses digital literacy (Vanek, p. 1).

The digital literacy skills that Algerian educational and training institutions should focus on include: basic digital skills, network literacy skills, digital problem-solving skills, information knowledge, and communication culture.

The field of digital commerce is also critical as the economy and business world today are closely tied to digital transactions and exchanges. Preparing a digital citizen in this domain requires teaching the principles and regulations of e-commerce while educating them about the key risks they may face. A comprehensive guide to e-commerce can be created, available to all individuals, regardless of their specialization. This guide should include "the definition and development of understanding the nature, scope, and use of e-commerce and its applications, identifying and developing an understanding of the role of internet technologies, empowering individuals to apply e-commerce business models to real-world scenarios, providing the skills needed to analyze case studies and discuss key issues related to e-commerce development, enabling the acquisition and understanding of how to design, engineer, and implement e-commerce applications, and providing an understanding of the security, legal, and ethical issues related to e-commerce" (Ohene-Djan, 2008, p. 1).

5.2.3. Requirements for Preparing the Digital Citizen in Terms of Digital Protection

The aspect of digital protection encompasses digital security, protection, and safety, which makes preparing digital citizens in Algeria in this regard extremely important. This is especially crucial given the prevalence of cyber threats both globally and within Algeria, including hacking and cyber theft. If an individual is unaware of how to protect their accounts and digital privacy, they may be vulnerable to violations. As seen in the 2017 statistics on cybercrime in Algeria, digital protection is

multi-dimensional, affecting individuals as well as institutions and digital organizations. "Many small and medium-sized enterprises lack the awareness, resources, or expertise to assess their exposure to digital risks and implement appropriate prevention and remediation measures. The risk is especially evident in sectors where small and medium-sized companies tend to handle large amounts of personal and valuable data, such as professional services, healthcare, and retail" (Cusmano, 2020, p. 1).

Thus, the first focus should be on educating digital citizens about the types of cyber threats they may face, whether personally, such as identity theft and reputation damage, or coercion into illegal activities by threatening them with stolen personal images or data. Additionally, on a professional level, the risks could include the destruction of administrative systems, financial embezzlement, or the hacking of banking accounts. Cybercrimes also include violations of intellectual and literary property rights, as well as patent infringement. Furthermore, cybercrimes may threaten national security by infiltrating government systems and engaging in espionage.

After raising awareness about the threats, it is essential to educate citizens on how to protect themselves and use available protection mechanisms. There are numerous high-precision protection applications and software that digital citizens should be familiar with and know how to use to ensure digital security and safety. "One study emphasized the need to train individuals to use antivirus programs and anti-spyware software, keep them updated regularly, and ensure the proper and secure encryption of important information, such as using comprehensive cleanup and removal programs. Digital citizens should only download necessary programs from trusted websites, use strong passwords for website access, and ensure that browser settings are configured securely. If an individual faces any cyber threat, they should immediately report it to the authorities" (Abdulaziz Al-Ahmadi, 2020, p. 507).

Conclusion:

From the above, we can conclude that digital citizenship has become an integral part of individuals' lives in all societies, including Algerian society. The digital citizen now practices their digital rights and duties in an integrated manner, from communicating with others and participating politically to learning and seeking knowledge, and even performing their daily tasks and shopping to meet various needs.

In light of the rapid digital transformation witnessed in Algeria, especially with the absence of full readiness for this significant transition, the importance of learning digital citizenship has emerged as an urgent necessity. This learning aims to enable citizens to adapt to and practice digital life correctly and responsibly.

Learning digital citizenship includes a comprehensive understanding of its various components, such as:

Digital Etiquette: Adhering to electronic behavior standards and procedures.

Digital Communication: Effectively exchanging information electronically.

Digital Education: Acquiring the necessary skills for teaching and learning using technology.

Digital Access: Achieving inclusive electronic participation within society.

Digital Commerce: Conducting buying and selling transactions through electronic means.

Digital Responsibility: Taking responsibility for digital actions and practices.

Digital Rights: Enjoying the digital freedoms guaranteed by laws and norms.

Digital Well-being: Ensuring mental and physical well-being in the digital environment.

Digital Security: Taking necessary precautions to ensure personal and collective protection.

This comprehensive approach to learning digital citizenship enhances the ability of the Algerian citizen to live their digital life as a responsible citizen, capable of interacting with digital transformations efficiently and responsibly.

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