

Digital Citizenship and Health Security

Mounira BELAID*¹

¹ University of Constantine 3 - Salah BOUBNIDER, (Algeria), mounira.belaid@univ-constantine3.dz

Date of submission: 30/06/2024

Date of acceptance 23/05/2025

Date of publication: 05/06/2025

السلامة الصحية والأمن الرقمي: دور المواطنة الرقمية في مواجهة التهديدات الصحية في العصر الرقمي

Abstract:

Digital technology and communications' took a big area in people's lives, where they represented a loophole and a solution for individuals and countries to face the different diseases and epidemics and this is done by setting many facilities that decreased the repercussions of the different health security threats to the normal citizen, to whom the digital citizen character was added within what is called the digital citizenship. Therefore, this research paper aims to detect and identify the role of digital citizenship in decreasing the severity of health security threats.

Keywords: Digital Citizenship, Digital Citizen, Security, Health Security, Health Security Threats.

*Corresponding author.

1. Introduction

Our modern world has undergone significant changes that have affected every facet of life and brought up a number of issues that have worried all those in charge of making decisions. Health concerns and the rise of diseases and epidemics are at the top of the list, posing a threat to the health security of the individual, the state, and the entire world. With growing awareness of health threats and their deadly risks, interest in this subject is no longer confined to health professionals, but has become a general concern which is shared by politicians and security alike. Therefore, in an international environment with globalized routes, it is challenging to prevent and control the spread of the coronavirus and the recurrence of numerous deadly epidemic diseases. Digital technology and the evolution of communications have played a major role in people's lives, providing a breath of fresh air and a solution for individuals and countries in the face of various diseases and epidemics, presenting numerous facilities that have reduced the repercussions of the various threats to health security for the ordinary citizen, to whom the character of digital citizen has been added as part of what is known as digital citizenship. This research paper aims to detect and identify the role of digital citizenship in decreasing the charpeness of risks that threaten health security.

So, depending on what we have seen at the international level and at the local level, the Corona Covid-19 crisis was the real touchstone that formed a major humanitarian security challenge for governments and peoples. As Everyone who has followed the course of the crisis acknowledges whether political analysts and technicians that digital citizenship has contributed to conquering the crisis by depending on information technology and digital culture both at the governmental and the individual levels, especially in the areas of: health, education and security.

Also, the Corona pandemic has shown the pressing significance of the digital technologies for administration, economy and society, where digitalization through its different technologies and means contributes to decreasing the Sharpe of different humanitarian security crises. Therefore, the number of services that digitization offers has both directly and indirectly helped to address this dilemma by reducing the amount of time, effort and money needed to achieve the realization of institutional and individual strategic, economic and security goals. These services also made many sectors enter and evolve their structures and institutions to keep pace with these health and then digital evolutions. Therefore, in spite of the numerous challenges encountered during this phase, the latter compelled the state

to invest in and adopt plans and strategies related to digitization and digital citizenship in anticipation of future humanitarian security crises. Consequently, this study will attempt to address this theme starting from raising the following problematic: In what ways might digital citizenship, with its many technology and tools, lessen the severity of the numerous health security risks and humanitarian security crises in general?

This study starts from a general hypothesis, which is represented in:

Adopting digital citizenship and digitalization methods, as well as investing in various technologies and resources, is regarded as a fundamental step to help reduce the severity of the threats to health security.

To answer the raised problematic, the study deals with the following elements:

First: The concept of digital citizenship.

Second: Knowledge Building for Health Security

Third: Threats to health security.

Fourth: The role of digital citizenship in facing health security threats.

2. First: The concept of digital citizenship:

I. Definition of Citizenship:

The Britannica Encyclopedia states that citizenship is a relationship between an individual and a state that is determined by the law of that state according to the duties and rights included in that relationship in that country (Beck, 1997)

The Britannica Encyclopedia confirms that citizenship refers implicitly to a rank of freedom with what joins it of responsibilities. And though nationality is often synonymous with citizenship where it contains a relationship between an individual and a state, it also means other special privileges, like protection abroad. The Britannica Encyclopedia concludes its concept of citizenship by: it is in general grants the citizen political rights like the election right and occupying public office. (Al-Kuwari, 2001).

The International Encyclopedia mentions that citizenship is the full membership in a state or some government units, and that citizens have some rights, like the voting right and occupying public office, as well as have some duties, like the duty of paying taxes and defending their country. (Harester, 1994)

In this context, one definition indicates citizenship as the full membership in a state or in some government units..., and citizens have some rights, like voting right and occupying public office, as well as they have some duties like the duty of paying taxes and defending their country. (Barout, 1995) And in another definition, citizenship and in another definition considered as the rank that simplifies obtaining the civil rights and also the political, social and economic rights. (Ismail, 1983).

However, the citizen is defined as a person who has the right to vote, hold political responsibilities, enjoy equality in front of the law and has the right to obtain government services and privileges. In contrast, citizenship means committing a set of obligations, like obeying laws, paying taxes and defending the country (Faulk, 2000).

In this context, we are talking about the contribution of the British sociologist “T.H. Marshall” as the pioneering contribution that dealt with the issue of citizenship in the modern era, where he could set an overall theoretical framework, through which he grasped the experience of the modern nation-state: The “well-being state” and the capitalist society, especially after the second world war (John, 1996) . So, his contribution is considered an essential reference for the citizenship idea, and there is hardly a recent study on citizenship that does not deal with Marshall’s contribution whether through analysis, criticism, and review to face the new problematics that confront citizenship regarding western experience (Stephen C. A., 2000) .

1.Elements of Citizenship:

Marshall defined Citizenship as: full and equal membership in a political unit and he also defined it as: a body of rights that are exercised in institutional manner. (Marshall, 1963) And Citizenship is composed of three elements:

a. Civil Element:

It includes individual freedom, freedom of expression, belief and faith, possession rights, liberating restrictions and the right to justice against others who oppress him in terms of full equality. And as for the institutions expected to achieve the civil element of citizenship, it is the judicial institution.

b. Political Element:

It means the right to participate through the existing political forces in society because the citizen is considered as an active member of the political authority,

or as a voter for these political forces. The political element is exercised by the parliament or the local councils (Iija, 2011).

c. Social Element:

It means that the citizen enjoys economic well-being and social security, and enjoys a life deserved of a civilized person according to the standards of existing society. The social element is carried out through the education system, health care system and social services (Marshall, 1963).

2- Citizenship dimensions:

There is a functional aspect to citizenship where each party fulfills the other's rights and obligations. As a result, citizenship in its modern sense denotes a set of rights and obligations that are recognized by international agreements, indicated and guaranteed by national constitutions, and enshrined in national laws (Kanfyinga, 2000).

So, based on the above, we can say that citizenship is an expression of a certain pattern of the relationship patterns between the individual and the state and this pattern has lot of dimensions, the most significant of which are the following (Al-Hafez, 2008):

- a. The legal dimension is represented in the legal organization of political, economic, social and cultural rights that the state must guarantee to citizens equality and without any kind of distinction among them religion, gender, race or wealth. However, there are also duties that citizens have to the state, as long as they are explicit and well-defined in terms of their nature and how they must be carried out.
- b. The material dimension, which is reflected in the state's capacity to provide for each person's basic needs.
- c. The moral dimension, which is represented in the individual's feeling of loyalty and belonging to the state, leads to respect, voluntary compliance with the law, interest in public work and the desire to carry out volunteer work to serve the community in which he lives, even if that needs to sacrifice an aspect of one's interests, reaching the readiness to sacrifice oneself for the sake of defending the state against the threats it is exposed to.

II- Digital citizenship concept:

Communities were able to crystallize the concept of citizenship during their evolution by setting an ideal model for it, which is the model that became

reference to evaluate the realizations that determine the extent of citizenship perfection or its reduction and narrow scope. Particularly since our contemporary world is differentiated from everything else by the march of human civilizational development, which is considered the information revolution and the computing development (hardware and software), the spread of social media and the growth of the Internet, that has reduced the dimensions of our geographical world. The way we live and communicate, as well as the quality of our ideas, beliefs, cultures, and identities, have undergone drastic change as a result of these changes (Mossberger, 2011).

According to We Are Social and social media management platform Hootsuite, which are concerned with presenting periodic statistics of the digital services, international statistics for the year 2019 indicate the depth of this transformation (Kemp, 2019), where 360 million people around the world started to use the internet for the first time in 2018, an average of one million new users per day. The internet users' number reached during the same year about 4.388 billion users, at a rate of 57% of the earth's population.

And from the results of this information revolution new terms and concepts have appeared, so we are faced with what we call the digital society, the digital individual and the digital citizenship, where the latter is considered as a virtual citizenship in a wide-ranging technological electronic space, in which identities are multiple, values interlock, privacy breaks down and new rights and duties appear that put the identity with its traditional sense in a deadlock (Kastell, 2024).

The topic of digitization is very significant and even requisite, as it imposes the integration of religious, social, psychological, legal, political, pedagogical and educational concepts into the equation and taking them into consideration for evolution. (Stephen N. , 1997). This matter imposes the common work and the exchange of experience and knowledge horizontally and vertically.

The term digital citizenship has been set within different definitional fields and through lot of intellectual contributions, I attempted to understand its meaning, among them:

- Digital citizenship refers to a set of guidelines for conduct, knowledge, abilities and values that people in a digital society should possess in order to become proficient with technology and capable of handling the demands and abilities of digital access. (Jones, 2016).

- Digital citizenship concept indicates one form of the social identity

which is shared by all the community members... and has a set of rights, duties, rules, standards, ideas and principles which are pursued in the optimal use of the technology that the citizen requires. (Bakardjieva, 2009, p. 104).

- Digital citizenship can be simply defined as: the interaction of the individual with others by using digital tools and sources, like computers and cell phones, with all the services they supply, like the electronic mail, blogs, internet sites, social media networking, ...etc, with the requisite rules, regulations, standards, targets, ideas and principles that support the optimal and correct use of the digital technology. (Jwaifell, 2018).

- Digital citizenship is as the supreme universal hospitality (according to the Kantian sense), where its legitimacy derives from the right of the human mind to a new horizon for his self-achievement in a way that is keep pace with the current civilizational moment and fulfills the tolerance needs, cultural exchange, economic evolution, equality and peace (Culver, 2014).

- According to UNESCO, digital citizenship means that the citizen enjoys a set of skills that enable him to access information and media, retrieve, understand, evaluate, use, create and share them in all sorts and this is by using various tools in critical, ethical and effective manner for the purpose of participating and engaging in personal, professional and social activities.

- Digital citizenship means the ability to participate in a networked society, and it represents the responsible, ethical and safe use by the individuals for the information and the communications technology as members of the national community and as citizens of the global community (Bearden, 2019).

- Some believe that digital citizenship is the optimal model of citizenship in the twenty-first century, where it represents the standards of appropriate behavior which is related to the use of technology.

- A digital citizen, is a person or citizen who benefits from having the ability to use the internet to regularly and efficiently complete his duties. He is therefore a product of contemporary technology, community development, and the utilization of civilizational data for the advantage of a brighter future.

1- Dimensions of digital citizenship:

Digital citizenship has nine elements which have been agreed upon by the International Society for Technology in Education (ISTE): and these elements have been determined to help better understand the topics that form

digital citizenship and supply a regulated way to teach it and include it in the approaches in an appropriate manner so that we have fully digital citizens (Ribble). And these elements are as follows (Ceccarini, 2021):

a. **Digital Access:** means the equal opportunities for all the students concerning the technological access so that technology is available for everyone and that they obtain the opportunity of engaging in a digital society. Technology must be accessible in schools since we are preparing the pupils for a technological future.

b. **Digital commerce:** entails teaching students about smart consumption and digital commerce, as well as a number of problems that they might face when shopping online, such as identity theft, fraud, and personal information. The goal is to make students more conscious of these problems when making purchases or selling products online, which will help them to engage with the digital economy.

c. **Digital communication:** which has become the new means by which people interact with each other, whether it is through the electronic email, video calling, immediate messaging, social networking sites, or other means of digital communication. Accordingly, it is a must to realize the appropriate digital social communication when communicating with others and to educate students about the etiquettes and rules that they must pursue.

d. **Digital culture:** Despite efforts to make technology more widely used, teaching frequently focuses on teaching the technology itself rather than how to utilize it conveniently. Among the most important challenges of the digital culture are learning the fundamentals of digital technology, assessing electronic sources and the degree of authenticity and honesty of their material, identifying and developing learning patterns on electronic networks, and remote learning.

e. **Digital code of conduct:** In the past, parents were typically the only ones responsible for establishing standards of behavior. However, as technology has advanced, parents are no longer able to keep up with the latest developments and determine what digital stuff is convenient and what is not. As educators, our role appears in dealing with issues of digital conduct in the approaches, asserting the respect principle and presenting the basics of digital code of conduct to the students.

f. **Digital law:** The Kingdom of Saudi Arabia's Anti-Cybercrime Law is a type of digital law that was developed to safeguard online users. Violations of this

system are punishable by actual consequences. As a result, the school needs to address this issue and explain the consequences of some careless student behaviors, such as utilizing hacking software, breaking into programs and systems, sexual harassment, identity theft, etc.

g. Digital rights and responsibilities: as long as there is a digital law that protects digital citizens, we must be alert about the rights of these citizens, like privacy, protection of their intellectual property and other rights. To obtain his rights, he must fulfill his obligations to this digital society, which are reflected in the responsible and efficient use of technology. In addition, these rights come with responsibilities.

h. Digital health and wellbeing: Its goal is to raise students' awareness of the physical risks associated with technology use, such as issues with the eyes, shoulders, or back, as well as other symptoms that may arise from careless use. These risks may worsen until they develop into a true addiction and cause mental and psychological issues. That's why students are required to use technology to preserve good health.

i. Digital security: which includes teaching students how to protect their electronic data through using antivirus software, digital protection systems, as well as not supplying anyone on the electronic network with their personal data. This, in turn, protects them from identity theft, fraud and harassment (öztürk, 2021).

2- The relationship between the ordinary and digital citizenship and the difference between them:

- Digital citizenship is a stretch of thorough citizenship which means belonging and commitment to the rules, laws and values of the virtual world to which the individual belongs, as is the case in ordinary citizenship. In other words, digital citizenship has appeared as an idea from the ordinary citizenship concept, which we practice in the actual reality.

- Digital citizenship is viewed as developing the traditional or the ordinary citizenship values by using digital technology tools, where both of them concentrate upon preparing a good citizen who represents a model of good belonging to his country, his community and in the virtual world.

- Both the concepts concentrate upon supporting a valuable and strong

behavioral system which inculcates belonging, responsibility, respect, time management and freedom. So, just as there is in reality affiliation, rules and conditions that govern us, also the same rules and values apply in the digital community.

- Both the concepts agree in boosting the individual's moral and the behavioral orientation towards himself and his community. But thorough citizenship is more general and overall because it evolves awareness of rights and duties in different matters and fields. However, the digital citizenship, evolves this awareness just in the virtual environment.

Concerning the difference between ordinary and digital citizenship, we can classify it as follows:

Ordinary citizenship:

- Preparing a good citizen who serves his country and community.
- Developing the values of belonging and commitment in the community.
- Practicing duties and rights which the individual belongs with to his country and community.
- Practicing different activities in life: political, social, cultural, ...
- Knowing the laws and practicing them to protect the community.

Digital citizenship:

- It is interested with the good digital citizen who supervises
Developing the values in the digital virtual community.

- Practicing rights and duties in using just digital technologies.
- Practicing the political, social and cultural activities in the digital environment.
- Knowing the official laws and practicing them through the internet networks.

3. Second: Knowledge Building for Health Security

The concept of security is considered one of the most significant political terminology that raised controversy because of its relation with the issue of

the continuation and the survival of individuals, peoples and countries. Also, the many definitions of it and their variety in terms of content, level of analysis, means and parties which are concerned with it are the greatest evidence of this. The true security of the state stems from its deep knowledge of the sources that threaten its different abilities and facing them to give the opportunity to develop those abilities in a real development that touches all the fields, whether in the present or in the (Tashtoush,2012) . And among the most significant.

definitions of the security which is adopted in the academic studies is the Barry Buzan's definition who is considered one of the most outstanding specialists in security studies and defines it as working to get rid of the threat. And according to the international system, communities and states can preserve their independent entity and functional consistency against the forces of change which they consider inimical (Smit-Bellis, 2004).

And we can say that the concept of security is setup on four foundations or pillars (Alharbi, 2008):

- Perceiving the external and internal threats in a real awareness.
- Setting strategies to develop the state's forces.
- Supplying the ability to face these threats, and this is done by building the armed force and the police force which are able to address it.
- Preparing the scenarios and taking convenient measures to face threats, and the requirement of evolving them gradually as these threats escalate.
- **Military Security:** which relates to the two interacting levels of armed attack and defensive capabilities, as well as the perceptions of states towards each other's intentions.
- **Political Security:** which relates to the regulatory stability of countries, and government systems and ideologies from which they derive their legitimacy.
- **Economic Security:** it is about the financial resources and markets which are indispensable to permanently preserving the acceptable levels of well-being and state's power.
- **Social Security:** which relates to the communities' ability to reproduce their patterns of privacy in language, culture, national and religious identity, traditions and customs, by adhering to acceptable conditions for their evolution.

- **Environmental Security:** which means maintaining the local or universal biosphere as a fundamental factor on which all human activities rely.

- Globalization has brought about a number of changes that have affected the idea of security and the international security environment. Some of the most notable of these changes are those that have affected the idea of force and are no longer neatly and exclusively associated with the military component; rather, they have expanded to include technology, education, economic growth, information, and reliance on exchange. As a result, the global force today is based on both solid sources—the hard force—and sources that are of the soft force, as Joseph Nye had mentioned. Accordingly, the soft security indicates the indirect threats or the non-military threats like instability, extremism, terrorism, contraband, drugs, illegal immigration, organized crime and epidemics. However, we mean by the hard security: the direct threats, which means in other words the military threats.

So, if the security concept is limited to the security of a country's territory against external offensive, or protecting its national interests, then it must not be denied that there is a legitimate worries' disregard of the common people which have a direct connection with their security and the different repercussions it threatens of epidemics, starvation, vac, crime and social conflict,... Accordingly, the feeling's source of insecurity for the majority of people is primarily the problems of daily life more than the apprehension of fierce world events. Human security is therefore not linked to weapons, but to human life and respect for it.

According to the aforementioned, the idea of human security emerged in the latter part of the 1990s as a result of a number of worldwide changes, most notably the expansion of international conflicts and their effects on civilian casualties, as well as the globalization of certain environmental issues, diseases, and poverty. As a result, the threats that the world faces have changed, and this is what the 1994 Human Development Report addressed. The United Nations Development Program is credited with being the first to recognize the concept of human security and incorporate it into broader security studies (sustainable development, s.d.).

The contributions of the “Copenhagen School” in the early eighties of the last century, in particular the theoretical work carried out by “Barry Buzan” and “Ole Waover”, linked to the Copenhagen Peace Research Institute, are regarded as the pioneers of theoretical efforts to structure the concept of security and to broaden and deepen it, which means moving beyond the focus on state security as the reference subject for security and broadening it to sectors other than the military sector, and

extending it to the safety of groups and individuals (Antar, 2005).

We mean by the human security, the maintain of the human respect through the fulfillment of his material and moral needs and the guarantee of the practice of his basic rights. However, the threats against human security are represented in many forms where the report summed them up in the following categories: economic security, food security, health security, environmental security, personal security and social security (Jadid.).

Additionally, the 2001 commission on human security helped determine the meaning and dimensions of health security, which was in the midst of integrating human security into various United Nations activities. This commission had concluded that health security is a state of complete well-being of mental, physical, and social health that an individual enjoys, rather than just the absence of disease. The same report issued by the Human Development Commission had also presented a definition regarding health security, stating that it is one of the fundamental dimensions of human security and that its primary goal is to guarantee protection against diseases and unhealthy lifestyles (security, 2003).

Likewise, the same commission concluded in its report which was issued in 2003 four health issues which are connected in direct manner to the health security concept are as follows:

- The onus size of disease in the present and in the future.
- The pressing requirement which the health matter imposes is the requirement of the rapid movement to face what threatens it.
- The profundity and the extent of the influence health matter on the community.
- The external factors that can be the reason of some diseases or the health of individuals and places.

The same report indicated three major threat sources that influence in direct manner the individual health and which in turn transform into threats to the human security, which are: global infectious diseases, conflicts and humanitarian disasters, poverty and inequality.

The world health report which was issued by the World Health Organization in 2007 under the name: "A Safe Future: Global Public Health Security in the 21st Century," presented an overall view of the global health situation, comprised the health security concept as it is: The sum of the requisite activities and conducted in a planned or proactive manner and which are done to limit

injuries or incisions that form a risk to the general health of the population in the different regions and across the different borders ((WHO), 2007).

According to Czech researcher Jan Eichler, the concept of threat generally expresses the desire to cause harm to an aggressor (individual/group/state...), the following elements are required to fulfill (Akum, 2013) :

- It causes a state of terror and fright.
- It provides the ability to target, whether this is targeting directly the state, its citizens, or the countries which are neighboring the state and in this case the threat has a geopolitical effect.
- The risk degree, which means the nature of the risk (potential, actual, implicit), so the more the threat is dangerous the more it demanded an instant and dynamic reply from the threatened party.

Therefore, the health security threat means all the breaches, conditions and news that form a risk or attempt to damage the general health of the population in the different regions.

4. Third: Threats to health security

Given the risks that endanger the existence of the human element, many experts in security affairs believe that health issues and the related issues of infectious and epidemic diseases constitute a security problem par excellence. This is especially true in light of the resurgence of epidemics and infectious diseases based on their spread paths that have affected various nations worldwide. And the explanations for this occurrence point to four basic origins, which are as follows (Kojaili, 2012):

- Genetic and biological factors.
- Environmental and material factors.
- Ecological factors.
- Social, economic and political factors.

The evolution and adaptation of living things, the vital body's susceptibility to infection, climate and weather, changes in ecological systems, economic development and land use, demographic shifts, technology and industry, international travel and commerce, the breakdown of public health procedures, poverty and social inequality, wars and starvation, lack of political will, and deliberate infection are just a few of the numerous sources that fall under this

category (Ingram).

New diseases have started to emerge since the last decade of the twentieth century, at a rate of one or more diseases per year, and this is an unprecedented pace in the history. The issue that is concerning in this context is the rate at which drugs fail due to the evolution of resistance to viruses and bacteria, which happens more quickly than the scientific discovery of substitute pharmaceuticals.

And among the most significant new diseases that have evolved because of the viruses are the following (Jadid.):

- Crimean fever- Congo hemorrhagic: Hemorrhagic fever is caused by a virus that is transmitted through ticks and cattle with a mortality rate reaches 40%, with the possibility of the transmission from one human to another and there is no vaccine for this disease.

- Ebola virus: It is a hemorrhagic fever which is caused by the wild animals with a mortality rate reaches 90% with the possibility of transmission from one human to another, also, there is an experimental vaccine for the disease.

- Marburg virus disease: It is a hemorrhagic fever which is caused by a virus transmitted by fruit bats, with a mortality rate reaches 88% with the possibility of transmission from human to another and there is no vaccine.

- Lassa fever: It is a hemorrhagic fever caused by a virus that is transmitted through contact with the rodents' urine or feces, with a mortality rate reaches 15% in severe cases, with the possibility of transmission from human to another with no vaccine for the disease.

- Coronavirus: It is the cause of the middle east respiratory syndrome, which is a disease that affects the respiratory system that is caused by the Coronavirus and is transmitted by camels and humans with a mortality rate reaches 30% with also no vaccine.

- Severe acute respiratory syndrome (SARS): It is a disease that affects the respiratory system that is caused by the Coronavirus and it is transmitted from one human to another and also from animals (possibly bats) with a mortality rate that reaches to 10%.

- Nipah and Henipa viral diseases: are diseases brought on by a virus that is spread by pigs, people and fruit bats. They have a 100% fatality rate and manifest as encephalitis or acute respiratory syndrome. To create a new vaccination, a coalition has been formed (For the Pandemic Preparedness Innovations).

- Rift Valley Fever: is a disease caused by a virus that is transmitted by contact with the blood, infected animals' organs, or by mosquitoes, with a mortality rate reaches 50% for the patients who are suffering from the hemorrhagic fever. Also, no cases of transmission from human to another have been declared, and there is an unlicensed experimental vaccine.

- Zika fever: This condition is brought on by a flavivirus that is spread by mosquitoes and can cause Guillain-Barré syndrome and microcephaly in infants born to infected women. There is no vaccination, and there is a chance that it could spread from person to person.

- Covid 19: A group of viruses known as coronaviruses are responsible for the Middle East respiratory syndrome (MERS), coryza, and severe acute respiratory syndrome (SARS). Additionally, a new type of coronavirus was discovered after it was shown to be responsible for the development of a sickness that began in China in December 2019.

As a result, by the end of 2019, people all over the world had experienced the occurrence of a global pandemic, also known as the Corona outbreak. This created a new difficulty and resulted in significant material and human losses, making it a major issue and a top security threat. According to the World Health Organization, coronaviruses are a common family of viruses that can cause a variety of illnesses, from the common coryza to more serious conditions like severe acute pneumonia syndrome (SARS), middle east respiratory syndrome (MERS), and the recently discovered coronavirus nCOV. Furthermore, coronaviruses are thought to have a zoonotic origin, meaning both people and animals can contract them.

The new Corona virus Covid-19 pandemic, which causes Coronavirus-SARS Cov2, first appeared in Wuhan, China, in December. From there, it spread over the rest of the world and started to spread quickly until the end of March 2020. More than 800,000 cases have been reported to the WHO, with the majority occurring in the United States, Italy, China, Spain, Germany, Iran, France, the United Kingdom, Switzerland, and the Netherlands. Additionally, it reported more than 39,000 fatalities, the great majority of which occurred in France, Italy, Spain, China, and Iran. Likewise, the World Health Organization also registered the prevalence of the virus in 199 countries and territories in all of: Asia, Africa, Europe, and the Americas besides to Zealand). (Studies, 2020)

The first infection case was registered in Algeria on February 25, 2020, where the total score of infections in December of the same year was: 99,610 cases (arabic.rt, s.d.).

- Algeria was one of the first nations to take preventative measures against this epidemic, such as border closures and improving prevention systems. This was accomplished by implementing a quarantine system and establishing health protocols to ensure the continuation of social and economic activities. Algeria has also taken a number of actions to control and eradicate this epidemic virus, which are summarized as follows:

- Security measures included exceptional restrictions on physical contact between citizens in public spaces and workplaces, the suspension of passenger transport activities and the granting of exceptional paid leave.

- Taking health and preventive measures, where a number of decrees have been put in place which aimed to protect public health and restricting the prevalence of this virus, where the first of which comes as: a total home quarantine, which means obliging people not to leave their homes or places of residence during the given period that is determined by the public authorities, in addition to stopping competitions and sports activities.

Even though these security measures are in the benefit of the citizen's health, but lot of national sectors have been influenced economically and socially because of the quarantine, the issue of distancing and the study restrict the repercussions of this pandemic.

and the work cessation in lot of institutions. And this is the matter that pushed the government to take a number of exceptional and innovative solutions, the first of which is the digitization adaptation and use it as a mechanism to restrict the repercussions of this pandemic.

5. Fourth: The role of digital citizenship in facing health security threats

The new Corona virus prevalence has caused the undermining of the health security in most world countries and threat to the economy and different vital sectors in these countries. Algeria is considered among these countries that were infected by the new Coronavirus because of some cases that entered the country from Europe, and this is the matter that imposed it to take a number of preventive and precautionary measures in order to avoid the prevalence and spread of the epidemic among people like the closing of all the Algerian borders: sea, air and land, closing schools and universities and freezing the different economic and social activities in order to preserve the citizens' safety.

As the procedure for activating social distancing and limiting direct meetings

became indispensable and an imperative requirement for the effectiveness and validation of this distancing. So, the world found itself - like Algeria - in front of an inevitable requirement of adopting the digitization for the sake of guaranteeing the continuity of some sectors even if by distance. Among these sectors were the educational institutions, as well as all the service and production institutions.

So, the situation which is generated by the health emergency and movement restriction because of the new Coronavirus crisis has put the different actors in a threatening environment. Where we find lot of institutions, commissions, schools and universities were obliged to go to adopt the digital means for guaranteeing the continuation of their activities by distance.

On the other hand, the coronavirus demonstrated the urgent need to embrace digitization to provide services to quarantined citizens, as it spared them the fatigue of transport and the strain of seeking help from others and queuing. In addition, reliance on remote working instead of the usual working model. And after

The COVID-19 epidemic has highlighted the urgent need for digital technology in administration, the economy, and society. This is an issue that would greatly advance performance and rationalize public spending. Where one can attend his programmed meetings from his home without the fatigue of transportation to the meeting place, in addition to saving cost, effort and time, where a person can conduct his administrative matters while he is at home or at his workplace without bearing the material and moral costs of transportation to the departmental headquarters. And among these merits: low operational cost of digital information institutions compared to traditional ones, keeping pace with the evolutions which are happening in the field of preserving, organizing, retrieving and broadcasting information, besides to solve the problem of the spatial space within the information institutions.

6. Conclusion

Digitization contributes through its different technologies and means to decrease the Sharpe of the different humanitarian security crisis, particularly the health ones, and the best model of this is what the international community has experienced during the Corona pandemic and its repercussions. In both direct and indirect ways, the number of services made possible by digitization has helped to address this challenge by saving money, time, and effort in obtaining and realizing the strategic, economic, and security benefits for both individuals and institutions.

Alongside these health upgrades and the subsequent digital evolutions, it also made it simpler for many sectors to butt and evolve their organizations and structures, especially in the areas of internal affairs, banking, justice, public services, and educational and health institutions. Despite the many challenges this stage has presented, the latter has forced the state to invest in and implement future plans and strategies in the areas of digitization and digital citizenship in order to prepare for the future and any potential humanitarian security crises. In order to achieve many electronic works, these accomplishments should be disseminated, maintained, and improved. This will help to increase fiscal consolidation, combat corruption, and expedite service access.

In light of this, we can conclude that the adoption of digitization, digital citizenship, and investment in all aspects related to its operations and services during the Corona crisis is regarded as a fertile ground for the post-pandemic phase in order to adopt digital switching at the institutional, commission, and individual levels and make the digital world a fundamental component of every step. Additionally, the COVID-19 pandemic offers a chance to reflect deeply on what it means to be a good digital citizen.

One of the issues we want to address in the face of threats to health security is renewing the energy of leaders to think about how best to facilitate effective digital learning. So, when it comes precisely to digital citizenship, leaders must first focus on building a shared vision with researchers, curriculum preparation specialists for teachers, businesses and policymakers. This kind of stakeholder engagement will pave the way for partnership with a wide range of organizations that can contribute to capacity building.

As a final result, it is significant to be ready for a reality in which we are sure about our ability to face additional crises in the near future. Ultimately, our work throughout the digital citizenship journey must be aimed at meeting the demands that will continue into the future, and that are impossible to predict. It's really important to ask ourselves, as we choose among the alternatives, not only how to defeat the direct threat, but also what kind of world we'll be living in in the future.

7. Footnotes and bibliography

¹.(WHO), W. H. (2007). *a safer world public health security in the 21st century. world health report*. World Health Organization (WHO).

². Akrum, L. (2013). *The Impact of Security Threats between North and South Mediterranean*. Amman: Ibn Battuta House for Publishing and Distribution.

- ³. Al-Hafez, S. (2008). *Citizenship: Rights and duties*. Giza: Maat Centre for Legal and Constitutional Studies.
- ⁴. Alharbi, S. A. (2008). The concept of security: Levels, Formulas and Threats: A theoretical study in concepts and frameworks. *Arab Journal of Political Science*.
- ⁵. Al-Kuwari, A. K. (2001, (February)). The concept of citizenship in a democratic state. *Al-Mustaqbal Al-Arabi*, 264.
- ⁶. Antar, A. B. (2005). *The Mediterranean Dimension of Algerian Security: Algeria Europe and NATO*. Algeria: Modern Library for Printing, Publishing and Distribution.
- ⁷. arabic.rt. (s.d.). *arabic.rt*. Récupéré sur <https://arabic.rt.com/middle-east/1099708>
- ⁸. Bakardjieva, M. (2009). *Subactivism: Lifeworld and politics in the age of the Internet*. the informations Society.
- ⁹. Barout, M. J. (1995). *Civil Society: Concept and Problematic*. Syria: Friendship House.
- ¹⁰. Bearden, S. M. (2019). *Digital Citizenship: A Community-Based Approach*. corwin.
- ¹¹. Beck, U. (1997). *The reinvention of politics*. Cambridge: Polity.
- ¹². Ceccarini, L. (2021). *The Digital Citizen(ship): Politics and Democracy in the Networked Society*. Edward Elgar Publishing.
- ¹³. Culver, S. (2014). *Global Citizenship in a Digital World*. eborg: NORDICOM.
- ¹⁴. Faulk, K. (2000). *Citizenship*. London: Routledge.
- ¹⁵. Harester. (1994). *The Foundations Of Citizenship*. New York: Dawn Oliver And Dreek Heater.
- ¹⁶. Iija, V. (2011). *An Analysis of the Concept of Citizenship: Legal, Political and Social Dimensions*. Helsinki: University of Helsinki.
- ¹⁷. Ingram, A. (. (s.d.). The New Geopolitics of Diseases : Between Global Health and Global Security. *Geopolitics*,N1.
- ¹⁸. Ismail, S. A. (1983). *The Economic and Social Components of Democracy in the Arab Worldin Democracy and Human Rights in the Arab World*. Beirut: Centre for Arab Unity Studies.
- ¹⁹. Jadid., A. a.-H. (s.d.). Health security in a world without borders. *Horizons Journal of Science Djelfa*, 3.
- ²⁰. John, w. D. (1996). *Between Consent and Descent Conceptions of Democratic Citizenship* (éd. 2nd press). Washington: Bookings.
- ²¹. Jones, L. M. (2016). Defining and measuring youth digital citizenship. *new media & society, Vol18*, p. 9.
- ²². Jwaifell, M. (2018). The Proper Use of Technologies as a Digital Citizenship Indicator: Undergraduate English Language Students at Al- Hussein Bin Talal University. *World Journal of Education*, 8, 3.
- ²³. Kanfyinga, K. (2000). *Citizenship and Governance in Eastern and Southern Africa*. International Development Center.
- ²⁴. Kastell, K. (2024). *Good Digital Citizen: Everyday Ethics For An International Digital Existence*. Archway publishing.
- ²⁵. Kemp, S. C. (2019). *We Are Social*. Global Digital Report 2019. Consulté le 01 13,

2019, sur <https://wearesocial.com/global-digital-report-2019>

- ^{26.} Kojaili, S. A. (2012). *The evolution of security studies and the dilemma of application in the Arab world* (Vol. 1st edition). Abu Dhabi: Emirates: Centre for Strategic Studies and Research.
- ^{27.} Marshall, T. (1963). *Citizenship & Social Class*. London: Heimen.
- ^{28.} Mossberger, K. T. (2011). *Digital Citizenship: The Internet, Society, and Participation*. Cambridge: The MIT Press.
- ^{29.} öztürk, G. (2021). Digital citizenship and its teaching: A literature review. *Digital Journal of Education Technology and Online Learning*, 4, 1.
- ^{30.} Ribble, M. (2019, 11 4). *Nine Elements*. Récupéré sur <https://www.digitalcitizenship.net/nine-elements.html>
- ^{31.} security, C. o. (2003). *human security non report*. Récupéré sur New York: <http://www.un.org/humansecurity/sites/www.un.org>
- ^{32.} Smit-Bellis, J. S. (2004). *The Globalisation of World Politics*. Dubai: Gulf Research Centre.
- ^{33.} Stephen, C. A. (2000). *Citizenship and Migration, Globalization and the Politics of Belonging*. New York: Routledg.
- ^{34.} Stephen, N. (1997). *Citizenship and Ethnicity, An Examination or Two Transition*. Mimeo.
- ^{35.} Studies, A. C. (2020). *The novel coronavirus epidemic: Models of state responses to the epidemic and its repercussions on the global economy*. Political Studies Unit. Arab Centre for Research and Policy Studies.
- ^{36.} sustainabledevelopment. (s.d.). *sustainable development*. Récupéré sur <http://www.un.org/sustainabledevelopment>
- ^{37.} Tashtoush, H. A. (2012). *National Security and the Elements of State Power under the Regime*. amman: elhamed.