

Evaluating Computer, Information Technology and Communication for The Preparatory Stage in Light of Values of Digital Citizenship According to Egypt's Vision 2030 and A Suggested Framework for Enriching It.

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Abstract

The present research aimed at evaluating computer and information and communication technology courses of the preparatory stage in the light of the values of digital citizenship according to Egypt's Vision 2030 and at developing a proposed vision for their enrichment. To achieve the objectives of the study, the descriptive analytical method was followed. Then the researcher transformed it into a content analysis card that included (52) sub-indicators distributed over nine main criteria. The results indicated that the values of digital citizenship came in the first and second preparatory grades with a medium degree (51%), while they came in low rates in the third intermediate grade curricula (24%). The results showed that all Computer, information technology and communication subject of the preparatory stage achieved the two elements of digital access and digital literacy. The educational axis is also available in all subjects at the highest percentage compared to the other two axes. There are also some elements of digital citizenship that are not addressed, such as digital commerce, based on previous recommended findings. The study conducted a comprehensive review of achievement in order to include more educational standards of digital natives.

Keywords: *Evaluating Computer, Information Technology and Communication, Preparatory Stage, Digital Citizenship, Vision 2030, Suggestion Framework for Enriching It.*

Introduction

The great development that the world is witnessing in terms of digitalization and technology has led to a real technical revolution, as the technology has become one of the basics of life, and coexistence with it has become a necessity and an urgent and indispensable need, especially with the crisis that the world is experiencing now due to Coronavirus.

Although this change will have positive effects on the individual and the society if the means of communication and modern technology are optimally exploited. It involves many risks which calls for educating learners on how to deal with it, out of keenness to employ it in the best way and ward off its risks. Perhaps one of the most important concepts that attracted researchers' attention in this regard is the concept that imparts safe use within an ethical legal environment, which has been known as the concept of digital citizenship (Öztürk, G.,2021).

Digital citizenship is defined as: "Individuals' awareness of the various harms in the Internet environment on the basis of equal rights and responsibilities due to ethical principles." It should be noted that there are a number of dimensions associated with digital citizenship that serve to prepare or shape the right digital citizen in the age of networks. Social media, including: (Al-Maslamani, 2016).

Digital access: this is the ability to use internet without having restrictions.

Digital law: these are legal rights and restrictions governing technology use.

Digital commerce: selling and buying goods online.

Digital Rights and Responsibilities: Although you have the right to internet use but it comes with responsibilities such as respecting other internet users.

Digital communication: communicating with other internet users no matter the distance barrier.

Digital health and wellness: protecting internet users from dangers of physical and psychological harm.

Digital literacy : being more aware of what is posted and what you post online.

Digital security: not giving people personal information online eg. Home addresses and phone numbers.

Digital Etiquette: Behaving in an appropriate manner online and not doing something online which you would not be done in person.

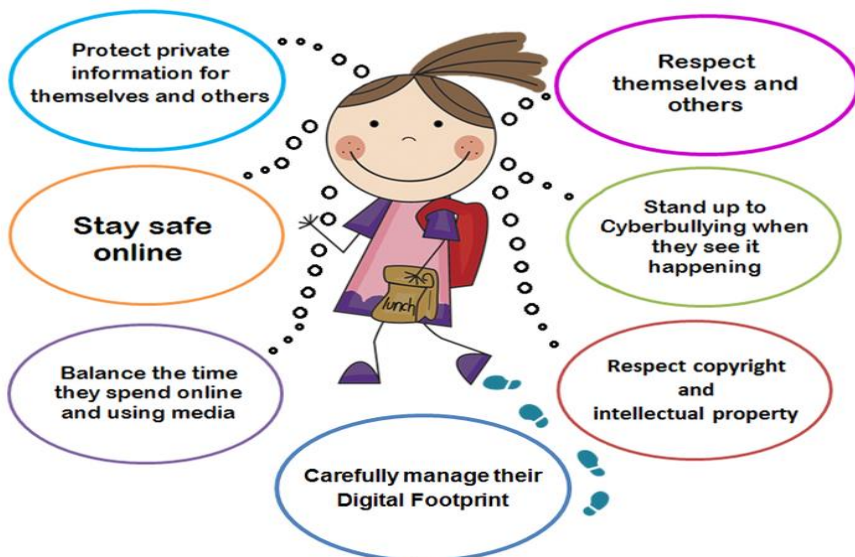


Figure (1): Roles and responsibilities in a digital society, from <https://www.virtuallibrary.info/digital-citizenship.html>

There is no doubt that the concept of “digital citizenship” is closely related to the education system. The ease and speed with which students can access and communicate about information sources makes the main goal of education not merely to provide basic knowledge and sciences, as they are available everywhere and at any time. Rather, preparing them and enabling them to deal with all forms of technology and helping them to choose good information, and adhere to the behaviors, rules and principles regulated to this, to prepare a digital society that embodies the values of citizenship. All this must be achieved through the curriculum system. Accordingly, there is an important and vital role that falls on institutions Education is represented in the need to spread the culture of “digital citizenship” in society, by teaching its principles and skills to students in schools, within an integrated approach to digital education (Al-Abdullatif, A. M., & Gameil, A. A. 2020).

On the Arab level description, education on digital citizenship is still a topic that has not received sufficient attention, while developed countries such as the United States of America, Britain and Australia have been keen on preparing the digital citizen by launching initiatives and including digital citizenship in their educational curricula. Digital literacy requires a very specific set of knowledge and teaching skills compared to other goals currently under the umbrella of digital citizenship (Hays, L., 2019).

Several previous studies have recommended the importance of developing digital citizenship for learners at various stages, such as Al-Tuwaijri’s study (2017), Al-Dossary’s study (2017) which recommended the inclusion of a separate subject for teaching digital citizenship among

other subjects, while Al-Riah study (2017) emphasizes the importance of Educating and developing digital citizenship in the Kingdom of Saudi Arabia. Al-Qahtani's study (2018) recommended the necessity of activating the values of digital citizenship and practical training on contemporary digital technology skills. One of the results of Snyder's study (2016) was integrating digital citizenship and social networks within middle schools. It increases the users' connection to the Internet, improves their interaction, and increases the educational responsibility of users.

A number of conferences also recommended the importance of digital citizenship; The second international conference entitled "Contemporary Education and Citizenship" organized by the Jordanian Society for Social and National Education (2018) recommended the

inclusion of digital citizenship axes within curricula and textbooks through follow-up classes with the aim of immunizing young people to confront extremist ideas spread by terrorist groups through modern technology and means of communication. The First Gulf Conference on Education and Human Development (2018) emphasized the role of education and the students' need for security awareness in its various aspects in order to achieve prevention of social media crimes. The Conference on Combating Intellectual Extremism in the State of Kuwait (2017) entitled "Reality and Hope" recommended the necessity of integrating digital citizenship skills at all educational levels by including them in educational curricula.

It is clear from the above that consolidating the principles and standards of digital citizenship and

communicating them to everyone through the appropriate medium is an educational necessity to overcome many of the problems that may result from the unconscious use of the Internet and digital media; especially after the Internet user base expanded without being restricted to a certain age. Therefore, these values must be included in the curricula, so when designing and planning curricula, the nature of the era in which we live and keep pace with should be taken into account, so as not to create a large gap between what students' study and the reality in which they live. This is consistent with the strategic vision for education in Egypt until 2030, including the development of curricula and strengthening the values and skills of students so the student becomes aware and strong and possesses the necessary knowledge and skills for the future such as: critical thinking, problem solving, decision-making, social communication skills, individual responsibility, restraint and others.

The preparatory stage is one of the important academic stages in which the student's personality and behavior is formed, through the growth of his awareness of conscious use, and insight into the undesirable uses of these techniques, followed by the stage of directed practice and distinguishing the appropriate from the inappropriate (Tawalbeh, H., 2017, 263). Therefore, this matter is a real and dangerous challenge that calls for attention and awareness of this category of society with cultural implications that emphasize the safe and secure digital use of digital technologies.

The nature of change assumes that any renewal process must be comprehensive, and take into account all the elements of the educational process, including the

educational evaluation process, as this requires teaching technology appropriate to reality, and teachers must possess comprehensive knowledge in conjunction with the ability to apply and employ it in teaching and imparting it to learners to keep pace with the values of digital citizenship (Al-Nimrawi, 2014, 242).

The axes of digital citizenship can be taught through lessons integrated with the concepts and axes of a Computer, Information Technology and Communication subject. So, it is necessary to prepare these topics in a way that enables them to carry out their responsibilities towards preparing conscious human minds that respond to digital developments efficiently and ably them with the aim of protecting societies from the dangers facing them.

Based on the foregoing, the researcher believes that there is a role that Computer, Information Technology and Communication subjects can play in developing digital awareness among students to be citizens aware of their rights in the digital age, by including the axes and concepts of digital citizenship in those curricula, and the educational resources that the courses employ. The most important of which is the textbook as an approved document and the main reference for the student. This role may fall under the gate of preventive rather than curative policy, as it is not defining the limits and obstacles for users of technology media with the intention of subjecting them to monitoring and control in their integration with the virtual world, and is also not a means of oppression and tyranny, but rather it is a serious call towards finding the right way to guide and protect users of all categories The Egyptian society, whose interests have increased in using the means of technology in all aspects of life and providing them with the necessary

competencies to ensure good conscious use, specifically the category of children and adolescents.

The study of Al-Maslamani and Al-Dosouki (2014) also sought to clarify the concept of digital citizenship, and the extent of the need for it in this era. The results of the field study showed an emphasis on the increased orientation of students towards the use of digital technology of all kinds, as well as their lack of knowledge of the standards of correct and acceptable behavior associated with the use of technology, which, in turn, reflects negatively on students at this stage, and makes them ineligible to deal with the technology community and adapt to its positive and negative data.

The study of Al-Jazzar (2014), after analyzing previous studies in the field and surveying the literature related to the field, reached a proposed vision for the role of the educational institution in instilling the values of digital citizenship, which includes work on three main axes: The first axis: the development of educational environments that support digital technology and the formation of virtual communities, the second axis Setting controls and standards for digital interaction, third axis: maximizing the educational role of the school.

The study of Al-Dahshan (2014) aimed to clarify the concept of digital citizenship and its various dimensions and the justifications for using the digital citizenship approach to Arab education in the digital age. By strengthening the culture of rational and beneficial use of digital technologies among young people and individuals and training them to practice various aspects of digital citizenship through all appropriate educational activities.

The study of Shaaban (2018) concluded that the various trends in digital citizenship fall into one rule, which is the interest in teaching digital citizenship in schools, with the need to train parents and teachers on digital citizenship. The study also found a proposed vision to enhance the values of digital citizenship for students of education before University in the light of contemporary global trends.

Some studies have shed light on how digital citizenship values and standards are included in school curricula. Among these studies is (Al-Qahtani's, 2018) study which aimed at identifying the digital citizenship values included in the educational technology course from the point of view of faculty members at the University of Princess Noura bint Abdul Rahman, and King Khalid University. To achieve the objectives of the study, the descriptive survey method was followed, and the questionnaire was used as a data collection tool. It consisted of (53) items distributed over nine axes of digital citizenship values. The study sample consisted of (23) faculty members from the two universities. The most important finding of the study is that the values of digital fitness, digital access, digital communications, digital illiteracy, digital health and safety and digital security are largely included in the educational technologies course at Princess Nourah University, while digital laws and digital rights and responsibilities were moderate, and digital commerce values were weak. While the values of digital communications in the educational technologies course at King Khalid University are great, the values of digital fitness, digital access, digital rights and responsibilities, digital health and safety and digital security are medium, and the values of digital laws are

weak, while the values of digital commerce are completely non-existent.

The study of Duba (2018), aimed to analyze technology subject of the secondary stage in light of the values of digital citizenship and to develop a proposed vision for its enrichment. To achieve the objective of the study, the analytical descriptive approach was followed by the method of content analysis, while the content analysis card was used as a tool for data collection. The study sample also consisted of three technology courses at the secondary stage in Palestine. The most important finding of the study is that the values of digital citizenship are generally included at low rates in the tenth-grade curriculum.

The study of Al-Shamrani (2018) aimed to build a web-based educational program 200 in the computer subject and measure its effectiveness in developing digital citizenship skills and critical thinking among secondary school students. To achieve the objectives of the study, the analytical descriptive approach was followed in the style of content analysis, analyzing the content of the computer subject, in addition to the experimental method to identify the effectiveness of the designed program in developing digital citizenship skills. The study used three data collection tools, the content analysis card, the digital citizenship skills test, and the Watson and Glaser scale. The study sample consisted of all computer and information technology subject at the secondary stage in the Kingdom of Saudi Arabia and (77) students. The researcher built a list of (22) digital citizenship skills that need to be developed among secondary school students.

The study of Kafafi (2016) aimed to identify the concept of digital citizenship and its relationship to other concepts such as the digital student and citizenship, and to identify the most important basic elements of digital citizenship, and to identify the role of the school in developing a culture of digital citizenship, and to identify the reality of how the curricula deal with it, in order to imagine a suggestion to develop a culture of digital citizenship in the basic education stage. To achieve the objectives of the study, the descriptive analytical approach was followed by the method of content analysis, where a content analysis card was used, while the study sample consisted of three books in computer and information and communication technology for the preparatory stage in the Arab Republic of Egypt. The most important finding of the study is that the subject achieves the elements of digital availability and digital literacy, and the course's interest in the concepts of safe use and social responsibility, and the ethical aspect while using the Internet is weak, as there was no mention of individuals' rights and digital duties.

The study of Al-Ghalath (2016) aimed to build a list of digital citizenship standards that must be available in the Computer, Information Technology and Communication subjects (general preparation for the secondary semester system in the Kingdom of Saudi Arabia, and to identify the extent of their availability in the subjects content, and to achieve the objectives of the study, the descriptive analytical approach was followed in an analytical method Content, and the content analysis card used the data collection tool, which included (53) sub-indicators that fall under (9) main criteria. From a digital culture, where the digital culture standard achieved the highest percentage

(87%), while the digital security standard achieved the lowest (1%), and the subjects did not address any of the standards of availability, commerce or digital safety.

Many studies indicated that the weakness in the curricula and in preparing teachers is reflected in the degree of awareness of the concept of digital citizenship among students. A study by (Al-Sayed, 2016) at Benha University in Egypt revealed that (91,6%) of the university's male and female students are unanimous. However, they do not know the meaning of digital citizenship, whether males or females, and there is no difference between students of scientific colleges and theoretical colleges. Another a study by (Al-Sarhan and others, 2018, 19) at the University of Jordan found that the degree of students' awareness of the concept of digital citizenship was moderately high. Al-Muzan study (2018, 171) was conducted on a sample of Princess Nourah University students; Awareness of the concept of digital citizenship was very small, amounting to 5.13 % of the study sample, while the largest percentage, which was 5.86 % of female students, did not know what this concept means. The study of (Al Muslimani and Al Dosouki, 2014) which was conducted on (300) Male and female students of secondary education in Egypt have shown that students are not familiar with the standards of correct and acceptable behavior associated with the use of technology, and the results of the study by (Sharaf & Aldemardash, 2014) revealed that there is a necessary need to prepare digital citizens in the age of digitization.

Through the researcher's review of previous studies, it is clear that they have served digital citizenship in several areas, and stressed the importance of supporting and

strengthening the values of digital citizenship and the importance of including them in the school curricula. The current study agreed with some of the previous studies in the curriculum, and even benefited from it in preparing the tool used in the study, but it differed from all previous studies in including the values of digital citizenship within the technological curricula and making it a general framework through which educational situations are presented, despite the difference of the study from previous studies, she benefited from it in building the idea, and choosing the problem of the research.

The Research Problem/Question:

Based on what the researcher has observed on successive developments and trying to keep pace with educational institutions in the process of development and construction and the tireless pursuit of achieving the values of digital citizenship in light of the requirements of the digital age. The societal nature imposes values concerned with building its generation in a sound and good manner, and in light of the scarcity of studies that dealt with evaluating computer content and information and communication technology in light of digital citizenship in particular. The need to evaluate the content of computer and information and communication technology for the preparatory stage to determine the degree of availability of digital citizenship values in these topics in accordance with Egypt's Vision 2030 and to develop a proposed vision to enrich them. Therefore, the study problem is determined in the following main question:

To what extent do Computer, Information Technology and Communication subjects of the preparatory stage include the values of digital citizenship according to

Egypt's Vision 2030? What is the proposed vision to enrich it?

The following sub-questions emerge from the main question:

- What are the values of digital citizenship that must be available in Computer, Information Technology and Communication subjects of the preparatory stage in light of Egypt's vision 2030?
- To what extent do Computer, Information Technology and Communication subjects of the preparatory stage include the values of digital citizenship in the light of Egypt's Vision 2030?
- What is the proposed vision for enriching Computer, Information Technology and Communication subjects for the preparatory stage with the values of digital citizenship in the light of Egypt's vision 2030?

The Research Aims:

this research aims at:

- Building a list of digital citizenship standards that are required to be available in Computer, Information Technology and Communication subjects for the preparatory stage in accordance with Egypt's 2030 vision.
- Revealing the degree of availability of digital citizenship standards in Computer, Information Technology and Communication subjects of the preparatory stage in light of Egypt's Vision 2030.
- Presenting a suggested vision prepared by the researcher to enrich the topics of computer and information and communication technology of the

preparatory stage with the values of digital citizenship.

Research Importance:

the importance of this research stems from:

- The importance of the study comes in light of a new stage of digital transformation in Egypt, which requires preparing and qualifying the next generation to practice constructive digital citizenship.
- The study may benefit those planning and developing Curriculum, as it will provide a list of digital citizenship values that must be included in Computer, Information Technology and Communication subjects of the preparatory stage in light of Egypt's 2030 vision.
- The study is concerned with the preparatory stage, which is the beginning of teaching the basic concepts of contemporary computers in the Egyptian curricula.
- The results of the evaluation process are useful in identifying the strengths and weaknesses in Computer, Information Technology and Communication subjects, which help in strengthening and developing the weaknesses.
- The study may contribute to opening the way for other studies in the field of promoting digital citizenship among students.

The limits of the study:

- The values of digital citizenship that must be included in Computer, Information Technology and

Communication subjects for the preparatory - stage, according to Egypt's 2030 vision.

- The results depend on the accuracy of the analysis of Computer, Information Technology and Communication subjects for the preparatory stage in light of the values of digital citizenship.
- The study took place in the academic year (2019-2020).

Research Terms and Definitions:

content evaluation: (Khattab,2001, 6) defined it as “A judgment on the value of things, subjects, or ideas, and then determining the strengths and shortcomings of each of them, in preparation for taking practical decisions and measures in their regard.”

Researcher is defined as: issuing a judgment on the availability of digital citizenship standards in Computer, Information Technology and Communication subjects for the preparatory stage in light of the list prepared as a study tool.

Digital Citizenship Criteria: Tawalbeh (2017, 299) defined it as “The set of values adopted by the digital citizen while dealing with digital technologies, which reflects his ability to take responsibility for his dealings with digital resources, and obliges him to self-censorship while dealing with its various media.”

Researcher is defined as: aspects of acceptable normative behavior in accordance with religious, social, ethical and legal controls, that should be developed among middle school students while they use digital technologies, to take

advantage of what digital technologies offer and protect their users from their risks, and digital citizenship standards can be represented in the current study through the following figure:

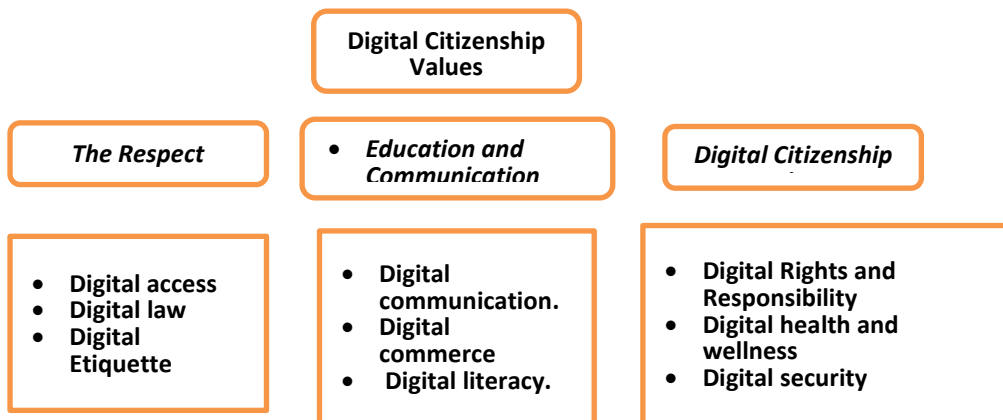


Figure (2): Distribution of the dimensions of digital citizenship according to the three axes

Figure (2): Dimensions of digital citizenship according to the framework of respect for education/protection Source: (designed by the researcher). It is clear from the above that each category has three elements. The first category began with the possibility of an individual dealing with digital technologies; To use them in all walks of life, and then deal with these techniques, that is, to know the acceptable behaviors and the moral direction in dealing with others.

Egypt Vision 2030: “It is a long-term national plan for the Egyptian government in economic and social development, which emphasizes the role of education in the national development strategy. The vision announced its strategic objectives, including evaluating the quality of education, its quality, equality and investment in education, among

other aspects” (Sustainable Development Strategy Egypt Vision 2030, 2014, 2016).

According to the current study, Egypt’s 2030 vision can be defined procedurally as follows:

- It seeks to improve the quality of life and standard of living.
- It works to enhance the spirit of loyalty and belongingness to the Egyptian identity and its cultural diversity.
- It aims to promote digital inclusion and digital citizenship for school students.

Methodology:

The study sample: The study sample consisted of three books in Computer, Information Technology and Communication subjects of the preparatory stage in the academic year 2019-2020.

The study tool: To achieve the objectives of the study and answer its questions, the study tool, represented by the Content Analysis Card, was built to analyze Computer, Information Technology and Communication subjects of the preparatory stage, by following the following steps:

First: Building a list of digital citizenship values that are required to be available in the subjects: after reviewing previous studies related to the topic of the study, the list included in its initial form (58) items distributed on (3) main axes: respect, education, and protection.

The apparent validity of the list was tested by submitting it to a group of arbitrators specialized in curricula, teaching

methods and educational technology, numbering 23 arbitrators, to judge the suitability of the sub-indicators to the main standards to which they belong, their linguistic validity, their suitability for the preparatory stage, and in light of the opinions of the arbitrators' professors. The researcher put their opinions into her consideration, and some indicators were modified in terms of linguistic formulation, and others were combined and shortened, so that the list in its final form consisted of (52) sub-items: distributed over (9) general criteria, distributed on (3) main axes.

Second: Process of Analysis: The process of analyzing the content in light of the values of digital citizenship was as follows:

(i) Determining the objective of the analysis: It is to identify the availability of digital citizenship values in computer, Information Technology and Communication subjects for the preparatory stage, to determine the extent to which curriculum designers are committed to including digital citizenship values in the middle school curricula.

(ii) Defining the categories of analysis, as follows:

The main categories of analysis: they were represented in the main criteria of digital citizenship included in each of the three main pillars, which are numbered nine criteria.

(iii) **Partial analysis categories:** represented in the sub-items of digital citizenship for the nine criteria, which are numbered (52) items.

3. Determining sample analysis: The sample analysis was represented in the topics contained in the books "computer, Information Technology and Communication" prescribed

to middle school students in the first and second semesters, edition (2019-2020). The following is a description of the units of technology books prescribed for middle school students.

Table (1): Computer, Information Technology and Communication book units for the preparatory stage.

Grade	chapter	units	unit topic	number of pages
first Prep	1st	I	basic computer operating systems	57
		II	creating the image and manipulation	89
	2nd	I	scratch program	113
		II	Internet	60
Total				319
Second Prep	1st	I	Website design and creation	36
		II	Web Sites	49
	2nd	I	Web Sites	23
		II	Introduction to Java Script	47
		III	Internet Security	10
Total				165
Third Prep	1st	I	Problem solving	20
		II	Introduction to Visual Basic.net	7
		III	Adjusting the properties of the controls	17
		IV	Code window	6
	2nd	I	data	20
		II	branching	16
		III	Repetition and actions	3
		IV	electronic infringement	16
Total				105

Process Analysis Control: The following controls were taken into account during the analysis process:

The analysis is carried out within the framework of the scientific content of Computer, Information Technology and Communication subjects for preparatory (first, second, third) grade students, with the exclusion of the cover, introduction, and indices.

The analysis is carried out in light of the digital citizenship values included in the analysis card after arbitration.

The analysis includes the forms, activities, questions, and evaluation contained in the middle and end of chapters of books, tests, and practical exercises contained in the courses.

Considering the main question or activity and its sub-items as a single repetition; As it often contains a single idea.

- Judgment of criterion was determined at the level of inclusion of the main criteria and sub-indicators, as shown in Table (2):

Table (2): Estimation of the degree to which the main criteria and sub-indicators are included in the course content (prepared by the researcher)

percentage		Embedding level
From	to	
0%	20%	Very low included
greater than 20%	40%	Low Included
greater than 40%	60%	Medium included
greater than 60%	80%	Highly included
greater than 80%	100%	Very high included

The range (0-100%) was calculated and divided by five inclusion scores to get the category length (20%) for each inclusion score.

Testing the Validity: Verification of the validity of the analysis card was verified through arbitration of the list of digital citizenship criteria by a group of specialists and the required modifications were made.

Testing the Reliability : The researcher has ensured the stability of the tool through the stability of the analysis across individuals, where the researcher has identified one of the units prescribed for the students of the stage, which is the first unit of the Computer, Information Technology and Communication books for the first grade of middle school, the first semester and analyzed it, and from then the researcher asked one of the computer instructors who are experts in the field (Faten Lotfy Ahmed Asheba) to re-analyze the same course, and then the percentages of agreement between the results that were reached by the researcher and her colleague in each of the two analyzes were calculated as shown in the table 3:

- Holsti's Method used to Calculate and report the reliabilities of the analysis tool:
- Intercoder reliability= $2 * M / (N1 + N2)$.
- Stability coefficient for first Prep curriculum = $2 (78) / (89 + 78) = 156 / 167 = 0.93$
- Through the previous equation, the results showed that the reliability coefficient (0.93), is a high stability coefficient. This reassures the researcher to use the content analysis tool.
- Stability coefficient for second Prep curriculum = $2 (90) / (98 + 94) = 180 / 192 = 0.94$

Table (3): Points of agreement and difference in the results of analyzing Computer, Information Technology and Communication subjects for the preparatory stage.

Grade	Unit	First Analysis	Second Analysis	the number of times an agreement	The number of times a difference
first Prep (1st)	I	25	22	22	3
	II	33	28	28	5
first Prep (2nd)	I	24	22	22	2
	II	7	6	6	1
total		89	78	78	11
second Prep (1st)	I	23	20	20	3
	II	16	15	15	1
second Prep (2nd)	I	26	22	22	4
	II	28	30	28	2
	III	5	7	5	2
Total		98	94	90	12
third Prep (1st)	I	10	12	10	2
	II	18	15	15	3
third Prep (2nd)	I	21	24	21	3
	II	6	7	6	1
total		55	58	52	9

- Through the previous equation, the results showed that the reliability coefficient (0.94), which is a high stability coefficient, reassures the researcher to use the content analysis tool.
- Stability coefficient for third Prep curriculum = $2 / (52) / (55 + 58) = 104/113 = 0.92$
- Through the previous equation, the results showed that the reliability coefficient (0.92), which is a high stability coefficient, reassures the researcher to use the content analysis tool.

Results & Discussion:

- In order to answer the first question: What are the values of digital citizenship that must be available in

Computer, Information Technology and Communication subjects for the preparatory stage in light of Egypt's vision 2030?

- A list of digital citizenship standards that are appropriate to be included in Computer, Information Technology and Communication subjects for the preparatory stage has been prepared. The researcher adopted the criteria that were previously mentioned by a group of previous literature unanimously agreed upon, such as the studies of Al-Qahtani (2018), Dawaba (2018), Kafafi (2016), and Al-Ghalath (2014). The list was presented in its initial form to 23 arbitrators specialized in curricula, teaching methods and educational technology, in order to know their observations and suggestions. In light of this, the researcher made the necessary adjustments, including deleting, adding, merging, and adjusting the language, so that the list in its final form consists of (52) sub-indicators, distributed over (9) main criteria.
- In order to answer *the second question*: - To what extent do Computer, Information Technology and Communication subjects for the preparatory stage include the values of digital citizenship in the light of Egypt's Vision 2030?
- The Computer, Information Technology and Communication subjects for the preparatory stage 2019/2020 were analyzed in the light of the content analysis card prepared by the researcher.

First: The results related to Computer, Information Technology and Communication subjects for the first year of middle school

Table (4): It shows the percentage of availability of digital citizenship values in Computer, Information Technology and Communication book for the first grade of middle school.

N	Axles	number of values	Number of available values		total	percentage
			first Prep (1 st)	first Prep (2 nd)		
1	Respect	15	2	6	8	53%
2	education	15	4	6	10	67%
3	protection	15	0	5	5	33%
	Total	45	6	17	23	51%

It is clear from Table (4) that the percentage of including citizenship values in the Computer, Information Technology and Communication books for the first grade of middle school came to a medium degree, reaching (51%), and the percentage of the education axis equaled (67%), while the percentage of the respect axis was (53%), as for the protection axis, the percentage was (33%).

The percentages of registration of paragraphs containing the values of digital citizenship vary from one axis to another of the list's axes, and the following tables show the percentages of the availability of the axes of digital citizenship values in the Computer, Information Technology and Communication book for the first preparatory grade according to each axis separately.

Table No. (4-1): Frequencies and Percentages of Computer, Information Technology and Communication books for the first preparatory grade

N	axles	Repetition 1st		repetition 2nd		Total iterations	percentage
		I	II	I	II		
1	respect	12	41	0	39	92	34%
2	education	37	101	0	29	167	62%
3	protection	0	0	0	10	10	3%
	Total	49	142	0	78	269	100%

Table No. (4-1-a): The repetitions of the respect axis in the first preparatory grade

the field	Value	(1st)		(2nd)		score
		I	II	II	I	
Digital access	The curriculum directs the student to use computer laboratories during the educational process	10	41	0	10	61
	The curriculum supports the use of mobile devices during the educational process	0	0	0	10	10
	The curriculum encourages the student to use smart devices connected to the Internet	2	0	0	9	11
	The curriculum provides digital access opportunities for all students.	0	0	0	8	8
total		12	41	0	37	90
Digital Etiquette	The curriculum introduces the student to digital etiquette when dealing with technology.	0	0	0	0	0
	The curriculum contributes to providing the student with the life skills of dealing with technology.	0	0	0	0	0
	The curriculum helps in controlling the student's behavior when using social media.	0	0	0	0	0
	The curriculum includes explicit calls for respect for cultures, communities and opinions in the digital environment.	0	0	0	0	0
	The curriculum develops student awareness about negative impact of inappropriate use of technology.	0	0	0	0	0
total		0	0	0	0	0
Digital law	The curriculum contributes to educating the student about the digital rules and laws that govern the use of technology	0	0	0	0	0
	The curriculum develops the student's awareness of the actions that are considered cybercrime and punishable by digital law.	0	0	0	1	1
	The curriculum shows the student the limits of freedom of opinion and expression through technology.	0	0	0	1	1
	The curriculum educates students about some anti-cybercrime laws issued by government agencies.	0	0	0	0	0
	The curriculum emphasizes the need to preserve intellectual property rights and protect individuals' online identities and privacy.	0	0	0	0	0
	The curriculum shows students how to confront and deal with any illegal or aggressive action in the digital society.	0	0	0	0	0
total		0	0	0	2	2
Summation Total		12	41	0	39	92

Table No. (4-1-b): The repetitions of the respect axis in the first preparatory grade

the field	Value	(1st)		(2nd)		score
		I	II	I	II	
Digital communication	The curriculum includes introducing students to various means of digital communication	0	0	0	2	2
	The curriculum guides students to find appropriate options for online communication.	0	0	0	1	1
	The curriculum provides students with opportunities to use digital communication technologies to share information and experiences with others.	0	0	0	1	1
	The curriculum develops digital communication skills between students and the community.	0	0	0	0	0
total		0	0	0	4	4
Digital literacy	The curriculum helps students understand the digital world and ways to deal with it.	11	47	0	18	76
	The subjects develop students' awareness of the importance of using digital technologies.	0	0	0	0	0
	The curriculum introduces students to digital tools and how to use them appropriately.	18	44	0	5	67
	The curriculum encourages students to use digital means of communication for self- and continuous learning.	4	0	0	0	4
	The curriculum directs students to cooperate through digital means of communication to carry out various educational tasks and activities, solve tasks, and search for information	2	10	0	2	14
total		35	101	0	25	161
Digital commerce	The curriculum develops students' awareness of the concept of digital commerce.	0	0	0	0	0
	The curriculum points out the advantages of digital commerce.	0	0	0	0	0
	The syllabus provides examples of the best online business websites.	0	0	0	0	0
	The syllabus provides enough information about safe ways to buy from online stores.	0	0	0	0	0
	The curriculum directs students to the need to ensure the credibility and reliability of the commercial website.	0	0	0	0	0
	The curriculum develops students' awareness of the problems of online shopping	0	0	0	0	0
total		0	0	0	0	0
Summation Total		35	101	0	29	165

Table No. (4-1-c): The repetitions of the protection axis in the first preparatory grade

The field	Value	(1st)		(2nd)		score
		I	II	I	II	
Digital Rights and Responsibility	The curriculum explains to students their rights and responsibilities in the digital world.	0	0	0	0	0
	The curriculum directs students to read the site's policies before registering for it.	0	0	0	0	0
	The curriculum emphasizes the importance of adherence to digital rights and responsibilities.	0	0	0	0	0
	The curriculum contributes to instilling the values of responsible and conscious use of digital technologies.	0	0	0	0	0
	The curriculum directs students towards defending religious and national constants and values in line with the nation's policy in the digital society.	0	0	0	0	0
total		0	0	0	0	0
Digital health and wellness	The curriculum explains to students the concept of digital health and safety.	0	0	0	1	1
	The curriculum develops students' awareness of safe and correct ways to use digital technology.	0	0	0	2	2
	The curriculum develops students' awareness of the risks and psychological and physical harm that may result from integrating into the digital society.	0	0	0	3	3
	The curriculum teaches students about preventive measures to avoid risks arising from improper use of digital technology.	0	0	0	1	1
	The curriculum sheds light on the phenomenon of Internet addiction and ways to prevent and treat it.	0	0	0	0	0
total		0	0	0	7	7
Digital security	The curriculum explains to the students the concept of digital security (self-protection).	0	0	0	3	3
	The curriculum contributes to educating students about the programs and methods that guarantee them prevention, protection and safety in the digital society.	0	0	0	0	0
	The curriculum directs the student to use anti-virus, anti-spyware and a firewall on his computer	0	0	0	0	0
	The curriculum includes topics on how to maintain personal security against theft, fraud and hacking	0	0	0	0	0
	The curriculum trains students to choose a complex and secure password.	0	0	0	0	0
total		0	0	0	3	3
Summation Total		0	0	0	10	10

Table (5): It shows the percentage of availability of digital citizenship values in Computer, Information Technology and Communication book for the second grade of middle school.

N	axles	number of values	Number of available values		total	percentage
			first Prep (1 st)	first Prep (2 nd)		
1	respect	15	4	2	6	40%
2	education	15	3	6	9	60%
3	protection	15	0	8	8	53%
	total	45	7	16	23	51%

It is clear from Table (5) that the percentage of including citizenship values in the Computer, Information Technology and Communication book for the second preparatory grade came to a medium degree, reaching (51%), and the percentage of the education axis equals (60%), while the percentage of the protection axis was (53%), as for respect, the percentage was (40%).

The percentages of registration of paragraphs containing the values of digital citizenship vary from one axis to another in the list axes, and the following tables show the percentages of the availability of the axes of digital citizenship values in the Computer, Information Technology and Communication subjects for the second grade of middle school, according to each axis separately.

Table No. (5-1): Frequencies and Percentages Computer, Information Technology and Communication book for the second preparatory grade

N	axles	Repetition 1 st		repetition 2 nd			Total iterations	percentage
		I	II	I	II	III		
1	respect	42	16	20	21	0	99	37%
2	education	72	37	0	10	0	119	44%
3	protection	0	0	0	0	52	52	19%
	total	114	53	20	31	52	270	100

Table No. (5-1-a): The repetitions of the respect axis in the Second preparatory grade

the field	Value	(1st)		(2nd)			score
		I	II	I	II	III	
Digital access	The curriculum directs the student to use computer laboratories during the educational .process	16	10	10	10	0	46
	The curriculum supports the use of mobile devices during the educational process	9	0	0	0	0	9
	The curriculum encourages the student to use .smart devices connected to the Internet	12	6	10	11	0	39
	The curriculum Provides digital access opportunities for all students.	5	0	0	0	0	5
total		42	16	20	21	0	99
Digital Etiquette	The curriculum introduces the student to digital etiquette when dealing with technology.	0	0	0	0	0	0
	The curriculum contributes to providing the student with the life skills of dealing with technology.	0	0	0	0	0	0
	The curriculum helps in controlling the student's behavior when using social media.	0	0	0	0	0	0
	The curriculum includes explicit calls for respect for cultures, communities and opinions in the digital environment.	0	0	0	0	0	0
	The curriculum develops student awareness about negative impact of inappropriate use of technology.	0	0	0	0	0	0
total		0	0	0	0	0	0
Digital law	The curriculum contributes to educating the student about the digital rules and laws that govern the use of technology	0	0	0	0	0	0
	The curriculum develops the student's awareness of the actions that are considered cybercrime and punishable by digital law.	0	0	0	0	0	0
	The curriculum shows the student the limits of freedom of opinion and expression through technology.	0	0	0	0	0	0
	The curriculum educates students about some anti-cybercrime laws issued by government agencies.	0	0	0	0	0	0
	The curriculum emphasizes the need to preserve intellectual property rights and protect individuals' online identities and privacy.	0	0	0	0	0	0
	The curriculum shows students how to confront and deal with any illegal or aggressive action in the digital society.	0	0	0	0	0	0
total		0	0	0	0	0	0
Summation Total		42	16	20	21	0	99

Table No. (5-1-b): The repetitions of the respect axis in the Second preparatory grade

the field	Value	(1st)		(2nd)			score
		I	II	I	II	III	
Digital communication	The curriculum includes introducing students to various means of digital communication	16	10	0	1	0	27
	The curriculum guides students to find appropriate options for online communication.	9	0	0	1	0	10
	The curriculum provides students with . opportunities to use digital communication technologies to share information and experiences with others.	12	6	0	2	0	20
	The curriculum develops digital communication skills between students and the community.	5	0	0	0	0	5
total		42	16	0	4	0	0
Digital literacy	The curriculum helps students understand the digital world and ways to deal with it.	11	6	0	3	0	0
	The subjects develop students' awareness of the importance of using digital technologies.	9	7	0	1	0	0
	The curriculum introduces students to digital tools and how to use them appropriately.	10	8	0	2	0	0
	The curriculum encourages students to use digital means of communication for self- and continuous learning.	0	0	0	0	0	0
	The curriculum directs students to cooperate through digital means of communication to carry out various educational tasks and activities, solve tasks, and search for information	0	0	0	0	0	0
total		30	21	0	6	0	57
Digital commerce	The curriculum develops students' awareness of the concept of digital commerce.	0	0	0	0	0	0
	The curriculum points out the advantages of digital commerce.	0	0	0	0	0	0
	The syllabus provides examples of the best online business websites.	0	0	0	0	0	0
	The syllabus provides enough information about safe ways to buy from online stores.	0	0	0	0	0	0
	The curriculum directs students to the need to ensure the credibility and reliability of the commercial website.	0	0	0	0	0	0
	The curriculum develops students' awareness of the problems of online shopping	0	0	0	0	0	0
total		0	0	0	0	0	0
Summation Total		72	37	0	10	0	119

Table No. (5-1-c): The repetitions of the protection axis in the Second preparatory grade

the field	Value	(1st)		(2nd)			score
		I	II	I	II	III	
Digital Rights and Responsibility	The curriculum explains to students their rights and responsibilities in the digital world.	0	0	0	0	5	5
	The syllabus directs students to read the site's policies before registering for it.	0	0	0	0	2	2
	The curriculum emphasizes the importance of adherence to digital rights and responsibilities.	0	0	0	0	4	4
	The curriculum contributes to instilling the values of responsible and conscious use of digital technologies.	0	0	0	0	5	5
	The curriculum directs students towards defending religious and national constants and values in line with the nation's policy in the digital society.	0	0	0	0	0	0
	total	0	0	0	0	16	16
Digital health and wellness	The curriculum explains to students the concept of digital health and safety.	0	0	0	0	10	10
	The curriculum develops students' awareness of safe and correct ways to use digital technology.	0	0	0	0	7	7
	The curriculum develops students' awareness of the risks and psychological and physical harm that may result from integrating into the digital society.	0	0	0	0	10	10
	The curriculum teaches students about preventive measures to avoid risks arising from improper use of digital technology.	0	0	0	0	5	5
	The curriculum sheds light on the phenomenon of Internet addiction and ways to prevent and treat it.	0	0	0	0	0	0
total	0	0	0	0	32	32	
Digital security	The curriculum explains to the students the concept of digital security (self-protection).	0	0	0	0	7	7
	The curriculum contributes to educating students about the 3programs and methods that guarantee them prevention, protection and safety in the digital society.	0	0	0	0	5	5
	The curriculum directs the student to use anti-virus, anti-spyware and a firewall on his computer	0	0	0	3	0	3
	The curriculum includes topics on how to maintain personal security against theft, fraud and hacking	0	0	0	5	0	5
	The curriculum trains students to choose a complex and secure password.	0	0	0	0	0	0
total	0	0	0	8	12	20	
Summation Total	0	0	0	8	60	68	

Table (6): It shows the percentage of availability of digital citizenship values in Computer, Information Technology and Communication book for the third grade of middle school.

N	axles	number of values	Number of available values		total	percentage
			first Prep (1 st)	first Prep (2 nd)		
1	respect	15	1	8	9	60
2	education	15	1	1	2	13
3	protection	15	0	0	0	0
total		45	2	9	11	24

It is clear from Table (5) that the percentage of inclusion of citizenship values in the information and communication book for the third preparatory grade was low, amounting to (24%), and it turns out that the availability of values for the respect axis (60%), while the percentage of values availability for each of the education axis and protection (0%). It turns out that the percentage of the respect axis was equal (60%), while the percentage of the education axis was (13%), and there were no values for the protection axis, as the percentage was (0%).

Table No. (6-1): Frequencies and Percentages Computer, Information Technology and Communication book for the third preparatory grade

N	Axles	Repetition 1 st		repetition 2 nd		Total iterations	percentage
		I	II	I	II		
1	Respect	17	11	15	32	75	71%
2	Education	10	9	5	7	31	29%
3	Protection	0	0	0	0	0	0
Total		27	20	20	39	106	100%

Table No. (6-1-a): The repetitions of the respect axis in the third preparatory grade

the field	Value	(1st)		(2nd)		score
		I	II	I	II	
Digital access	The curriculum directs the student to use computer laboratories and laboratories during the educational .process	17	11	15	0	43
	The curriculum supports the use of mobile devices during the educational process	0	0	0	0	0
	The curriculum encourages the student to use smart .devices connected to the Internet	0	0	0	0	0
	Provides digital access opportunities for all students.	0	0	0	0	0
	total	17	11	15	0	43
Digital Etiquette	The curriculum introduces the student to digital etiquette when dealing with technology.	0	0	0	7	7
	The curriculum contributes to providing the student with the life skills of dealing with technology.	0	0	0	5	5
	The curriculum helps in controlling the student's behavior when using social media.	0	0	0	5	5
	The curriculum includes explicit calls for respect for cultures, communities and opinions in the digital environment.	0	0	0	0	0
	The curriculum develops student awareness about negative impact of inappropriate use of technology.	0	0	0	3	3
Total	0	0	0	20	20	
Digital law	The curriculum contributes to educating the student about the digital rules and laws that govern the use of technology	0	0	0	0	0
	The curriculum develops the student's awareness of the actions that are considered cybercrime and punishable by digital law.	0	0	0	5	5
	The curriculum shows the student the limits of freedom of opinion and expression through technology.	0	0	0	0	0
	The curriculum educates students about some anti-cybercrime laws issued by government agencies.	0	0	0	0	0
	The curriculum emphasizes the need to preserve intellectual property rights and protect individuals' online identities and privacy.	0	0	0	2	2
	The curriculum shows students how to confront and deal with any illegal or aggressive action in the digital society.	0	0	0	5	5
total	0	0	0	12	12	
Summation Total	17	11	15	32	75	

Table No. (6-1-b): The repetitions of the respect axis in the third preparatory grade

the field	Value	(1st)		(2nd)		score
		I	II	I	II	
Digital communication	The curriculum includes introducing students to various means of digital communication	0	0	0	0	0
	The curriculum guides students to find appropriate options for online communication.	0	0	0	0	0
	The curriculum provides students with opportunities to use digital communication technologies to share information and experiences with others.	0	0	0	0	0
	The curriculum develops digital communication skills between students and the community.	0	0	0	0	0
Total						
Digital literacy	The curriculum helps students understand the digital world and ways to deal with it.	10	9	5	7	31
	The subjects develops students' awareness of the importance of using digital technologies.	0	0	0	0	0
	The curriculum introduces students to digital tools and how to use them appropriately.	0	0	0	0	0
	The curriculum encourages students to use digital means of communication for self- and continuous learning.	0	0	0	0	0
	The curriculum directs students to cooperate through digital means of communication to carry out various educational tasks and activities, solve tasks, and search for information	0	0	0	0	0
Total						
		10	9	5	7	31
Digital commerce	The curriculum develops students' awareness of the concept of digital commerce.	0	0	0	0	0
	The curriculum points out the advantages of digital commerce.	0	0	0	0	0
	The syllabus provides examples of the best online business websites.	0	0	0	0	0
	The syllabus provides enough information about safe ways to buy from online stores.	0	0	0	0	0
	The curriculum directs students to the need to ensure the credibility and reliability of the commercial website.	0	0	0	0	0
	The curriculum develops students' awareness of the problems of online shopping	0	0	0	0	0
Total						
		0	0	0	0	0
Summation Total						
		10	9	5	7	31

Table No. (6-1-c): The repetitions of the protection axis in the third preparatory grade

the field	Value	(1st)		(2nd)		score
		I	II	I	II	
Digital Rights and Responsibility	The curriculum explains to students their rights and responsibilities in the digital world.	0	0	0	0	0
	The syllabus directs students to read the site's policies before registering for it.	0	0	0	0	0
	The curriculum emphasizes the importance of adherence to digital rights and responsibilities.	0	0	0	0	0
	The curriculum contributes to instilling the values of responsible and conscious use of digital technologies.	0	0	0	0	0
	The curriculum directs students towards defending religious and national constants and values in line with the nation's policy in the digital society.	0	0	0	0	0
Total		0	0	0	0	0
Digital health and wellness	The curriculum explains to students the concept of digital health and safety.	0	0	0	0	0
	The curriculum develops students' awareness of safe and correct ways to use digital technology.	0	0	0	0	0
	The curriculum develops students' awareness of the risks and psychological and physical harm that may result from integrating into the digital society.	0	0	0	0	0
	The curriculum teaches students about preventive measures to avoid risks arising from improper use of digital technology.	0	0	0	0	0
	The curriculum sheds light on the phenomenon of Internet addiction and ways to prevent and treat it.	0	0	0	0	0
Total		0	0	0	0	0
Digital security	The curriculum explains to the students the concept of digital security (self-protection).	0	0	0	0	0
	The curriculum contributes to educating students about the 3programs and methods that guarantee them prevention, protection and safety in the digital society.	0	0	0	0	0
	The curriculum directs the student to use anti-virus, anti-spyware and a firewall on his computer	0	0	0	0	0
	The curriculum includes topics on how to maintain personal security against theft, fraud and hacking	0	0	0	0	0
	The curriculum trains students to choose a complex and secure password.	0	0	0	0	0
total		0	0	0	0	0
Summation Total		0	0	0	0	0

By reviewing the results of analyzing the content of Computer, Information Technology and Communication subjects for the preparatory stage, the following becomes clear:

- It is clear from the results of Table (4), (5), (6) that the values of digital citizenship in the books of the first and second preparatory grades average up to (51%), while they came in low rates in the third intermediate grade curricula (24%).The researcher attributes this to the society's interest in the first and second grades of the preparatory stage because of its importance in the future generations, in addition to their launch in preparing them from a conservative Islamic environment that serves the interests of the individual and society.
- It is clear from the results presented in Table (4-1), (5-1), (6-1) that the values of digital citizenship for the education axis are available in all subjects with a higher percentage compared to the other two axes

The researcher attributes this to the interest of curriculum designers in this axis because it helps the student to understand what must be understood in order to improve the use of technology, while the respect ratios ranked second for all subjects.

The researcher attributes the reason to the fact that the Egyptian curricula are concerned with the safety and security of students in light of the rapid technological development at all human, economic and social levels, and are concerned with the values of respect and emphasis.

The percentages showed that the protection axis did not receive sufficient attention in all subjects, and the reason for this from the researcher's point of view is the rapid development in the field of protection, which led to its availability in an average way.

-It is clear from the results of Table (4-1)- (A, B, C), Table (5-1)- (A, B, C), Table (6-1)- (A, B, C), the disparity The large distribution of digital citizenship values and standards in Computer, Information Technology and Communication subjects for the preparatory stage. We find that all courses achieve the elements of digital accessibility and digital literacy, because these courses are essential for all teams, and must contain many core topics in computer science that help students master the computer. While, attention to standards of digital behavior, digital law, digital rights and responsibilities, health and safety is weak, and the reason for this is that curriculum planners do not keep pace with the changes of the era and technological development well, as it appears from The results of the previous analysis that there are some elements of digital citizenship that are not addressed, such as commerce, The researcher attributes this to the nature of the age group of the preparatory stage, and the digital commerce standard may be one of the most difficult elements of digital citizenship to practice, as there is difficulty in training students on it in the classroom, either because of Lack of internet connection in computer labs in some schools, or lack of financial independence. However, students must be trained to deal intelligently in such situations. They should learn how and from where to buy so as not to be defrauded, because many of them do not know how to get the best deals, and matters related to using credit cards or bank accounts etc.

- These results agree with the results of Kafafi's study (2016) which concluded that there is insufficient attention to the elements and issues of digital citizenship

in the first stage of basic education, and there is no interest in the digital commerce standard. This is also in line with the findings of the Dawaba's study (2018), which resulted in the inclusion of digital citizenship values in the secondary technology curriculum at a very low rate. And the results of Al-Ghalith study (2016) that the content of the computer and information technology course for the second semester system does not comply with the standards of digital citizenship, where the digital security standard achieved the minimum 1%, and the course did not mention any of the standards of digital availability, digital commerce or digital safety, and this is in contrast to the digital literacy standard, which received great attention rather than the rest of the standards due to the importance of this standard, which is one of the requirements of society in light of technological development and the nature of computer and information technology subjects.

- The results of the current study differed from the results of the study of AlQahtani (2018) regarding the availability of values of digital fitness, digital access, digital communication, digital illiteracy, digital health, safety and digital security in educational technology course at Princess Noura University to a large extent. The researcher attributes this difference, perhaps to the difference in age, and the growing interest in including digital citizenship criteria in a more intense degree as the student moves to a higher stage of study, this may also be attributed to the difference in the content of the university course from the course in the preparatory stage.

In order to answer the third question: What is the proposed vision for enriching Computer, Information Technology and Communication subjects for the preparatory stage with the values of digital citizenship in the light of Egypt's vision 2030?

To enrich the computer, information and communication technology subjects scheduled for the preparatory stage with the values of digital citizenship, the researcher held a workshop with a group of specialists in the field of curricula, teaching methods and educational technology to determine proportions.

The values of digital citizenship in the computer, information and communication technology subjects for the preparatory stage

The results of the workshop came about the inclusion of each of the digital citizenship standards in the curricula of computers, information and communication technology for the preparatory stage, at a rate of no less than 40% as a minimum.

Accordingly, the researcher chose Second preparatory grade curriculum, which she had previously analyzed in Table (5-1) (a,b,c) to enrich it with the values of digital citizenship according to the ratios suggested by specialists in the field of curricula and educational technology.

The researcher presented a suggested scenario for one lesson from the Computer, Information Technology and Communication subjects for Second preparatory grade curriculum, and the following table illustrates this:

Table No. (7) A suggested perception in the light of the values of digital citizenship for the first lesson entitled "Websites" from the unit in the book of Second preparatory grade, first semester.

The field	The value
Digital access	<ul style="list-style-type: none"> -The student uses search engines to load a website, and then navigates the pages of that website. - The student uses the web to download the "Contact Us" page of the Ministry of Education website and enters the required registration data. - The student prepares a detailed report on the different types of websites he has browsed. -The student uses engines to search for image file types with the extension-BMP-GIF-JPG PNG and distinguish between them.
Digital Etiquette	<ul style="list-style-type: none"> - The student uses school computers to view and download the official website of the Ministry of Education https://elearning1.moe.gov.eg. -The student prepares a presentation of the components of Static Web Pages and Interactive Web Pages.
Digital law	<ul style="list-style-type: none"> - Students express their opinion through the school's digital communication website about the best websites visited and browsed. -The student discusses with his teacher and his colleagues through the school's digital websites the dangers of entering suspicious sites. -Respecting the opinions of others during the discussion via the social networking site in the mechanism of selecting and employing patterns of images appropriate to the educational situation.
Digital communication	-Develop appropriate means of communication between students to exchange correct information about the effective and efficient use of search engines in order to benefit from them in the best way.
Digital literacy	-Awareness of students with effective skills to deal well with information and communication technologies.
Digital commerce	<ul style="list-style-type: none"> -Providing the student with the correct methods and basic skills necessary to deal with the famous digital image buying and selling websites over the Internet. -Educate students about cyber security rules and check websites before using them or providing them with any of your personal information or paying for products through them and accessing them from your computer
Digital Rights and Responsibility	<ul style="list-style-type: none"> -Educate the student about the need to preserve his personal and academic information and not allow it to be displayed, published or used except by authorized persons only. -Provide the student with ways to obtain free images while avoiding copyrighted images to not infringe on the rights of others or steal the efforts of others.
Digital health and wellness	-Educate students about the dangers of entering suspicious links and sites and publishing private photos on the Internet.
Digital security	<ul style="list-style-type: none"> -Educate students about safe browsing practices, including an overview of add-ons and other features that can be used. -Educate the student about the risks associated with living in the digital world, be it in the form of online purchases, identity theft, or other types of fraud.

Recommendations:

In light of the results revealed by the study, the researcher recommends the following:

- 1- Conducting a comprehensive review of the computer, information and communication technology subjects prescribed for the preparatory stage to include more standards of digital citizenship at a rate greater than what was reached from the results of the study.
- 2- Taking into account the relative balance in the distribution of digital citizenship standards when they include the knowledge content in the books of computer, information and communication technology prescribed for the preparatory stage according to the characteristics of the age stages.
- 3- Including the necessary digital citizenship standards in the teacher's guide; So that the teacher has a clear conception of what needs to be taken into account while teaching.

Suggestions:

In light of the results of the study and linking it to previous studies, the researcher suggests the following:

- 1- Conducting evaluation studies for computer, information and communication technology subjects prescribed for the preparatory stage in light of digital citizenship standards, from the point of view of teachers and educational supervisors.
- 2- Evaluating the teaching practices of computer teachers in the light of their ability to develop citizenship standards digital for students.

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