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The extent of digital citizenship usage among secondary school students from the perspective of physical education teachers in Dammam.

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Abstract:

The research aims to identify the degree of use of digital citizenship among secondary school students from the point of view of physical education teachers in Dammam. The researchers used the descriptive approach using a survey method, and the study population consisted of physical education teachers in the Eastern Province, numbering (602). The study sample consisted of (460) teachers, equivalent to (76.4%) of the total study population. This sample participated in answering the study questionnaire, as it included education offices in the Eastern Province in Saudi Arabia. To achieve the objectives of the study, the researchers built a scale in eight axes, and the validity and reliability implications of the scale were extracted. The scale was then applied to the basic research sample, the data was collected, and the results were processed statistically. In light of the results of the study, the most important conclusions were reached, the most important of which are: The degree of use of digital citizenship among secondary school students from the point of view of physical education teachers was high. The most important recommendations of the study

were: Including digital citizenship skills in curricula and curricula for secondary school students, as well as conducting studies that address the relationship of digital citizenship with other variables and samples.

• Keywords: digital citizenship, secondary school students, physical education teachers.

The introduction:

The world today is witnessing rapid development and change in the field of communications and the digital and technological field. This development has been reflected in various areas of economic, cultural and social life and has had a major impact on the scientific and research field. Mastering the skills of dealing with digital technology has become one of the educational necessities imposed by the modern era. The rapid transformation of e-learning and distance education has led to the emergence of a digital educational gap represented by a lack of personal capabilities and skills to deal with technology. Educators interested in the technical field realized the students' need for digital education as they realized that a new virtual world was created by technology (Al-Hadeef, 2021).

The educational institution needs to keep up with all the new experiences and various knowledge through the use of technological innovations, especially since many important sources of information and references have become stored electronically, and therefore accessing them requires experience and skill in using technical devices and technological innovations, and this contributes to the development of outputs. Education (Al-Tamimi, 2014).

The widespread spread of the Internet and its multiple applications has contributed to redrawing an image of the concept of citizenship, as the digital revolution has brought about a radical change in the features and nature of the school environment and its concepts, which has led to the emergence of new concepts and patterns in education that are commensurate with the technological revolution. Some have called it digital citizenship behavior. Which seeks to form effective digital citizen behavior (Al-Fursan, 2018).

The need to develop digital citizenship among members of society, especially school students, has become an issue that occupies the first place of concern in developed countries, and parents, teachers, and educational leaders have begun to embrace the idea of digital citizenship among students (Livingstone, David, 2010).

Digital citizenship has also become a global interface that may impose itself on education systems and the requirements of life. Rather, it has topped the educational goals

and sits on the throne of global and international curricula. In a number of developed countries, such as Britain, America, Canada, and Australia, topics specific to digital citizenship are applied.

Digital citizenship is framed by governing principles, values, and laws. Educational institutions deserve attention and strive to spread their culture and laws among their students and employees, especially in light of the modern trend of digitization and the use of technological programs and applications in all administrative and educational fields in schools and universities (Al-Qarni, 2021).

While the use of electronic applications via the Internet is beneficial for learners in terms of developing skills, these applications can also be benefited through their optimal use. Achieving this goal requires the cooperation of students, teachers, and those in charge of the educational system.

Accordingly, the concept of digital citizenship is relevant to the education system because it is capable of helping educational teachers in general and parents to understand what students must know in order to use technology appropriately. Digital citizenship is more than just an educational tool, but rather a means of preparing students to fully engage in society and participate. Effective in serving the interests of the nation in general and in the digital field in particular (Al-Saadi and Al-Dahwi, 2017).

In light of all this, it has become important to look at our educational institutions that are graduating generations living in this new digital age. They, especially students, need to develop the aspects of digital citizenship in this new digital age in which our children will live in the future, and to stress the importance of developing Digital citizenship themes for students.

Study problem:

Educational systems are witnessing a major shift towards using and employing digital technologies, and benefiting from the Internet and its developments in the educational process. This is a shift that is not intended for education, but is extended and complex to all fields, as electronic uses have become prevalent in almost everything. The modern educational process is based on changing and activating the role of the student, providing various resources that suit the abilities, desires and inclinations of students, in addition to improving the educational process by introducing modern methods.

Through the researchers' observation of the changes that occurred in the values of citizenship in Arab societies, and in light of the successive and accelerating digital

revolution, the increasing use of technological applications, and the spread of tablets and portable smart phones everywhere, many negative practices and risks emerged that spread as a result of this increased and inappropriate use. Al-Rasheed for Information Technology and Communications, Hence, it has become important to educate students and make them aware of the rules, directions, and controls necessary to deal rationally with this digital revolution through what is known as digital citizenship.

Hence, the problem of the study crystallizes in the presence of challenges imposed by the nature of the current digital age, which cast a shadow on secondary school students, which necessitates study and research, with the aim of creating an educated and conscious environment that supports and preserves the culture of digital citizenship among secondary school students, and the subsequent preventive measures to avoid risks. to which they may be exposed.

The problem of the current study can be formulated in the following question: what is the degree of use of digital citizenship among secondary school students from the point of view of physical education teachers?

Study objectives:

The study aims to: Knowing the degree of use of digital citizenship and its aspects among secondary school students from the point of view of their teachers.

Importance of the study:

The importance of the theoretical study is:

– Shedding light on the issue of digital citizenship, which has become a topic of local and global interest. This is achieved by implementing various policies, plans, programs , and curricula in several countries.

– Emphasizing the vision of the Kingdom of Saudi Arabia (2030) to strengthen the national character in various fields, including digital fields , it serves as a modern means of preparing citizens capable of using and employing digital technology in sound ways that adhere to behavioral, ethical, religious, and legal rules and regulations.

– Providing Saudi and Arab libraries with additional studies on the topic of digital citizenship among secondary school students.

– Developing researchers' cognitive skills and raising their awareness of the importance of conducting further studies in the field of digital citizenship.

The importance of the applied study is:

- This research provides a tool that researchers and graduate students can utilize in developing their instruments.
- Civil society organizations benefit from the results of the field study and its proposals for developing mechanisms to localize the concept of digital citizenship among secondary school students.
- Researchers in their area of educational work benefit from understanding the social and environmental determinants of digital citizenship among secondary education students.

Study limitations:

- Objective limitations: The current study was limited to the degree of use of digital citizenship among secondary school students from the point of view of physical education teachers in Dammam.
- Spatial boundaries: The study was applied in secondary schools (governmental and private) for boys in the city of Dammam.
- Time limits: The first semester of the academic year (1446) AH.
- Human limits: This study was limited to a sample of secondary school students in the city of Dammam.

Study terms:

Digital Citizenship: The US Department of Education defines it as the safe, ethical, responsible, and informed use of technology. This concept includes Internet security skills, personal privacy, dealing with Internet bullying, communication skills, reading and writing skills, and protecting intellectual property (Shahda, 2019).

Method and procedures:

- **Study method:**

The researchers used the descriptive approach, and relied on a questionnaire to identify the opinions of the study sample about the degree of use of digital citizenship among secondary school students.

- **Study population:**

The study population consisted of all physical education teachers in the Eastern Province who were at the helm of their work during the period of applying the study tool,

and their number was (602) according to the statistics of the Department of Education in the Eastern Province during the academic year (1446 AH).

- **Study sample:**

The nature of the methodology used in this study requires that the sample members be diverse, as it included education offices in the Eastern Province as follows: (East Dammam, West Dammam, Al-Khobar, Qatif, Jubail, Jubail, Abqaiq, Al-Nairyah, Al-Khafji, Upper Village, Ras Tanura). In order to reach the goals that serve the purposes of this study, the study sample consisted of (460) teachers, equivalent to (76.4%) of the total study population. They were selected by simple random method, as this sample participated in answering the study questionnaire that was sent to them in their groups.

Table (1) Distribution of the study sample according to the two education offices in Dammam

Percentage %	Repetition	Education Office
20%	92	East of Dammam
24.13%	111	West of Dammam
18.9%	87	the news
25%	115	Qatif
3.7%	17	Abqaiq
2.61%	12	Ras Tanura
3.04%	14	Jubail
0.65%	3	Khafji
1.11%	5	The upper village
0.86%	4	Nairiyah
100%	460	the total

- **Study Tool:**

After reviewing the studies and research that dealt with digital citizenship, such as the study: (Al-Belbisi, 2022); And (Al-Zahrani, 2021); (Khalil et al., 2021); And (Al-Rashed, 2020); And (Al-Qahtani, 2018); And Kim, (2018 and others; In light of the above, the researchers prepared a list of digital citizenship skills that students should have, and accordingly, (64) sub-skills were reached, distributed in eight main axes. Each axis consists of eight statements, with each statement corresponding to five alternatives according to a five-point scale (strongly agree 5). Agree 4, Neutral 3, Disagree 2, Strongly Disagree 1) The following is a definition of the axes of the questionnaire:

- **The first axis:** digital access; Full electronic participation for all secondary school students.
- **The second axis:** digital communication; Electronic exchange and sharing of information among secondary school students.
- **The third axis:** eradicating digital literacy; The process of teaching and learning technology and using its tools.
- **Fourth axis:** digital fitness; Digital standards of behavior and procedures.
- **The fifth axis:** digital laws; Digital responsibility on businesses and actions to protect their rights and achieve security and safety for them digitally.
- **Sixth axis:** digital rights and responsibilities; The freedoms that everyone enjoys in the digital world and which govern the use of digital technologies for their benefit.
- **The seventh axis:** digital health and safety; Mental and physical health in the world of digital technology and spreading awareness and culture around it to avoid the physical risks inherent as a result of the use of digital technologies.
- **The eighth axis:** digital security (self-protection); Measures to ensure prevention, electronic protection, security of their networks, and protection of their data and information from malware.

Table (2) Questionnaire answer index, score, and judgment criterion according to a five-point Likert scale

Average class		Answer indicator	Degree
From	to		
1.80	1.00	**Very low**	**1**
2.60	1.81	**Low**	**2**
3.40	2.61	**Medium**	**3**
4.20	3.41	**Great**	**4**
5.00	4.21	**Very big**	**5**

- **Psychometric properties of the study tool:**
- **The apparent validity of the tool:**

To determine the validity of the study tool in measuring what it was designed to measure, the researchers presented it to a group of arbitrators and experts with experience and expertise. The researchers attached a letter to the tool that included a summary of the objectives of the study and its variables and axes. They were asked to study the tool and express their opinion on it in terms of: clarity of the phrases (clear, unclear), belonging

(belonging, not belonging), importance (Important, not important), and their suitability to the topics. Expert opinions were unanimous in the validity of all paragraphs contained in the two tools, and no paragraph was deleted.

- **Internal consistency validity:**

Table (3) Pearson correlation coefficients for the study tool between the statement and the total score of the axis to which it belongs

Digital fitness		Literacy Digital		Connectivity Digital		Digital Access	
Correlation coefficient	phrase	Correlation coefficient	phrase	Correlation coefficient	phrase	Correlation coefficient	phrase
0.874**	1	0.732**	1	0.386**	1	0.870**	1
0.768**	2	0.822**	2	0.832**	2	0.909**	2
0.834**	3	0.772**	3	0.822**	3	0.925**	3
0.863**	4	0.714**	4	0.882**	4	0.875**	4
0.801**	5	0.831**	5	0.848**	5	0.884**	5
0.876**	6	0.833**	6	0.546**	6	0.837**	6
0.710**	7	0.793**	7	0.445**	7	0.851**	7
0.670**	8	0.752**	8	0.740**	8	0.615**	8
Digital Security (Self-Protection)		**Digital Health and Safety**		**Digital Rights and Responsibilities**		**Digital laws**	
0.761**	1	0.965**	1	0.830**	1	0.689**	1
0.613**	2	0.948**	2	0.873**	2	0.732**	2
0.829**	3	0.918**	3	0.670**	3	0.863**	3
0.882**	4	0.906**	4	0.842**	4	0.842**	4
0.822**	5	0.931**	5	0.735**	5	0.778**	5
0.879**	6	0.798**	6	0.845**	6	0.750**	6
0.719**	7	0.923**	7	0.927**	7	0.690**	7
0.823**	8	0.875**	8	0.944**	8	0.900**	8

***Significant at the significance level of 0.01 or less*

It was shown from Table (3) that all statements in the questionnaire were associated with a positive, statistically significant and acceptable degree with the total score of the axis to which they belong, which indicates the validity of the content of the questionnaire and the consistency of its items.

- **Stability of the study tool:**

Table (4) Cronbach's alpha coefficient to calculate reliability

Axis stability	Number of phrases	Questionnaire axes
0.839	8	Digital access
0.852	8	Digital communication
0.806	8	Digital literacy
0.919	8	Digital fitness
0.905	8	Digital laws
0.836	8	Digital rights and responsibilities
0.870	8	Digital health and safety
0.916	8	Digital security (self-protection)
0.878	**64**	**General stability**

It is clear from Table (4) that the values of the reliability coefficients for the study axes range between (0.81) and (0.92), and that the general reliability coefficient of the questionnaire is high, reaching (0.88). This indicates that the questionnaire has a high degree of reliability that can be trusted in the field application of the study.

- **Statistical methods:**

To achieve the objectives of the study and analyze the data, the researchers used a number of appropriate statistical methods using the Statistical Package for the Social Sciences (SPSS), after the data was coded and entered into the computer. The researchers then extracted the results according to frequencies, percentages, and arithmetic average. weighted (weighted); And the arithmetic mean; (average of the averages of the expressions), and the standard deviation; Cronbach's alpha reliability coefficient.

- **Study results, discussion and interpretation:**

Presenting and discussing the results of the first question: Answer to the first question: "What is the degree of use of digital citizenship among secondary school students from the point of view of physical education teachers?"

To answer this question, the researchers calculated the arithmetic averages for the digital citizenship axes, as well as the arithmetic average for all axes, and the results were as follows in the following table:

Table (5) Arithmetic averages of digital citizenship themes among secondary school students from the point of view of physical education teachers

Degree of use	Ranking	Standard deviation	Arithmetic average	Interviewer
Great	2	0.655	4.19	Digital access
Very big	1	0.563	4.26	Digital communication
Great	3	0.744	3.90	Digital literacy
Great	5	0.784	3.56	Digital fitness
Great	4	0.773	3.56	Digital laws
Great	6	0.854	3.51	Digital rights and responsibilities
Medium	8	1.090	2.91	Digital health and safety
Great	7	0.805	3.43	Digital security (self-protection)
High		0.633	3.66	Degree of use of digital citizenship

From Table(5),the results indicate that the degree of use of digital citizenship among secondary school students is large from the point of view of physical education teachers (3.66), and physical education teachers believe that the digital communication axis is the one most used by secondary school students with an average score of (4.26), followed by Digital access with arithmetic average(4.19), then the axis of digital literacy with an average of (3.90), and in fourth place came the axis of digital laws with an average of (3.56), while the axis of digital fitness came in fifth place with an average of (3.56), and in sixth place came the axis of digital rights and responsibilities with an average of (3.56). 3.51), and the digital security axis (self-protection) came in seventh place with an arithmetic average of (3.43), and the digital health and safety axis ranked last with an average of 3.51. (2.91).

Frequencies, percentages, arithmetic means, standard deviations, and ranks were calculated for the degree of use of digital citizenship among secondary school students from the point of view of physical education teachers in their axes as follows:

The first axis: digital access; Full electronic participation for all secondary school students.

Table (6) Frequencies, percentages, arithmetic means, standard deviations, and rankings for the digital accessibility axis items (n=460):

Degree of use	Ranking	Standard deviation	Arithmetic average	Phrase text	Number
Very big	5	0.868	4.28	The high school student has knowledge of digital technology tools and their alternatives.	1
Very big	1	0.721	4.41	Secondary school students have access to various digital technologies.	2
Very big	2	0.709	4.34	The high school student is good at searching through different digital browsers.	3
Very big	3	0.701	4.31	Secondary school students can download bulletins and lectures from digital pages with ease.	4
Very big	4	0.69	4.28	Secondary school students are able to receive information anywhere and anytime via digital technologies.	5
Great	6	0.846	4.10	A high school student uses digital media in distance learning activities.	6
Great	8	0.847	3.79	A high school student addresses the problems of accessing various digital resources.	7
Great	7	0.851	4.03	Secondary school students use search engines that support Arabic and English to access information.	8
Great		0.655	4.19	The degree of use of digital access among secondary school students	

It is clear from Table (5) that the degree of use of digital access among secondary school students is large. The overall average for the axis was (4.19), and five items came in the category of use to a very large degree, while three items came in the category of use to a large degree, which means that physical education teachers agreed on the degree of use of digital access among secondary school students is large.

The following two phrases came in first and second place:

In the first place came statement No. (2): "Secondary school students can access various digital technologies" with a mean (4.41) and standard deviation (0.71). In second place came phrase No. (3): "The high school student is good at searching through various digital browsers," with a mean (4.31) and standard deviation (0.71).

The following two phrases were ranked seventh and eighth:

In the seventh rank came phrase No. (8): "The high school student uses search engines that support the Arabic and English languages to access information," with a mean (4.03) and standard deviation (0.85).

In the eighth rank came phrase No. (7): "The high school student deals with the problems of accessing various digital resources," with a mean of (3.79) and a standard deviation of (0.85).

The second axis: digital communication; Electronic exchange and sharing of information among secondary school students.

Table (7) Frequencies, percentages, arithmetic means, standard deviations, and rankings for the digital communication axis items (n=460):

Degree of use	Ranking	Standard deviation	Arithmetic average	Phrase text	Number
Very big	1	0.406	4.79	The high school student communicates with his classmates through social media.	1
Very big	4	0.761	4.21	The secondary school student benefits from the experiences of his colleagues in addressing scientific and cultural topics.	2
Great	8	0.981	3.93	Secondary school students contribute to enriching useful discussions through digital communication technologies.	3
Great	5	0.875	4.17	The secondary school student has knowledge of the appropriate options for communicating through different communication technologies.	4
Great	7	0.869	3.93	The secondary school student develops the skills of participatory learning and cooperation between him and his colleagues through various digital applications.	5
Great	6	0.924	4.10	Secondary school students are able to use digital communication tools to build new friendships in different regions of the world.	6
Very big	2	0.618	4.59	The high school student has the ability to deal with digital applications such as Facebook, WhatsApp, Instagram, and others.	7
Very big	3	0.843	4.34	The high school student is proficient in sending and receiving e-mail.	8
Very big		0.563	4.26	The degree of use of digital communication among secondary school students	

It is clear from Table (7) that the degree of use of digital communication among secondary school students is very large. The overall average for the axis was (4.26), and four items came in the category of use to a very large degree, while four items came in the category of use to a very large degree, which means that education teachers agree. Physically, the degree of use of digital communication among secondary school students is very large.

The following two phrases came in first and second place:

In the first place came statement No. (1): "The high school student communicates with his colleagues via social media," with a mean (4.79) and standard deviation (0.41). In the second place came statement No. (7): "The high school student has the ability to deal with digital applications such as Facebook, WhatsApp, Instagram, and others," with a mean of (4.59) and standard deviation (0.62).

The following two phrases were ranked seventh and eighth:

In the seventh rank came statement No. (5): "The secondary school student develops collaborative learning skills and cooperation between himself and his colleagues through various digital applications," with a mean (3.93) and standard deviation (0.88).

In the eighth rank came phrase No. (3): "Secondary school students contribute to enriching useful discussions through digital communication techniques," with a mean (3.93) and standard deviation (0.98).

The third axis: eradicating digital literacy; The process of teaching and learning technology and using its tools.

Table (8) Frequencies, percentages, arithmetic means, standard deviations, and rankings for the digital literacy axis items (n=460):

Degree of use	Ranking	Standard deviation	Arithmetic average	Phrase text	Number
Great	2	0.82	4.14	Secondary school students can learn independently through their use of digital technologies.	1
Great	7	1.158	3.62	The secondary school student attends seminars, programs and electronic educational videos to enhance his ways of benefiting from digital technologies.	2
Very big	1	0.805	4.21	Secondary school students can download the educational programs they want via the Internet.	3
Great	3	0.908	4.07	Secondary school students are aware of the importance of learning the skills of using digital technology.	4
Great	5	1.016	3.93	The high school student educates himself by learning about technological innovations and new information.	5
Great	6	1.093	3.66	The high school student practices with his classmates practically on contemporary digital technology skills.	6
Great	8	1.071	3.55	The secondary school student participates in remote training courses to increase his knowledge using digital applications.	7
Great	4	0.696	4	The high school student follows innovations related to mobile devices, computers, etc.	8
Great		0.744	3.90	The degree of use of digital literacy among secondary school students	

It is clear from Table (8) that the degree of use of digital literacy among secondary school students is large. The overall average for the axis was (3.90), and only one item came in the category of use to a very large degree, while seven items came in the category of use to a large degree, which means that education teachers agree. Physically, the degree of use of digital literacy among secondary school students is great.

The following two phrases came in first and second place:

In the first place was the statement No. (3): "A high school student can download the educational programs he wants via the Internet," with a mean of (4.21) and a standard deviation of (0.81). In the second place came statement No. (1): "The high school student can learn on his own through his use of digital technologies," with a mean of (4.14) and a standard deviation of (0.82).

The following two phrases were ranked seventh and eighth:

In the seventh rank came phrase No. (2): "The high school student attends seminars, programs, and electronic educational videos to enhance his ways of benefiting from digital technologies," with an arithmetic mean (3.62) and a standard deviation (1.16). In the eighth rank came phrase No. (7): "The high school student participates in distance training courses to increase his knowledge by using digital applications," with a mean (3.55) and standard deviation (1.07).

Fourth axis: digital fitness; Digital standards of behavior and procedures.

Table (9) Frequencies, percentages, arithmetic means, standard deviations, and rankings for the numerical fitness axis items (n=460):

Degree of use	Ranking	Standard deviation	Arithmetic average	Phrase text	Number
Great	3	0.967	3.59	The secondary school student adheres to the rules of digital and civilized behavior when dealing with digital applications.	1
Great	2	0.993	3.66	Secondary school students should avoid accessing information stored on other people's devices without their consent.	2
Great	3	0.967	3.59	The secondary school student is keen to cultivate a culture of logical dialogue through digital communities and discuss opinions with complete objectivity.	3
Great	1	0.98	3.72	The high school student chooses polite phrases while communicating with others via digital devices.	4
Great	4	1.005	3.52	The high school student chooses the appropriate time when communicating with others through digital media.	5
Great	5	0.969	3.45	The high school student respects the viewpoint of others through digital media.	6
Great	6	0.967	3.41	A high school student is careful not to interrupt his classmates while they are talking in the online digital environment.	7
Great	4	1.005	3.52	The high school student responds to incoming correspondence without delay.	8
Great		0.967	3.56	The degree of use of digital fitness among secondary school students	

It is clear from Table (9) that the degree of use of digital fitness among secondary school students is large. The overall average for the axis was (3.56), and all items in the category of use came in at a large degree, which means that physical education teachers agree that the degree of use of digital fitness among secondary school students is large. .

The following two phrases came in first and second place:

In the first place came statement No. (4): "The high school student chooses polite phrases while communicating with others via digital devices," with a mean (3.72) and standard deviation (0.98). In the second place came phrase No. (2): "The high school student avoids accessing information saved on other people's devices except with their consent," with a mean (3.66) and standard deviation (0.99).

The following two phrases were ranked seventh and eighth:

In the seventh rank came phrase No. (6): "The high school student respects the point of view of others through digital media," with a mean of (3.45) and a standard deviation of (0.97). In the eighth rank came phrase No. (7): "The high school student is careful not to interrupt his colleagues while they are talking in the digital environment via the Internet," with a mean of (3.41) and a standard deviation of (0.97).

The fifth axis: digital laws; Digital responsibility on businesses and actions to protect their rights and achieve security and safety for them digitally.

Table (10) Frequencies, percentages, arithmetic means, standard deviations, and rankings for the items in the Numerical Laws axis (n=460):

Degree of use	Ranking	Standard deviation	Arithmetic average	Phrase text	Number
	3	0.727	3.76	Secondary school students adhere to the policies for acceptable use of digital websites issued by the competent authorities.	1
Great	5	0.998	3.62	The high school student has awareness of the laws and penalties for combating digital crimes issued by official authorities.	2
Great	4	0.963	3.62	The high school student has knowledge of the steps and procedures for reporting any illegal action in digital communities.	3
Medium	7	1.048	3.28	Secondary school students verify the sources of information before publishing and sharing it.	4
Medium	8	1.305	2.76	A high school student must seek permission from the author or publisher of any online work before benefiting from it.	5
Great	2	0.965	3.97	A high school student believes that hacking into others' personal information and stealing their identity is an immoral act.	6

Degree of use	Ranking	Standard deviation	Arithmetic average	Phrase text	Number
Great	1	0.948	4.00	A high school student believes that designing destructive viruses and sending them via mail is a digital crime.	7
Great	6	0.934	3.52	A high school student encourages his classmates to abide by the rules of the digital society.	8
Great		0.773	3.56	The degree of use of digital laws among secondary school students	

It is clear from Table (10) that the degree of use of digital laws among secondary school students is large. The overall average for the axis was (3.56), and six items came in the category of use to a great degree, while two items came in the category of use to a moderate degree, which means that there is a disparity between teachers. Physical education in the degree of use of digital laws among secondary school students between senior and middle.

The following two phrases came in first and second place:

In the first place came the statement No. (7): "The high school student believes that designing destructive viruses and sending them via mail is a digital crime," with a mean of (4.00) and a standard deviation of (0.95).

In the second place came statement number (6): "The high school student believes that hacking into others' personal information and stealing their identity is an immoral act," with a mean of (3.97) and a standard deviation of (0.97).

The following two phrases were ranked seventh and eighth:

In the seventh rank came phrase No. (4): "Secondary school students verify the sources of information before publishing and sharing it," with a mean (3.28) and standard deviation (1.05).

In the eighth rank came phrase No. (5): "The high school student seeks permission from the author or publisher of any online work before benefiting from it," with a mean of (2.76) and a standard deviation of (1.31).

Sixth axis: digital rights and responsibilities; The freedoms that everyone enjoys in the digital world and which govern the use of digital technologies for their benefit.

Table (11) Frequencies, percentages, arithmetic means, standard deviations, and rankings for the digital rights and responsibilities axis items (n=460):

Degree of use	Ranking	Standard deviation	Arithmetic average	Phrase text	Number
Great	5	1.072	3.48	High school students understand the importance of reading the policy of any website before registering or dealing with it.	1
Great	4	1.036	3.59	A high school student warns against spreading rumors and misleading information through digital communities.	2
Great	3	1.002	3.59	A high school student only browses websites that are appropriate to his interests.	3
Great	1	0.898	3.76	High school students realize not to tamper with the content of websites.	4
Medium	8	1.064	3.21	The secondary school student mentions the source of the digital content when making use of or quoting it.	5
Great	2	0.848	3.62	The high school student believes that basic digital rights, such as privacy and expression of opinion, must be understood by all users of digital technologies.	6
Great	6	1.102	3.45	The high school student contributes to spreading the ethics of online research.	7
Medium	7	1.158	3.38	High school students use social networking sites consciously and responsibly.	8
Great		0.854	3.51	The degree of use of digital rights and responsibilities among secondary school students	

It is clear from Table (11) that the degree of use of digital rights and responsibilities among secondary school students is large. The overall average for the axis was (3.51), and six items came in the category of use to a great degree, while two items came in the category of use to a moderate degree, which means that there is a disparity between Physical education teachers in the degree of use of digital rights and responsibilities among high and middle school students.

The following two phrases came in first and second place:

In the first place came phrase No. (4): "The high school student realizes not to tamper with the content of websites" with a mean of (3.76) and a standard deviation of (0.90). In the second place came statement No. (6): "The high school student believes that basic digital rights, such as privacy and expression of opinion, must be understood by all users of digital technologies," with a mean (3.62) and standard deviation (0.85).

The following two phrases were ranked seventh and eighth:

In the seventh rank came statement No. (8): "Secondary school students use social media sites consciously and responsibly," with a mean of (3.38) and standard deviation

(1.16). In the eighth rank came phrase No. (5): "The high school student mentions the source of the digital content when making use of or quoting from it," with a mean (3.21) and standard deviation (1.06).

The seventh axis: digital health and safety; Mental and physical health in the world of digital technology and spreading awareness and culture around it to avoid the physical risks inherent as a result of the use of digital technologies.

Table (12) Frequencies, percentages, arithmetic means, standard deviations, and rankings for the digital health and safety axis items (n=460):

Degree of use	Ranking	Standard deviation	Arithmetic average	Phrase text	Number
Medium	2	1.219	3.03	The high school student is keen to take periods of rest and not to excessively use digital devices.	1
Medium	5	1.333	2.86	High school students avoid prolonged use of digital devices in order to preserve time and health.	2
Medium	7	1.216	2.79	The secondary school student adheres to the correct sitting position while using digital devices.	3
Medium	3	1.274	2.97	The high school student ensures proper lighting on digital device screens.	4
Medium	4	1.156	2.90	The high school student should move an appropriate distance away from the digital device screen to avoid strain on the eye muscles and the effect of radiation emanating from the device.	5
Medium	1	1.107	3.14	High school students are aware of the psychological damage resulting from addiction to using social media networks.	6
Medium	6	1.148	2.83	The high school student is keen to do some physical exercise while constantly using digital devices.	7
Medium	8	1.135	2.76	The high school student constantly turns the direction of the device screen to avoid any glare or direct light reflections.	8
Medium		1.090	2.91	The degree of use of digital health and safety among secondary school students	

It is clear from Table (12) that the degree of use of digital health and safety among secondary school students is moderate. The overall average for the axis was (2.91), and all items in the category of use came in at a moderate degree, which means that physical education teachers agreed that the degree of use of digital health and safety among high school student's Intermediate high school.

The following two phrases came in first and second place:

In the first place was the statement No. (6): "The high school student is aware of the psychological damage resulting from addiction to the use of social networking" with a mean of (4.14) and a standard deviation of (1.11). In the second place was the statement No. (1): "The high school student is keen to take periods of rest and does not overuse digital devices," with a mean of (3.03) and a standard deviation of (1.22).

The following two phrases were ranked seventh and eighth:

In the seventh rank came phrase No. (3): "The high school student adheres to the correct sitting position while using digital devices," with a mean (2.79) and standard deviation (1.33). In the eighth rank came phrase number (8): "The high school student constantly turns the direction of the device screen to avoid any glares or direct light reflections" with a mean of (2.76) and a standard deviation of (1.14).

The eighth axis: digital security (self-protection); Measures to ensure prevention, electronic protection, security of their networks, and protection of their data and information from malware.

Table (13) Frequencies, percentages, arithmetic means, standard deviations, and ranking of the digital security (self-protection) axis items (n=460):

Degree of use	Ranking	Standard deviation	Arithmetic average	Phrase text	Number
Great	1	0.907	3.72	A high school student uses a strong password to protect his digital devices and wireless network.	1
Great	1	0.907	3.72	The high school student is keen to update the operating system periodically and regularly.	2
Great	4	0.895	3.45	High school students should avoid opening any unknown or untrusted files or messages.	3
Medium	7	1.19	2.97	A high school student always keeps a backup copy of important data on an external hard drive.	4
Medium	5	1.032	3.38	The high school student updates the anti-virus software on his digital devices periodically.	5
Medium	6	1.174	3.07	The high school student regularly changes the password for his websites from time to time to protect his privacy.	6
Great	2	0.888	3.62	The high school student avoids giving his personal information and other correspondence data or registering it in social networking site accounts.	7
Great	3	1.072	3.52	High school students always deal with reliable and harm-free websites and use safe browsers.	8
Great		0.805	3.43	The degree of use of digital security (self-protection) among secondary school students	

It is clear from Table (13) that the degree of use of digital security (self-protection) among secondary school students is large. The overall average for the axis was (3.43), and five items came in the category of use to a large degree, while three items came in the category of use to a moderate degree, which This means that there is a disparity among physical education teachers in the degree of use of digital security (self-protection) among secondary school students, between large and medium.

The following two phrases came in first and second place:

In the first place came statement No. (1 and 2): "The high school student uses a strong password to protect his digital devices and wireless network. The high school student is keen to update the operating system periodically and regularly," with a mean (3.42) and standard deviation (0.91). In the second place was the statement No. (7): "The high school student avoids giving his personal information and other correspondence data or registering it in social networking site accounts," with a mean of (3.62) and a standard deviation of (0.89).

The following two phrases were ranked sixth and seventh:

In the sixth rank came statement No. (6): "The high school student regularly changes the password for his websites from time to time to protect his privacy," with a mean (3.07) and standard deviation (1.17). In the seventh rank came phrase No. (4): "The high school student always keeps a backup copy of important data on an external hard disk," with a mean (2.97) and standard deviation (1.19).

Conclusions and recommendations:

- **Conclusions:**

1. The degree of use of digital citizenship among secondary school students from the point of view of physical education teachers was high.
2. The degree of use of the digital communication hub among secondary school students was very high.
3. The degree of use of the axis (digital access; digital literacy; digital laws; digital fitness; digital rights and responsibilities; and digital security) among secondary school students was significant.
4. The degree of use of the digital health and safety axis among secondary school students was average.

- **Recommendations:**

1. Including digital citizenship skills in the curricula and curricula of secondary school students.

2. The necessity of developing digital citizenship concepts and their applications among secondary school teachers and students.
3. Holding workshops and courses to promote digital citizenship, as it has become an utmost necessity for its development among students in the current era.
4. Spreading the culture of information and communication through cultural activities, seminars and lectures and how to direct students towards the rational use of the Internet.
5. Design educational activities that encourage the effective use of technology.
6. Expanding the field of research and literature on variables to improve digital citizenship skills, as the researchers noted the lack of studies and literature in this field.
7. Conduct other similar research among other categories of society and according to different variables and stages of education.

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