DIGITAL CITIZENSHIP IN GEORGIAN'S TEACHERS, STUDENTS AND PARENTS

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Abstract

The Council of Europe's (CoE) model on Digital Citizenship Education (DCE) has at its basis the 'Competencies of Democratic Culture' model, which considers being an active and responsible citizen and implies the development of a set of lifelong competencies both online and offline at various levels, as well. Taking the 'Competencies of Democratic Culture' the CoE experts elaborated on the DCE domains, which are the appropriate way to develop democratic culture competences in the digital environment. Georgia, as a member country, signed the agreement on DCE to be applied at the K-12 curriculum level and joined the DCE project of the CoE in July 2020. Thus, as an educational concept, DCE is relatively new to the education system of Georgia. The aim of the study was to describe the current situation concerning DCE in Georgia, namely on awareness of the concept and its foundations, as well as identifying self-reported DCE competences by teachers, students and parents, in the light of the Ribble's and the CoE's models. Data was collected in five schools in 2020. The issue was studied using the quantitative method, an online survey, 1954 respondents were involved in the research. It was demonstrated that most of the respondents had a lack of awareness about information-communication technologies. It can be concluded that communication among school teachers, students and parents about the issues of digital security has not started yet. The correlation between the geographic location of a school and teachers' digital competences is not confirmed.

Keywords: *digital citizenship education, digital domains, digital competences, digital school culture, exploratory sequential design*

Introduction

Significance and Theoretical Foundations

At the beginning of the 21st century, the digital revolution marked a deep societal shift in how people think, what they think about, how they communicate, how they relate to the material environment and to each other, how they organize their working conditions, and how they build their societies at all (Jansen, 2002). Jansen's words are still relevant nowadays, in a world marked by social acceleration driven by the economy and supported by technological development, which governments try to control through new laws and digital weapons, often without progress (Bonilla & Rosa, 2015).

If technology opens doors to the "participatory culture" (Jenkins, 2009), it should be noted that participation implies previous and lifelong empowerment through education, whether formal, informal, or non-formal. Empowerment is key to benefit from the opportunities (e.g., communicate, play, be informed, learn and work) avoiding the risks (e.g., privacy, security, health, consumption, …). This subject concerns every citizen, even those who are disconnected, since the boundary between online life and 'real life' is blurred and "it is not appropriate to think only about 'digital' or 'analogue', or 'online' and 'face-to-face'" (Netsafe, 2018).

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The development of digital citizenship competencies is of particular importance from the early childhood education. Accordingly, the general educational institution should take care of its development from the very first level. Research studies show that sufficient and inclusive access to relevant programs at school ensures the formation of a sustainable digital citizen (Ghosn-Chelala, 2019; Lauricella, 2022). The importance of the mentioned competencies has increased even more in the conditions of the global COVID-19 pandemic when the teenage generation was left face to face with a large volume of unfiltered information in the internet space. Both the family and the school and the community as a whole were unprepared to help the younger generation cope with the challenges they were suddenly faced and consider the force majeure situation as an opportunity for digital development (Akcil & Bastas, 2021; Buchholz et al., 2020; Martin et al, 2022).

The Council of Europe's model on Digital Citizenship Education has at its basis the 'Competencies of Democratic Culture' model (Council of Europe, 2018), which considers that being an active and responsible citizen implies the development of a set of lifelong competencies both online and offline, and at various levels, from local to global. Also known as "The butterfly of competencies for democratic culture", it consists of several competence items organized into four areas, namely: Values: Valuing human dignity, rights, diversity, democracy, justice, fairness, equality and the rule of law; Attitudes: Openness and tolerance to cultural differences and to other beliefs, viewpoints and social practices; Skills: Autonomous learning, Analytical and critical thinking skills, skills of listening to others and observing your life practices, empathy, flexibility and adaptability, conflict-resolution skills, etc.; finally, knowledge and critical understanding of the self, language and communication used during life cycle, politics, law, human rights, cultural and religious diversity, history, media, economies and environment.

According to "The butterfly of competences for democratic culture", which integrates a set of descriptors per item and whose application has been tested in formal learning contexts, the competence items are teachable, learnable and this learning is measurable. Taking the 'Competencies of Democratic Culture' (Council of Europe, 2018) as a fundamental reference, the Council of Europe started the project Digital Citizenship Education in 2016, whose expert group had in mind to build the 10 digital citizenship domains: Being online includes access and inclusion, learning and creativity and media and information literacy. Well-Being online includes ethics and empathy, health and wellbeing issues, e-Presence and online interactions and finally rights online refer to active participation, rights and responsibilities, privacy and security and consumer knowledge (Council of Europe, 2018).

The domains are also the appropriate way to develop democratic culture competences in the digital environment, which implies policy development, the involvement of multiple stakeholders, following contextualized and adapted strategies to the specific contexts, having in mind the available infrastructures and resources. Finally, all the actions taken must be monitored and assessed, to come up with results that are crucial to improve the model. The study given below is based on these 10 domains and their areas.

The second model used in the current study as a theoretical background is Ribble and Bailey's (2017) model of digital citizenship. It uses a framework of nine interrelated elements as a way for online users to understand and to use the issues concerning DC. They are digital access, commerce, communication, literacy, etiquette, so-called netiquette, law, rights, and responsibilities, health, and wellness, and finally digital security. These elements give knowledge for understanding the digital issues that are important to educators. They should be used to identify current areas of need in general and higher education, as well as emerging issues that may become important in the future.

The empowerment of learners, of all ages, from crib to lifelong learning, has been a concern of governments, research institutions, schools and families, as well as of international institutions (e.g., UNESCO, OECD, European Commission or the Council of Europe) and

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NGOs (e.g., Common Sense Media in the US, Netsafe in New Zealand, or MediaSmarts in Canada). The presented study is scientifically anchored in two models mentioned above: The Digital Citizenship in schools model developed by Ribble and Bailey (2017) and the Digital Citizenship Education model organized by the Council of Europe in 2019. The cross of the two models is presented in Table 1.

Table 1
Crossing Ribble and Bailey's and the Council of Europe's Digital Domains

#	Ribble's Model of DCE (Ribble, 2017)	CoE's Model of DCE (Council of Europe, 2019)	Crossing the two models (2022)
1	Digital Security	Privacy and Security	Privacy and Security
2	Digital Etiquette	ePresence and Communications	Netiquette
3	Digital Literacy	Media and Information Literacy Learning and Creativity	Media Literacy Education
4	Digital Communication	Ethics and Empathy Active Participation	Ethical participation
5	Digital Access	Access and inclusion	Inclusive access
6	Digital Commerce	Consumer Awareness	Consumer Awareness
7	Digital Health and Wellness	Health and Wellbeing	Health and Wellbeing
8	Digital Law Digital Rights and Responsibilities.	Rights and Responsibilities	Rights and Responsibilities

A set of eight common areas came up after having crossed the two models, namely:

1. Privacy and Security - protect personal and others' information (e.g., strong passwords, site security) and act safely online
2. Netiquette - manage online identity and presence and show suitable etiquette through positive, coherent and consistent interactions.
3. Media Literacy Education - mobilize critical thinking to interpret, understand media messages, and express creativity through digital media.
4. Ethical participation - behave ethically in digital environments, making responsible decisions, and participating actively and positively in society.
5. Inclusive access - overcome all sorts of digital divides, from having access to technology to the openness of digital spaces to any kind of minority.
6. Consumer Awareness - be aware of the dangers related with online purchasing and understand the implications of the online commercial reality
7. Health and Wellbeing - be aware of risks (e.g., online addiction) and opportunities that can affect wellness (e.g., reliable health information)
8. Rights and Responsibilities - Know the citizens' rights (e.g., freedom of expression) and what is legal and acceptable according to the law.

The above-mentioned areas are studied and covered by Digital Citizenship Education and must be developed by every citizen, from crib to lifelong learning. Therefore, the identification of factors, measurement of these competences and development of educational models represent the scientific novelty which is required to be offered to the educational community in Georgia.

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Studies of digital citizenship competencies are mainly based on either Ribble (Suson, 2019) or the Council of Europe DCE models (Bombardelli, 2019, Mattar et al., 2022). The uniqueness of the presented study is the fact that the theoretical framework of the research is a crossed model of eight common dimensions which is the combination of the two most authoritative DCE models mentioned above.

Current Situation and Challenges in Georgia

In November 2019, the Council of Europe's committee of ministers signed a recommendation on developing and promoting digital citizenship education, suggesting the governments of member States to "review their legislation, policies and practices, including learning frameworks", aligning them with "the recommendations, principles and further guidance" of the document, apart from promoting their implementation in formal, non-formal and informal education settings", besides assessing "the impact of the legislation, policies and practices at regular intervals" (Council of Europe, 2019).

Other key recommendations pointed to the need to involve all relevant stakeholders in the process, including through the provision of appropriate resources (e.g., sense-making practices, pedagogical innovations and educational resources), initial and in-service education and training to teachers and other educators, promoting cooperation between public, private and civil sectors and education institutions, and ensure their alignment with relevant national, European and international standards (e.g. Council of Europe). Finally, the implementation of the recommendation should be monitored by member states at least every five years.

The recommendation is an output of the Council of Europe's project 'Digital Citizenship Education', which started in 2016, aiming to contribute to reshaping the role that education plays in enabling all children to acquire the competences they need as digital citizens to participate actively and responsibly in democratic society, whether offline or online. Its first outputs were a literature review on digital citizenship (Frau-Meigs et al., 2017), and a multi-stakeholder consultation focused on sense-making practices in DCE (Richardson & Milovidov, 2017).

The consultation pointed out "the lack of knowledge among educators of the importance of digital citizenship, the limited number of pedagogical resources available, properly targeted, and at least apparently considerable confusion among experts and educators between what is generally referred to as 'internet safety' and the concept of digital citizenship education. In April 2019, the Council of Europe organized a network of experts and practitioners (the DCE Promoters Network), currently representing the project and developing activities in 24 European countries.

To tackle the lack of DCE validated resources, the Council of Europe published the "Digital Citizenship Handbook" in 2019 (Richardson & Milovidov, 2019) and the "DCE Trainers´ Pack" in 2020 (Raulin-Serrier, et al., 2020). Still in 2020, a year during which around 84% of the world's student population was affected by school closures due to COVID 19 and the consequent shift to online distance learning (UNESCO, 2020), the Council of Europe provided a rapid response to the effects of the pandemic, by launching a set of resources namely a set of lesson plans on DCE (Council of Europe, n.d.).

Georgia signed the agreement on DCE to be applied at the K-12 curriculum level, and finally joined the Digital Citizenship Education project of the Council of Europe in July 2020. Therefore, as an educational concept, Digital Citizenship Education is relatively new for the education system of Georgia. It was officially adopted by the Georgian general education system in September 2021: two strands/subject areas of The National Curriculum - Computer Sciences at the primary and Civic Education at the general education level cover the learning outcomes of the Digital Citizenship Education.

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In the year 2020 significant changes were made in the general competences section of the Teacher Professional Standards (Ministry of Education and Science, 2020). The competencies such as Media Literacy, Information Literacy and Digital Literacy became mandatory for the teachers who are entering the profession as well as for the in-service teachers. For example, as it can be seen in the Teacher Professional Standards, Chapter II, Article 5, Sub-section D: "The teacher should be able to apply information-communication technologies while planning the learning process and consider the principles of digital citizenship. The article of learning resources includes a section that is focused on the importance of teacher competence in media literacy: It is mandatory for a teacher to be able to "search or/and prepare learning resources for learning aims and student needs that will be based on the principles of media literacy" (Chapter II, Article 7, Section E. Ministry of Education and Science of Georgia, 2020).

Therefore, two of the fundamental documents that define General Education policy – National Curriculum and Teacher Professional Standard, reflect the basic competences of digital literacy.

Supporting the development of students' digital literacy as a cross-curricular competence is one of the priorities of the United National Strategy of General Education 2020-2032 **(**United National Strategy of Education and Science of Georgia - 2022-2032).

Apart from the education policy documents mentioned above, the document adopted by the government of Georgia "National Cybersecurity Strategy of Georgia and its Action Plan 2021-2024 (Government of Georgia, 2021) is also noteworthy. The document was approved in 2022. It should be mentioned that the Cybersecurity Strategy document is a third edition, and the Education Component has been involved in it for the first time. The component of education includes general and higher education levels, where teaching digital citizenship as a multidisciplinary field combines the following: Cyber Awareness, Digital Security, Media Literacy, Digital Literacy, and other adjacent competences. The Strategy Action Plan implies its execution through the involvement of various actors, including the Ministry of Education and Science and the National Communications Commission. The third edition of the strategy is valid until the end of 2024. The strategy defines the following significant objectives: "Developing skills and raising education level of school students and higher education students in order to operate safely and securely in the cyberspace" (Objective 1.1); "Raising awareness of the information society and organizations in order to operate safely and securely in the cyberspace" (Objective 1.2) and "Providing learning courses and learning materials to promote Digital Citizenship (Government of Georgia, 2021). As it was already mentioned, there are certain shifts in the Georgian general education system in the direction of teaching.

In addition to the commitments taken by the country, the relevance of digital citizenship research in Georgia is also determined by the high involvement of the majority of teenagers in social networks, the internet and, in general, a strong tendency to use technological gadgets and social networks. Also, below average competence of parents/guardians, teachers, and school administrators in the use of information communication technologies (Institute for Social Research and Analysis, 2015) and daily growing threats that appear in the form of various challenges or managed games related to online life and which, in some cases, even leads to lethal results (Drummond, et al 2020; Duggan, 2017).

In the recent reports of the Mandatory Service of the Georgian Educational Institutions, we read that the statistics of the teenagers addicted to online violent games are increasing (2021 and 2022 reports of the State Educational Institution of Georgia).

Despite the international obligations and challenges facing the country, conducting research on digital citizenship has not become a subject of discussion in the scientific groups in Georgia yet, while there are existing research studies on Digital Citizenship Education in post-Soviet countries (Buchholz et al, 2020; Telarico, 2021). The regional context of this study is rooted, since this paper stands out as it specifically focuses on the current state of Digital

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Citizenship Education in Georgia, in particular its general education system. This kind of focused study has never been conducted in the context of this country before.

The presented research carried out in the framework of the national scientific project "Digital Citizenship in General Education Schools in Georgia: Challenges and Ways of Implementation" enables education policymakers and other stakeholders to make evidence-based changes in the curriculum in the direction of digital literacy. It also enables them to offer need-based professional development activities to the teachers, refine the methodology of teaching digital literacy, etc.

The scientific project aimed to infuse DCE in educational policy and school culture through pre-service and in-service activities started after joining the Digital Citizenship Education project. The core steps of this project consisted of understanding to what extent Georgian teachers, students and educators were aware of digital citizenship and its importance, apart from asking teachers if they felt competent to implement DCE in the classroom and which type of DCE activities were developed in Georgian schools.

Developing research in the area is of crucial importance not only from the viewpoint of its scientific value but also from the viewpoint of public awareness. The presented research lays foundation for a new descriptive knowledge and practical experience of Digital Citizenship Education among school community members and of the prospects for their development, which will be used by researchers as well as by education policymakers.

Research Aim and Questions

The aim of the study was to explore the current situation concerning Digital Citizenship Education in Georgia, namely awareness of the concept, by means of identifying self-reported DCE competences by teachers, students, and parents/guardians in the light of the Ribble's and the Council of Europe's models.

In terms of design, it followed an exploratory sequential design in which two strands were implemented in a sequence. The qualitative focus groups with educators were conducted in the first stage of the study to explore the phenomenon and then first-hand sociological information was collected using a quantitative method, an online survey of the teachers, students, and parents/guardians. The research is considered to be an exploratory study because it was the first time that information on DCE was collected from Georgian teachers, students and parents.

The research has been conducted in five general education public schools. The following research objectives were formulated:

- To study general education school teachers', students' and parents'/guardians' awareness of the concept of Digital Citizenship in its broader meaning;
- To study general education school teachers', students' and parents'/guardians' awareness of the concept of Digital Citizenship elements/domains;
- To correlate the geographic location of public schools with teacher's Digital Citizenship awareness;
- To correlate access to the internet with DCE competencies of the school society?

The following research questions were formulated according to the aim and objectives of the quantitative research:

1. To what extent are members of Georgian public schools' society (teachers, students, parents/ guardians) aware of Digital Citizenship?
2. Does the school teachers' awareness of digital citizenship correlate with the geographic location of the school?
3. Does the access to the internet relate to the DCE competencies of the school society?

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Therefore, the Research Hypothesis suggested that: i) members of Georgian public school society have a lack of awareness of Digital Citizenship areas; ii) teachers' awareness is correlated with the location of public schools; iii) Access to the internet does not relate to DCE perceived competencies of the school society.

Research Methodology

General Background

The presented exploratory study is a part of the fundamental research state grant project "Digital Citizenship in General Education Schools in Georgia: Challenges and Ways of Implementation" (Project Number: 19-SRNSFG-FR-445, project ID: FR-19-7716). The design of the fundamental research state grant project was action research involving three following phases: diagnosing, intervention and monitoring/assessment of the interventions. In this article, the results of the diagnostic stage of action research are presented. The exploratory quantitative research was conducted during the diagnostic phase.

The research questions were related to the study of the current situation of digital citizenship at Georgian public schools and, also, the research questions studied the correlations between respondents' awareness and school location.

Based on the results of the quantitative research presented in this article, the interventions were implemented in the five public schools. The research project was carried out from September 2020 to December 2022.

Research Population and Sample Frame

Georgia's five public schools were the sample of the study. Because of COVID-19 regulations, as well as the limited budget of the research, the sampling process was conducted by means of Cluster Sampling. In the first stage the population, Georgian schools were divided into clusters. Area Sampling is one of the most widespread types of Cluster Sampling. Here the clusters consist of geographical units which can be provinces, regions, or districts. Schools in Georgia are allocated according to regional location. Therefore, they were represented as the general education public schools of Tbilisi, East Georgia, and West Georgia.

After setting up the clusters, none of the schools from any regions were left out of the clusters stated above. Afterwards, the sample was formed within the selected clusters. According to the formation of the sample, cluster sampling can be single-stage, two-stage, or multi-stage. In the case of the current study, the two-stage cluster sampling, namely probability sampling was conducted in proportion with the population. The research group has used the database of schoolteachers and students. The number of respondents is referred to in Table 2.

Table 2
Survey Respondents (N=1954)

Status/School	West Georgia Sachkhere Public School	Tbilisi Public School	Tbilisi Public School	East Georgia Public School	East Georgia Public School	Total
Teacher	39	62	14	64	26	205
Student	173	253	91	354	101	972
Parent/guardian	207	76	50	291	153	777
Sum	419	391	155	709	280	1954

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Table 3
The Main Characteristics of the Participants

	Participants		
Characteristics	**Teachers**	**Students**	**Parents/guardians**
Age	From 30 to 60 years	From 12 to 16 years	From 35 to 50 years
Gender	The majority - female	Half of them - male, half – female	The majority - female
Level of Education	Bachelor, Master	Students of general education schools	Secondary education, Vocational education, Degrees of Bachelor and Master
Residence	A resident of the same location in which the school is located	A local resident of the same location in which the school is located	A local resident of the same location in which the school is located

Research Instruments and Procedures

To answer the research questions primary sociological information was collected by means of quantitative methods of social research. Specifically, by online questionnaires. The survey turned out to be the most relevant research strategy that could have been used by the research group for collecting information about Digital Citizenship due to the COVID-19 regulations. The research instrument was a self-completion questionnaire.

The starting point of the research instrument applied in this study was a draft questionnaire titled "Council of Europe Survey on Parent's View of Digital Citizenship" and discussed by the Steering Committee for Education Policy and Practice (CDPPE) in 2019. The reliability of the Questionnaire is presented in the *Validity, Reliability, and Ethics* section. The document was organized into 35 questions that were distributed into three sections: i) general instructions and personal information; ii) perceptions on DCE in general and per digital domain; iii) open question asking respondent opinion on what needs to be done to help children become responsible citizens offline and online. All questions were analyzed and discussed during focus group sessions. The focus-group method was used to collect information from education experts, teachers, and general school students in order to create and adapt quantitative research instruments for describing school community members' awareness of Digital Citizenship in Georgia.

The focus-group method is often introduced as 'a group in-depth interview' and it is used at the initial stage of a research, as the first step of studying an unexplored issue and helps to formulate hypotheses. Apart from that, the information collected during focus-group interviews suggests rich and useful material for creating mass surveys/questionnaires. Particularly, it suggests materials for formulating questions and refining answers to close-ended questions, since the process of focus-group interview demonstrates respondents' vocabulary and their model of thinking" (Zurabishvili, 2005).

Data Analysis

Statistical analysis has been conducted on the data of the survey with students and parents/guardians. The study was explorative, and its main objective was to analyze respondents' opinions regarding DCE at schools only at an explorative level. Quantitative data were collected by means of Google Forms. The collected quantitative data was processed by using the SPSS

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25 program. Frequencies, percentages, and correlation of respondents' viewpoints about Digital Citizenship were counted. Qualitative data collected by focus-group interviews were analyzed by using transcript-based narrative analyses. After each focus group was completed, notes were taken, and the groups were carefully analyzed. Data was analyzed by the research team. The collected qualitative data was used only for the wording of the quantitative self-completion questionnaire. The objective of the research was not to present analyzed qualitative data in the research report and in the article.

Validity, Reliability, and Ethics

The focus-group interviews mentioned above were conducted with the purpose of elaborating questionnaires. Afterwards, the three questionnaires (intended for teachers, parents/guardians and students) were elaborated and adapted to the Georgian context, having in mind the information gathered and discussed with the National Centre for Teachers' Professional Development, a LEPL of the Ministry of Education and Sciences of Georgia. The questionnaire's draft version included a set of 44 questions, organized into three areas: personal data; ICT use and practices; digital citizenship perceptions. A pilot study was conducted and 30 respondents (10 teachers, 10 parents, 10 students) were interviewed to validate the questionnaires. In order to ensure the reliability of the questionnaire, the aim of the research team was to take into consideration that all the questions presented in the questionnaire were understood by the respondents in the same way. Afterwards, the final instruments were modified but the number of questions and sections remained the same. The content of the questionnaires was adjusted based on these pilot results. The improved instruments were sent to experts in the field to verify their validity and reliability. DCE experts from TPDC evaluated questionnaires and the research team developed the very final version of the instrument. The researcher obtained informed consent from the participants of the focus group and interview to be noted. Participants of the survey were also informed about their complete confidentiality, and they could withdraw from the research at any time if they wished.

Limitations

The main limitation of the study was the COVID-19 pandemic and the problems caused by it. Face-to-face interviews could not be conducted due to the pandemic situation. Every state and educational institution in Georgia was closed and worked online in 2020 when the study was conducted. The research team had to conduct the survey online by using Google Forms and to conduct focus-group interviews online by using ZOOM and TEAMS platforms. Conducting fieldwork online may have had a negative impact on respondents' honesty.

Research Results

As it was revealed from the questionnaire analysis, the respondents' schools and houses were well equipped with internet access and they possessed different kinds of digital devices such as computers and smartphones. However, less than half (49.3%) of the 205 surveyed teachers were aware of the concept of digital citizenship and the results did not differ among schools, since the correlation between the respondents' awareness and school location is not statistically significant (Table 4). The Pearson correlation coefficient is 0.047 which means that the awareness of the teachers about digital citizenship depends on the geographical location of the school only by 4.7%. This means that the geographical location of the school does not have an impact on teacher's awareness about digital citizenship.

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Table 4
Correlation Between Teachers' Awareness and School Location (N=205)

		Geographical location of the school	Teachers' awareness about digital citizenship
Geographical location of the school	Pearson Correlation	1	.047
	N	205	205
Teachers 'awareness about digital citizenship	Pearson Correlation	.047	1
	N	205	205

It is therefore understandable that only 71 respondents answered the question through which they were asked to choose one or more sentences to define digital citizenship. The most selected one was "A set of citizen's knowledge and skills to use digital technologies effectively" (29 answers), followed by "A person who uses technology by following the appropriate ethics" (22 answers). Other answers were "Knowledge about online safety and cyber security" (5), "Use of social networks" (3), "When you know which information is fake and which is reliable" (2), "When you find out which online game or social network is dangerous" (2), "Effective and targeted use of digital technologies" (1) and "Other" (7).

Even though about one-third of the teachers decided to select possible definitions, all of them felt they needed to develop competences in the area, namely having access to "more information on digital citizenship" (68%), "short videos from experts" (20%), "a webinar in which they can ask questions" (5%) "a web page for teachers" (3%), "training" (1%), "weekly news" (1%) and "other" (2%). This need is even greater among students and parents, since 84% and 80%, respectively, stated that they have not heard about digital citizenship.

Teachers, students and parents were also asked to select the definitions of Digital Citizen that they considered the most reliable among the four options. Teachers' answers show that they are more focused on privacy and security than on interculturality issues or the critical assessment of information available online (Table 5).

Table 5
Teacher definition of Digital Citizen (N=205)

Definitions	*N*	%
A person who protects personal information placed in a digital space	113	55.1
A person who cares for intellectual property and copyright	92	44.9
A person who is tolerant of intercultural diversities	56	27.3
A person who critically assesses digitally obtained information	42	20.5

Similar tendencies were found among students to whom a digital citizen is "a person who protects personal information placed in a digital space" (37%), "a person who cares for intellectual property and copyright" (29%), "who is tolerant of intercultural diversities" (18%) or "who critically assesses digitally obtained information" (16%). Among parents, 50% considered that a digital citizen is "a person who protects personal information placed in a

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digital space", while the other referred to "a person who cares for intellectual property and copyright" (22%), "who critically assesses digitally obtained information" (17%) or someone "who is tolerant of intercultural diversities" (11%).

After having analyzed the digital citizenship awareness of surveyed teachers, students and their parents/guardians, further results were organized according to the 8 areas defined after having crossed Ribble and Bailey's Model and on DCE Model of the Council of Europe.

Privacy and Security

Based on the information from the research it can be mentioned that in surveyed schools, communication among teachers, parents/guardians and students about privacy and security issues has not started yet. Teachers admitted that they did not have enough competence in this area and therefore, they could not manage to discuss these matters with their students. In addition, they admitted having a lack of digital competences in order to help their students: 96% of respondent teachers were willing to get further information and knowledge about privacy and security, in most cases (67,8%) for prevention, but also "when there is a specific case and I face the problem" (28,3%), while 3,9% of respondents considered they did not need this kind of information because "my students will take care of themselves". Among students, only 38% believed that they should protect their own as well as other people's personal information.

Apart from the competences, there is a communication issue, as 70% of the teachers say that they have too little information about online life and friends of their students, which opposes to parents and students: 71% of the parents stated that they knew almost everything about online life and friends of their children; 58% of the students stated they told everything to their parents about online life and friends, while only 27% of students gave a negative answer to that question. Nevertheless, 65% of the students surveyed stated that parents did not control their online activities.

Netiquette

Results showed that 58% of public-school teachers, 43% of students and 44% of parents surveyed do not possess information about netiquette but, according to their answers, most of the respondents said they behave according to the Digital Etiquette rules online, such as:

- 65% of the teachers surveyed stated that before posting online, they think carefully about whether their behavior will harm or hurt anyone.
- 82% of the teachers said that they should respect other people's rights when they express themselves online, however, free speech should not be restricted.
- 23% of the students stated that they should treat other people online in the same way as they want to be treated.
- 65% of students answered that before posting online, they think carefully about whether their behavior will harm or hurt anyone.

However, 5% of the teachers admitted that they often post photos and videos where other people are presented, without permission from those people, and another 5% admit that they post students' photos or school life details publicly on social networks.

Media Literacy Education

Media Literacy Education is a complex concept, and because most respondents are not aware of it, the presented research focused the analysis on the general question "What do you consider to be your level of understanding in information-communication technologies?", whose answers revealed that there is a lot of work to be done in Georgia:

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- 41% of the teachers surveyed answered that they understand information-communication technologies, 56% said that they understand "more or less", and only 3% stated that they understand little about information-communication technologies.
- 42% of the respondent students considered that they understand information-communication technologies, 52% said that they understand "more or less" and 6% admit that they understand little in information-communication technologies.
- 34% of the respondent parents/guardians considered that they understand information-communication technologies, 60% said that they understand "more or less" and 6% answered that they understand little in information-communication technologies.

Ethical participation

Facing the question "If you open the social network on a public computer and it turns out that the person who has used the computer has not logged out of their account, what would you do?", teachers gave the following answers:

Table 6
Ethical Participation of the Respondents (N=205)

Answer items	%
If I find a social network profile, I will log out of the profile and log into mine	70
If I find a social network profile, I will not do anything and use another computer	2
If I find a social network profile, I will post on the timeline of this social network in order that some of the friends of this person find out about the situation	3
If I find a social network profile, I will send them a personal message and give advice to be more careful next time	24

Similar answers were given by the students, as 61% will log out and log in to their own accounts, and 31% said that they will inform the user about the situation and offer advice to change password and protect online safety. Among parents, 66% will log out and only after that log in to their account, while 28% said that they will send a message to the user and suggest being more careful in the future.

Inclusive access

The questionnaire offered three possibilities to define inclusive access, being the first and more correct one ("equal access to any kind of online activity despite the obstacles") was chosen by 53% of teachers, while "access to the information on the internet any place any time" was selected by 40%, and "is a skill to upload information on the internet from any place and any time" was the option marked by 6% of teachers who responded to the questionnaire.
Internet access does not seem to be a general problem in Georgian schools, as 92% of teachers stated that their school has reliable Internet access and only 8% gave a negative answer. A similar situation occurs in Georgian households, where 96% of parents and 95% of students stated that they have internet access at home. In addition, 96% of students own a gadget (tablet, laptop, mobile phone/smartphone, personal computer) connected to the Internet and 92% own a smartphone.

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Consumer awareness

School communities that have been studied during the research did not offer information to the students about consumer awareness, and the discussion about the area has not yet started in the studied schools, as the respondents lack sufficient and correct information about the issue.

Health and Well-being

Most teachers (82%) admitted that their students own a smartphone and 52% have at least one social network account, even those under-13's, who have not reached the proper age yet. 96% of them were also aware of the existence of dangerous violent games and suicidal online challenges (e.g., "1", "Momo Challenge, "Blue Whale"). However, 46% of teachers pointed out that they do not pay attention to their students' activities on social networks, and they do not talk to the students about online games and possible risks.

Concerning the use of gadgets at school, the only limitation and guide for 55% of the teachers is linked to the time frame. Teachers mainly pay attention to time spent on the internet, but only 3% tell their students not to talk to strangers online, 2% tell their students to critically assess online information, 3% tell them to respect other people and their online life and only 4% of respondent teachers instruct their students that mobile phone numbers and other kinds of personal information should not be posted public on social network.

The study has shown that 73% of students in surveyed schools possess smartphones before they reach 7th-9th grade and 45% of students said that on average they spend more than four hours on the internet every day. Almost all students (97%) use social networks and 39% of them have a Facebook account before the age of 11. One third of the students who have social network accounts stated that parents do not pay attention to their children's activities on the social network. And when they do, students declared that parents only control time online and do not go any further, for instance, they do not control the online content. Nevertheless, 52% of students indicated that they talk with their parents about online activities only when a parent gets interested.

Students' perceptions are confirmed by their parents, according to whom (82%) their children use personal smartphones. Seven in ten parents stated that they have given these gadgets to their under-13 children and 84% said that their children use social networks, even the under-13 (37%). Three out of four parents said that their gadgets and their children's gadgets do not include filters such as search browsers, and utilities to block inappropriate websites for a certain age. And 6 in 10 parents have not developed a family agreement about internet use at home, while 40% of the surveyed parents do not control their children's online time at all.

Rights and Responsibilities

Most teachers surveyed have not participated yet in civic events or in petitions that concern their rights as a citizen and digital citizens. The percentages are even lower among parents (9%) and students (3%), which points to the urgent need to improve participation through media, aiming to improve the state of Digital Citizenship in general education schools. Characteristics of the society may have an effect in this case as well. In Georgian society, citizens rarely participate in civic activities that concern their rights and responsibilities.

Regarding the perceptions about the freedom of expression, there are differences among the surveyed groups, as 82% of teachers pointed out that it is crucial to protect human rights without restricting the right to express themselves, and only 7% refer that the freedom of expression will have no limits or having it depending on the social status (6%) on age (5%). Among parents, 58% stated that human rights are key and must protect freedom of expression

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while the others think that self-expression has no boundaries (14%). Most students (58%) indicated that freedom of expression is a right that can be fully exerted depending on the age of the individual, while 30% align with the view that both human rights and freedom of expression must be protected.

Discussion

Similar to the results of the presented study, current studies related to the issue confirm that in the contemporary world, it is true that schools are well equipped with digital technologies, and teachers, students and parents have access to the quality of technologies that they had never had before, but this does not guarantee that they are empowered digital citizens (Ribble, 2015).

It can be assumed that the quality of internet access did not have an effect on awareness about Digital Citizenship in the target schools. Digital Citizenship, as a new field, has not been implemented in the Georgian general education environment yet, despite the high level of access to the internet and technology for schools and students' households.

Studies confirm that even in advanced countries in the direction of digital citizenship education, there is low digital awareness in the school community, for example, a study conducted in the Philippines in 2019 confirms unfavorable results in this regard, among students, teachers, and school administration representatives (Suson, 2019).

The finding of the researchers at the University of North Carolina is of particular interest according to which educators rate students' digital skills as "not well" in most cases (Martin et al, 2019). Ribble (2015) suggests that schools globally acquire technologies but only a small number of students are taught to use these technologies in a way that can be useful for them, as digital citizens in the future.

Based on the obtained data and the results of the research studies conducted outside Georgia, it can be concluded that students in Georgia and from all over the world share sensitive and personal information only on web-sites with clearly defined digital safety rules (Ribble, 2015) when teachers and educators have specialized knowledge in computer security in order to deliver teaching focused on digital security (Skutil, 2014). Therefore, teachers and school administration should be trained in a way to realize the importance of awareness of Digital Citizenship and the competencies of a Digital Citizen not only for certain people but for every student and every family (Ribble, 2015).

It is true that the presented study revealed the low competence of digital citizenship of teachers and parents, but parents, unlike teachers, were interested in their children's online life. The indifferent attitude of teachers towards students' online life can be explained by the fact that teachers do not consider their responsibility and duty to take care of students' digital well-being. A number of current studies emphasize the importance of not only having digital competences for the 21st-century teacher but also their role in properly managing the digital life of students (Falloon, 2020).

According to the research results, there was a gap between the responses of students and their parents when the issue was connected with having information about their children's online life and controlling their online activities.

On the one hand, the majority of interviewed parents said that they knew their children's online life, on the other hand, according to the majority of interviewed students, parents were less interested in their online life.

Presumably, this can be explained by the situation, that parents became more aware of online dangers and saw their children's reverse reaction to prohibitions and directive attitudes in general, especially during the COVID pandemic.

Thus, their behavior and parenting style became more democratic, based on collaboration and commitment. Whereas, children, taking into account their previous experience, equate

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parental interest only with directive control. Whereas children, taking into consideration previous experience, only direct control is considered as parents' interest.

A number of studies confirm the effectiveness of a supportive parental approach to preventing or dealing with online risks, as opposed to control or prohibition (Schiffrin et al., 2014; Karabanov et al., 2021). The presented study also showed that most of the respondents did not understand the meanings of the terms at the level of the names, but their online behavior was mostly acceptable, which is probably similar to their behavior in real society.

This opinion is shared by Ribble (2015) who suggests that people are members of a particular society where they live and if this society has certain features, for example, if breaking a specific rule is allowed or restricted, the members of the society behave the same way in digital space. The respondents probably do not have information about netiquette, but in the society where they live people care for other people's rights. Respectively, they behave the same way in the digital environment - they follow the rules of the digital world, and they adhere to the conventions, and expectations, the majority of which are unwritten (Hollandsworth et al., 2011; Suson et al., 2020).

It is significant that the answers given by the students were similar to the answers given by the teachers and parents. It confirms once again that the influence of teachers and parents on student values and behavior is rather high.

By categorizing James's ethical understanding, it can be discussed the moral behavior of the respondents. James categorizes ethical understanding into three types: (i) A self-focused implies focusing on one's self of a particular action. It is consequence-based thinking, (ii) Thinking about others (friends, family, classmates, etc.) is considered to be moral thinking. (iii) The final type of thinking is ethical, which involves thinking about unknown others. It is macro morality and refers to ethical thinking on the effects of what one's actions have on the larger community. This type of thinking involves complex perspective taking and understanding of roles and responsibilities in online interactions (James, 2014). If we rely on this categorization, a high share of the respondents (on average 72%) had *Self-Focused Understanding* values. While only 28% of the respondents focused on narrow and wide circles of *Moral* and *Ethical Thinking*. The result leads us to the conclusion that the general education system should care about the development of Digital Etiquette as a value in a school community.

Despite the fact that in the direction of digital citizenship development in Georgia, most of the emphasis is on the development of media literacy which is revealed by introducing media literacy as a cross-curricular competence into the national curriculum, preparing a number of methodical literature and practical guides, offering trainings and other professional development activities for the employed in the field of education, there is still lack of this competence. The respondents emphasized this issue in their self-assessment. This problem is confirmed by other studies conducted in Georgia recently (Levitskaya, Seliverstova, 2020; Osepashvili, 2023).

Therefore, first of all, the education system of Georgia should take care of the development of media literacy competences among teachers because competent teachers will help students to develop high-standard online literacy skills and understanding the fundamentals of computer and gadgets use such as email, search engines and producing students prepared to be more effective contemporary workers (Curran & Ribble, 2017).

Having the competence of media literacy is especially important in reality when young people spend a lot of time online and have to deal with a large amount of unfiltered information. The current study has revealed that adolescents spend much time on the internet, with the absence of control of time spent on the internet and, what is more important, the absence of content control by parents and teachers. A number of studies confirm that "Adults are an extremely vulnerable social group" (Miller & Prinstein, 2019, p. 425). High levels of stress during adolescence are less properly processed, often causing emotional overreactions. This makes adolescents very sensitive to harmful media depictions in a digital world: "Because

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of their limited capacity for self-regulation and susceptibility to peer pressure, children and adolescents are at some risk as they navigate and experiment with social media" (O'Keeffe & Clarke-Pearson, 2011, p. 800). Also, studies confirm a rather high level of unfavorable influence of social media (Youtube, Tiktok, etc.) on adolescents. The rate of sharing and viewing of the Momo Challenge on Youtube can be stated as an example. The most watched video attracts more than 11 million adults. Even for YouTube standards, these are very high engagement rates" (Kobilke & Markiewitz, 2021). For this reason, the role of school and family is crucial in protecting the new generation from temptation. This can be achieved on the one hand, by setting a relevant filter on the gadgets and on the other hand, through open communication about using social media and navigating properly. All this would be significant for preventing the threats mentioned above (Kobilke & Markiewitz, 2021).

According to the study of Freedom House (2022), while online rights are nominally protected in the constitution and legal framework, in general, Georgian digital citizens are less likely to participate in social and civic activities online, though the right to access information and freedom of expression are also guaranteed by the constitution and are usually respected in practice. Although the Georgian online audience has grown significantly from 2010 to 2020, there are few bloggers and influencers who create content that influences the political or social debate or sparks widespread discussion online. In general, most of the debates and discussions on digital rights and responsibilities are held on social media through public and private groups.

As Digital Citizenship Education is a relatively new field in the Georgian context, the discussion about some areas, such as consumer awareness has not yet started in the studied schools. However, if teachers want to empower their students as digital citizens, this is one of the most important issues (Suson, 2019). Anyone who works, plays, or buys objects online is not only a member of digital society, but also an economically active person. Apart from that, students should acknowledge that their online activities may have an effect on their lives (for example, their account may be blocked because of credit card debt etc.). If teachers want to help their students become fine citizens, they need to equip them with knowledge and information about Digital Economics and Commerce (Ribble, 2015). Therefore, knowledge about digital commerce should be introduced into schools and should be adapted to students, in order that they become responsible digital citizens.

2021-2024 Georgian National Strategy of Cybersecurity as well as an action plan of the strategy was elaborated. One of the main objectives of the action plan is to enhance the skills needed for operating safely and securely in cyberspace and raising the level of education for students and schoolchildren. To meet the objective mentioned above, the following function was determined for the Ministry of Education and Science: introducing digital citizenship at all three levels of general education (primary, basic, and secondary). Amendments were made in the third edition of the National Curriculum of General Education (2018-2024) where the Cybersecurity Strategy and the requirements of the strategy were depicted. The respondents interviewed did not have information about the amendments as long as the field work was conducted in 2020. If the amendments to the National Curriculum had been made in 2020, interviewed teachers should have been more informed about the issue. According to Ribble, it is crucial that a country has cyber legislation, and it is also important that teachers, students and parents/guardians get acquainted and become aware of the legislation (Ribble, 2015) to be safer in online life and, at the same time, to become responsible digital citizens.

Conclusions and Implications

Since digital citizenship is a novelty in the Georgian context, the legal base is scarce in this direction. Concerning cyber security strategy and action plan that covers the years 2021-2024, the research respondents would not be able to have information about it, as the field work

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of the research was conducted in 2020. Consequently, the quantitative study did not reveal the awareness of teachers, students, and parents in terms of digital legislation.

Concerning digital security, even though the majority of the interviewed teachers have heard about the dangerous violent games/suicidal online challenges (e.g., "1", "Momo Challenge, "Blue Whale"), the teachers did not pay attention to students' activities in social media. The above-mentioned fact may reflect their level of digital citizenship and lack of information. Additionally, parents were not able to set family agreements about the safe use of the Internet. Therefore, the study has shown that school teachers and parents were in need of instruction and raising awareness in terms of digital security.

According to the research data, it can be concluded that conversation and communication between school teachers, students and parents about the issues of digital security has not started yet. The survey has revealed that the school teachers have a lack of awareness of digital security issues and hence they cannot manage to have conversations with students about that matter. A complete majority of the surveyed teachers asked for additional instruction in terms of digital security. Therefore, it was not unexpected that surveyed school teachers lacked information about digital Etiquette.

Half of the surveyed teachers lack awareness of information-communication technologies, but this fact is not correlated to the geographic location of a school. Also, it was revealed that half of the teachers had not heard about digital citizenship and this fact was not correlated to geographic location as well.

Teachers in Georgian public schools have a lack of awareness about Digital Citizenship and Digital Etiquette and their awareness is not correlated with the location of public schools. The results also showed that teachers, students and parents surveyed have Internet access and that there are digital devices available in schools and households, pointing out that the lack of DCE awareness is not related to the low access. It is important to mention that the Georgian Ministry of Education and Science has supplied school students with personal netbooks since 2011. As it turns out, the access to technologies does not directly relate to the development of the DCE competences in the Georgian context.

The study has shown that the issues of Digital Commerce, Digital Health and Wellness were unfamiliar to the surveyed respondents. In the end, the study has revealed that at this stage, the teachers, students and parents did not participate in civic activities that will enhance digital citizenship in general education institutions.

As Digital Citizenship is a new field in the Georgian context, data collected through this study in 2020 showed that the country needs to review its legislation, policies and practices and learning frameworks, aligning them with the Recommendation on Digital Citizenship Education signed by all the member-states in 2019. It is, however, important to point out that the strategy and action plan of cyber security, two documents elaborated by the Georgian government and under application between 2021 and 2024 could be understood as a way forward and its implementation shall be monitored regularly, as the Council of Europe's recommendation proposes.

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Declaration of Interest

The authors declare no competing interest.

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