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Executing the National Curriculum of Digital Citizenship Education in the Country of Georgia

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Abstract- The international events of recent years have provided us with a new perspective on citizenship in the modern world, where the borderlines between online and real life are erased and blurred. To navigate safely and ethically in the online space, it is essential to integrate digital citizenship education into curricula not only at the national level but also at the level. The present study aims to collect the subjective evaluations and positions of the school community regarding the implementation of educational innovation in general education, in particular, the digital citizenship curriculum. Critical and curriculum research approaches were used within the research. An in-depth interview and focus group are used as a research method. Five school principals and fifty-five teachers participated in the research. Based on the study results, the following conclusions are drawn: Georgia's general education system should create conditions for schools to select the programmed one, the adaptive-evolutionary one, or the hybrid one - which would be more effective at a specific school and which approach would facilitate achieving the best results.

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Executing the National Curriculum of Digital Citizenship Education in the Country of Georgia

Marika Sikharulidze ^α, Sofiko Lobzhanidze ^σ & Giorgi Urchukhishvili ^ρ

Abstract- The international events of recent years have provided us with a new perspective on citizenship in the modern world, where the borderlines between online and real life are erased and blurred. To navigate safely and ethically in the online space, it is essential to integrate digital citizenship education into curricula not only at the national level but also at the level. The present study aims to collect the subjective evaluations and positions of the school community regarding the implementation of educational innovation in general education, in particular, the digital citizenship curriculum. Critical and curriculum research approaches were used within the research. An in-depth interview and focus group are used as a research method. Five school principals and fifty-five teachers participated in the research. Based on the study results, the following conclusions are drawn: Georgia's general education system should create conditions for schools to select the programmed one, the adaptive-evolutionary one, or the hybrid one - which would be more effective at a specific school and which approach would facilitate achieving the best results. Each school should be given freedom in the implementation process and supported with recommended methodological guidelines and guides for the successful implementation of the curriculum. The school principal should understand their responsibility for implementing innovations, support teachers to the maximum extent, and care not only about individual teachers but also about systemic and strategic change to achieve sustainable and long-term educational transformation. Recent international events have underscored the critical importance of digital citizenship education in navigating the increasingly interconnected world where online and offline boundaries are blurred. Integrating digital citizenship education into school curricula at both national and organizational levels has become imperative. This study aims to explore subjective evaluations and positions within the school community regarding the implementation of educational innovation, specifically focusing on the digital citizenship curriculum. The objectives of this study include identifying preferred curriculum implementation models and exploring factors influencing implementation to provide insights into effective strategies for integrating digital citizenship education. Methodologically, the study employs critical and curriculum research approaches, utilizing in-depth

interviews and focus groups for data collection. A total of five school principals and fifty-five teachers participated in the study. The findings highlight the need for Georgia's general education system to provide schools with the autonomy to select and implement curriculum approaches that best suit their needs. This includes options such as the programmed, adaptive-evolutionary, or hybrid models. Recommendations emphasize the importance of developing curriculum frameworks and methodological guidelines while granting schools the freedom to implement them. Furthermore, school principals are urged to embrace their role in implementing educational innovations, supporting teachers, and driving systemic change to achieve sustainable educational transformation. The study's findings have broader implications for educational policy and practice in Georgia and beyond, emphasizing the importance of flexibility, collaboration, and strategic decision-making in curriculum development and implementation. In conclusion, this study offers valuable insights into the dynamics of digital citizenship education implementation and underscores the need for a flexible and collaborative approach to curriculum development in the context of modern education.

Keywords: educational changes, digital citizenship education, curriculum implementation, critical theory, curriculum studies.

I. INTRODUCTION

a) Significance and Theoretical Foundations of the Research

In the 21st century, a lot of technological innovations are entering our everyday lives at lightning speed, the virtual world is replacing the real one, and humanity, and especially teenagers, is becoming more and more dependent on technology. The field of education and, in particular, the general education system must directly respond to the order of time and generations, the challenges and achievements of the era, and introduce relevant changes to the educational curricula. Implementation of state-initiated innovations at the organizational level is often accompanied by difficulties, as established systems often find it challenging to adopt innovations and, therefore, oppose the new practice.

Michael Fullan's theory of educational change (Fullan, 2015) highlights the complex nature of educational change and the importance of different components in successfully implementing change. According to Michael Fullan, the following components are essential for making significant and lasting changes in educational organizations: understanding the context, Joint decision-making, formation and development of a common vision, inclusive leadership and professional

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learning communities, data- and evidence-based decision-making, continuous improvement cycle, capacity building and support.

By integrating these components, Fullan developed an "Integrated Educational Change Framework" (Fullan, 2015) to provide a comprehensive and practical approach to implementing successful and sustainable educational change. He recognizes the complexities of the change process and the significance of collaborative efforts, inclusive leadership, and continuous improvement to achieve sustainable and long-term educational transformation.

Curriculum researchers emphasize two approaches to curriculum implementation: a programmed approach, according to which the formation of innovation and development of a curriculum design takes place before its implementation, and it is implemented following predetermined models. Therefore, in a programmed approach, implementation is evaluated by determining the correlation between the actual use of the innovation and the intended ideas of the curriculum developers (Leithwood & Montgomery, 1980). The adaptive-evolutionary approach favors the opposite concept of implementing changes, which accepts the idea that the innovation should not be accepted unconditionally by practitioners and they can, according to the context, adjust it during the implementation process, because it is them who are responsible for the educational process. They cannot transfer this responsibility to external actors. Therefore, according to the adaptive-evolutionary approach, the curriculum is created during the implementation process. (OpenLibrary.org, 1985b) This approach to curriculum implementation cannot simply test the effect of an innovation against predetermined goals, as accountability for practice requires assessing the impact of the entire process, including side effects (Schön, 2017).

b) *Current Situation and Challenges in Georgia*

The international events of recent years have provided us with a new perspective on citizenship in the modern world, where the borderlines between online and real life are either erased or blurred, where news can be learned from social networks or other unreliable sources rather than from the mainstream media.

Digital citizenship, as a new field of education, has been actively introduced in the United States of America for the last two decades (James et al., 2019). Since the Department of Education Policy of the Council of Europe initiated a program called Teaching Digital Citizenship, the countries within the Council of Europe (27 out of 46 states) started implementing the program and actively promoting it. State education authorities have included digital citizenship in state curricula and educational standards; implementation strategies were developed; guides for teachers were written; specialized

manuals were developed. Teaching digital citizenship is interdisciplinary. It covers all four competencies of the Council of Europe's democratic competence framework (skills, attitudes, knowledge, and critical thinking), and democratic culture competencies are recognized as an interdisciplinary framework for any school context (Digital Citizenship Education Handbook, n.d.-b) Digital citizenship is pervasive and applies immediately to all subjects and disciplines. Moreover, considering that teaching through technology is an integral reality in the modern civilized world, the development of digital citizenship competence constitutes the cornerstone of teaching through technologies (Digital Citizenship Education, n.d).

Changes were introduced to the educational space of Georgia, as a member country of the Council of Europe. A note regarding digital citizenship appeared for the first time in the education policy documents of Georgia, namely, the updated versions of the National Curriculum 2020 and Teacher's Professional Standard. The significance of digital literacy and media literacy as the components of general literacy in the age of communications and digital technologies is mentioned in the 2020 edition of the third generation (2018-2024) National Curriculum, Chapter 2, Section 1 - "Learning and Teaching Goals and Educational Principles". The development of digital literacy competence in students is defined not only by the computer technology subject standard, it is also by one of the core competencies for all subjects. (National Curriculum, 2018-2024).

In addition, significant changes were introduced in the Teacher's Professional Standard in 2020 which made competencies such as media literacy, information, and digital literacy compulsory for teachers (Teacher's Professional Standard, 2020).

Thus, the essential components of digital citizenship are provided in both fundamental documents of general education policy - both in the National Curriculum and the Teacher's Professional Standard. However, the question is, to what extent are schools ready to implement educational changes in this direction?

c) *Research Aim and Research Questions*

The present study aims to collect the subjective evaluations and positions of the school community (director, teachers) regarding the implementation of educational innovation in general education, in particular, the digital citizenship curriculum.

The following research objectives were formulated:

- Determining the compliance of programmed and adaptive-evolutionary models of curriculum implementation with the Georgian reality in the context of implementing the digital citizenship curriculum at schools;
- Studying the subjective opinions of the respondents regarding the factors affecting the implementation of

the curriculum, the innovation itself, and local and organizational characteristics.

- Studying the implementation of the digital citizenship curriculum at schools as the transformation of pre-existing teaching and learning practices, beliefs, and values.

The following research questions were formulated following the purpose and objectives of the quantitative research:

- Which model of curriculum implementation is more acceptable, the programmed one or the adaptive-evolutionary one, when it comes to implementing digital citizenship at Georgian schools?
- Which factors (the nature of the innovation itself, local and organizational characteristics) may determine/influence the implementation of the digital citizenship curriculum at Georgian schools?
- Which values help teachers to implement the digital citizenship curriculum at schools successfully?

II. RESEARCH METHODOLOGY

a) *General Background*

Critical and curriculum research approaches were used within the framework of the research, according to which the curriculum should change the educational environment from authoritarianism and elitism to social democracy, and its influence should emancipate teachers and students. This approach echoes the objectives of digital citizenship, according to which general education should be a space where the implementation of digital citizenship principles will lead to the emancipation of the school community and their change for the better as members of the democratic society. An in-depth interview is used as the primary research method, and a focus group method is used as an auxiliary one. During the research, school principals, administration representatives, and teachers were interviewed. Since the main focus of the study was a critical evaluation of the implementation of digital citizenship at school, a qualitative methodology was selected, namely, a critical research approach (Cohen et al., 2017b). The study team's overarching objectives were to advocate for the research findings to decision-makers in the education sector and to gather qualitative, subjective data from research participants. For this reason, the study team decided to use focus groups, in-depth interviews, and curriculum and critical research approaches. The research was conducted in September and October 2023. The research team developed the research instruments through two focus groups with teachers and school administrators at the start of October. Following that, the team conducted sixty in-depth interviews from 10 to 30 October 2023. Below is a comprehensive explanation of the data collection process.

b) *Sample Selection*

To fulfill the purpose of the research and answer the research questions, the following target groups were selected:

- (i) General education school leaders (school principals/deputy principals);
- (ii) General education school teachers.

Organizational non-probability sampling was used within the research to select the respondents. Since the mentioned qualitative research is a continuation of the quantitative research conducted by the scientific group in 2020¹, only those five schools and, accordingly, the principals/deputies and teachers at these schools, who were already interviewed by the said scientific group in 2020, were selected as the object of this research. The research team employed the above-mentioned sample approach. It was simple to recruit respondents for the study because it had already done multiple trainings on digital citizenship in general education at the aforementioned schools before the qualitative research. sixty respondents participated in the study: 5 school principals/deputy principals and forty-five Teachers. The respondents ranged in age from twenty-five to sixty-five years, with one male and fifty-nine female respondents overall. For Georgian general schools, this gender distribution of administrators and teachers is highly typical. Organizational non-probability sampling was used to select the respondents within the research. Schools that participated in the first quantitative research were chosen as the selection criterion. Accordingly, the following schools were selected:

- Two schools in Tbilisi;
- A school in Western Georgia;
- A school in Eastern Georgia;
- A school constituted by ethnic minorities.

¹ See the research at the following link: https://www.scientiasocialis.it/pec/node/1683?fbclid=IwAR3AYqfYoZHRoxB7h7WxuKWORTHIVG5Dt_JG6jVD_HXXyxDzHqIQRqlqxA

Table 1: The main characteristics of the participants

Characteristics	Participants	
	General education school teachers	Leaders (school principals/deputy principals)
Age	From 25 to 65 years	From 31 to 65 years
Gender	The majority were female	The majority were female, only 1 was a male.
Level of Education	Bachelor's degree, Master's degree	Bachelor's degree, Master's degree
Residence	A local resident of the same town/village where the school is located	A local resident of the same town/village where the school is located

c) *Instrument and Procedures*

For data collection, the following methods were used: an in-depth semi-structured interview, using which opinions of leaders, school community members, and teachers (who were involved in the process of developing and implementing digital citizenship curricula at the school level) were studied, and the focus group method, using which the contents of the semi-structured questionnaire of in-depth interviews were developed.

Using the in-depth interview, the research team established the following:

- While implementing digital citizenship at Georgian schools, which model of curriculum implementation- the programmed or adaptive-evolutionary is preferable?
- Which factors (the nature of the innovation, local and organizational characteristics) determine/ influence the implementation of the digital citizenship curriculum at the selected schools?

- What values are necessary to implement the digital citizenship curriculum at schools successfully?
- The interviews were conducted face-to-face. Each interview lasted between 45 and 60 minutes.

d) *Data Analysis*

After the completion of each interview, notes were taken, and the interviews were carefully transcribed and analyzed by three researchers.

The analysis of the in-depth interview and the focus group data was carried out in four stages. The research team performed the data coding, then - the data categorization, local integration, and, finally, inclusive integration. At the initial stage of the analysis, the research team decoded the audio recordings of the interview, prepared the transcripts, and coded them following the research objectives. Data coding was applied to extract key concepts and ideas from the interview material and summarize them.

Table 2: Coding

1. Personal profile 1.1 Gender 1.2 Age 1.3 Education 1.4 School
2. The curriculum implementation model; 2.1 Systemic changes; 2.2 Awareness of the school community; 2.3 The programmed or adaptive model?; 2.4 The proposal of the respondents
3. Factors 3.1 Nature of innovation; 3.2 The perception and feeling of innovation; 3.3 The role of the principal 4.4 Resource centers and municipality
4. Values 4.1 Principals and teachers; 4.2 Citizenship in the Georgian community; 4.3 Teachers' professional development 4.4 Parents and students

After coding, the data were categorized to collect the information gained from the respondents, regarding the concepts and issues revealed during the coding. The next stage of the analysis was more in-depth. Initially, local integration of the data was carried out, i.e., the researchers analyzed and interpreted the information gathered under each code. Finally, the research team carried out an inclusive integration of the data, analyzing, interpreting, and combining individual excerpts of information into one logical narrative. The researchers found common and divergent narrative lines in the interviews with the respondents. The article presents the results obtained as a result of inclusive integration.

e) *Validity, Reliability, and Ethics*

To ensure the integrity of the respondents' responses, both in-depth interviews and focus groups with respondents were documented through audio recordings. Prior to the commencement of these interviews and focus groups, respondents provided informed consent to participate in the interviews which would be recorded. Participants were assured of their unrestricted right to withdraw from the study at any stage, and the confidentiality of their identities was rigorously safeguarded.

The study participants were given explicit assurances regarding their unlimited right to withdraw at any point, and their identities were kept confidential with extreme care. The researchers carefully developed the procedures that controlled the conduct of focus groups and interviews. These procedures included a list of topics to be covered in detail and a series of open-ended inquiries. These questions were developed after a comprehensive analysis of relevant literature. The authors and educators who actively participated in the focus groups worked together to design the framework, questions, and overall research objectives. Teachers' insightful feedback was also incorporated into the iterative process to shape the study instruments.

The pilot testing of the instruments was conducted in educational settings mirroring the demographic characteristics of the study population, involving engagement with teachers and school

administrators. After this pilot phase, the necessary modifications and adjustments to the questions were made based on empirical findings. The refined instruments underwent scrutiny by subject matter experts to ascertain their validity. Notably, the project team maintained a close collaborative relationship with Vitor Tome, an esteemed expert and research consultant, who provided invaluable guidance during the genesis of the research instruments and throughout the fieldwork.

f) *Limitations*

The main limitation of the study was the fact that the study results were based only on the subjective opinions and experiences of the respondents who were responsible for implementing the curriculum. They were and are responsible for introducing innovation at school. It would be good to conduct a micro-ethnography to observe the processes on-site or to study the opinions of other members of the school community such as parents and students. However, due to the lack of time resources, this could not be applied. Consequently, the insincerity of the respondents can be considered as one of the limitations of the research. However, this problem was minimized by using facilitation techniques between the interviewer and the respondent, including asking verifying and third-person questions in the course of the focus groups and in-depth interviews.

III. RESEARCH RESULTS

In the article, the study results are presented in accordance with the order of the objectives. First the curriculum implementation models, then the factors impacting the choice of the model, and, finally, the values influencing the implementation of the digital citizenship curriculum. are discussed.

The study attempted to determine which approach to implementing the digital citizenship curriculum, the programmed one or the adaptive-evolutionary one, is more appealing to the school community. To this end, the research team explained to them the main features of both approaches and, for illustration purposes, demonstrated a table showing the differences between these two models.

Table 3: Curriculum development models²

Number of changes	Programmed approach	Adaptive-evolutionary approach
	Small, step-by-step	Large
Curriculum technology	Fixed, approved and renowned methods	Adaptive, open methods
Attitude of the participants	Agreement	Conflict
Integration/Organization	High degree of integration	Diversity
Stability of the environment	Unstable	Stable

² The table used the following resource: Policy Regime Perspectives: Policies, Politics, and Governing, May, P. J., & Jochim, A. E. (2013, August). *Policy Studies Journal*, 41(3), 426–452

Several lines of the respondents' narratives were outlined regarding the digital citizenship curriculum implementation models at schools. The study revealed differences and similarities between principals' and teachers' narratives.

The principals believe that if digital citizenship is implemented at Georgian schools, an adaptive-evolutionary approach will be more beneficial. They think that a pre-scheduled plan will not be helpful and effective and will result in additional mental problems because so many things are already pre-scheduled and planned for Georgian schools that the teacher has very little leeway to implement these plans. "We experienced a lot of rapid changes since 2003, so we principals prefer changes in general education that have more flexibility and are long-term," one respondent stated. Although the principals say that the adaptive-evolutionary approach is more spontaneous and you have to do things and make changes gradually, in their opinion, it is more realistic and effective, and practical because it focuses on the interests and needs of each school, class, and student, at the same time making the teacher an innovator, getting used to dealing with challenges, their work becoming more exciting and creative. One of the principals said during the conversation: "The teacher knows better what to do in a particular class than someone who has written the curriculum and never worked at a school". Furthermore, the principals say that a specific framework of the curriculum plan and activities may be scheduled in advance, but the teacher must be free to introduce changes. The principals do not unanimously support the program model. One of the principals cites their experience to support this opinion. They say that when teachers started to prepare the school curriculum based on the national curriculum, they scheduled only small plans in advance, and the mentioned curricula were filled and diversified during the implementation process. For example, they said they had only an idea regarding complex tasks, but the activities were thought up and refined during the implementation process. According to the principal, this was more effective than working with a pre-planned curriculum. Principals agree that it is very challenging to strictly implement a pre-planned curriculum because it does not consider the needs and interests of specific classes and students. The curriculum should always be adapted to the local context. However, most respondents also argue that it will be difficult for teachers to realize this without external support. According to the principals' narrative, digital citizenship is a most recent novelty in the Georgian educational space, therefore, the adaptive-evolutionary model will be more effective at Georgian schools. However, they also discuss Georgian teachers' mentality expressed in the opinion that at least a specific part thereof must be pre-scheduled, because teachers,

and especially the older generation, are afraid of innovation and, therefore, they propose a hybrid model.

Although the principals lean towards the adaptive-evolutionary model of innovative curriculum implementation, some of them analyze their role as educational leaders to a lesser extent within this process. When asked how they see the role of the principal, one of the principals answered: "My contribution will be expressed in the fact that I will not interfere with the teachers".

Most teachers prefer the programmed model. The study reveals differences between teachers' and principals' attitudes. Teachers prefer a programmed approach, because as one teacher stated: "Georgian teachers usually are governed from the top bottom approach, so, I think that programmed approach would be more convenient for us". Those who do not understand the concepts of digital citizenship and are new to this phenomenon unequivocally support the pre-scheduled, programmed model. Even teachers of information technologies, who, considering the specificity of their subject, have more exposure and expertise in the field of digital citizenship, show caution and prefer to work with a strictly scheduled plan at the initial stage of curriculum implementation and only later start to introduce changes to the curriculum and carefully, step by step embrace the adaptive-evolutionary model. As one teacher says: "After a year, I would see what I liked and what I did not, and then I would draw conclusions".

The study also attempted to find out which factors (the nature of the innovation, and local and organizational characteristics) determine or influence the implementation of the digital citizenship curriculum at schools. While some of the principals did not clearly and correctly see their role in the implementation of innovation, in particular, the digital citizenship curriculum, the teachers assigned a crucial role to the support of school administration in the change of the existing practice.

One of the civil education teachers told us: "For me not to be afraid to introduce innovation in my practice, first of all, I need to feel the support of my department head and the head of the school, they need to show me that they stand by me. Especially when I face a difficulty, they should show me how to solve it".

Principals and teachers said that the entries in the subject standards of teachers' professional skills, public science, and information and communication technologies regarding digital citizenship, or the change introduced in the cyber security strategy, within the framework of which, to discover young talents, it is envisaged to conduct cyber training and other activities for schoolchildren and students (e.g.; Cyberclass), as well as one-time and short-term retraining of teachers and coaches in this field do not have a significant

impact on the implementation of digital citizenship curriculum at school. The introduction of this issue as a novelty to schools is carried out more through various externally proposed local or international projects. If the responses of a principal, teachers of information and communication technologies, and other subjects are compared with each other, it will be found that ICT teachers are informed about digital citizenship to a greater extent. They teach digital citizenship to the second through sixth grade due to the changes in subject standards, and while they say this is still the beginning and something novel, within the framework of which they discuss the basics of cyberbullying, digital safety, copyright, passwords, observing the balance between virtual and real life, phishing, computer viruses and responsible digital citizenship, the experience gained from the projects encouraged them to gather more information, knowledge, and expertise on these issues and, in general, start a discussion on these topics. One of the teachers in the focus group says: "When the digital citizenship issues were included in the ICT subject standard, I started thinking about how to integrate it into the school curriculum, but it was hard for me to do it with empty hands. However, being involved in participation projects organized by several organizations helped me a lot to overcome this challenge".

Although a school size did not constitute a criterion for selecting target schools in the present study, the study found that the implementation of a digital citizenship curriculum is influenced by the location and size of a school. For example, more attention is paid to the issues of digital citizenship at schools with a large contingent in Tbilisi than at schools with a small contingent in Tbilisi or schools outside of Tbilisi.

According to the principals, if there is any requirement for teachers from beyond the school in the field of digital citizenship, for example, a change in the standard, a mandatory retraining course, a scheme, credits, or a competition held by an organization, they become more interested in digital citizenship issues. One of the principals says that the Communications Commission has a competition named "Real or Fake", aimed at identifying fake information, and their school took part in this project, after which the teachers of ICT became more interested in digital citizenship issues.

The next factor affecting the implementation of the digital citizenship curriculum at schools is teachers' willingness. From the interviews conducted with the principals, it was revealed that digital citizenship competence is low in most of the teachers. One of the respondents told us in the interview - "Teachers are confused and do not know exactly what to do when it comes to teaching digital citizenship. Teachers themselves do not understand the significance of digital citizenship; they cannot even protect their data. For

example, one teacher failed to maintain their confidentiality, resulting in money being deducted from their card".

Respondents agree that the necessity of implementing digital citizenship is not perceived and understood by the school community seriously. From school principals to parents, people have a superficial attitude towards digital citizenship. Therefore, they believe that no changes will be implemented until the problem is understood.

Respondents say that just like regarding many other issues such as gender equality, and sexual harassment, when people did not feel threatened because they were not aware of these problems, the same applies to digital citizenship. According to one of the principals, although students are facing various threats online, they have had problems having their money deducted, they have also experienced cyberbullying, etc., but since neither teachers nor parents know what to do in such situations, the only thing they ask for is prohibitions: "Ban the phone, ban Facebook". They do not know how to turn on parental controls in gadgets, or how to use two-step protection for apps and credit cards. The study revealed, that ultimately, the lack of serious attitude on the part of the school community affects the implementation of the digital citizenship curriculum.

The study also revealed that although students know how to use gadgets, they do not know the principles of digital citizenship - how to deal with plagiarism, online bullying, how to maintain digital security, etc. The respondents said that Georgian youth are more likely to use pirated games, music, and movies rather than to purchase them and protect their copyright because such conduct usually is not rejected and condemned by society. The respondent principals say that just as there is a difference between the ability to read in Georgian and being educated, there is also a difference between digital citizenship and the ability to use gadgets. However, they are thought to be the same at Georgian schools. A child may be able to read in Georgian, but s/he may not understand the content of the story. The same happens in this situation.

One of the principals says that when they conducted a small survey with students regarding digital citizenship, they could not answer what digital citizen etiquette, digital rights, security, etc. mean. According to the principals, there is a stereotype that the new generation knows digital citizenship issues better than the older generation, which is not entirely consistent with reality. Young people know how to use gadgets. However, they frequently do not understand the issues of digital citizenship. According to the principals, the same applies to parents. Even though Parents know how to use gadgets, digital literacy, and digital citizenship are still unfamiliar issues to them, and they

do not know how to interact with their children when it comes to raising a responsible digital citizen.

The respondents discussed online plagiarism, which they see as a problem not only among students but also among teachers.

As the respondents' narrative reveals, when teachers ask students to search for certain information online, they do not know what to advise them regarding security or protecting other people's intellectual property.

The next issue that the study explored is the values that influence the implementation of the digital citizenship curriculum.

The narratives of principals and teachers revealed a common line the Georgian citizenship culture reflects digital citizenship at schools. If there is a problem with citizenship in the ordinary, non-digital world, we face problems in the digital world as well. One of the principals recalled that within the framework of the e-Twinning project, their school implemented a joint project with one of the French schools. When children's participation was required, there were many objections from French parents to the organizers of the event. They were actively protesting against the dissemination of information about their children. They were interested in where the videos recorded within the project were sent, why these materials were sent elsewhere, and what purpose such conduct served. As the respondent says, since the French generally have a high degree of citizenship culture, they repeat the same in the digital world as well. Since the citizenship values in Georgia are not solid and transparent yet, there is an undesirable situation in the fields of digital citizenship and the protection of human rights in the digital world.

The study respondents agree that a digital citizenship curriculum should begin with information about citizenship in general. First, teachers, students, and parents at Georgian schools must understand what a good citizen in the non-digital world is like, and then it will be easier to perceive a good digital citizen. To sum up, the low degree of citizenship culture in a country is directly proportional to the low level of digital citizenship awareness. Teachers also agree with the opinion that citizenship responsibilities are related to the state of digital citizenship. They assign a significant role to the influence of the family and say that if a parent is not a good digital citizen, the same applies to a student. The principals said that teachers never meet up at school regarding digital citizenship, which may be because they do not know what to talk about when it comes to digital citizenship. It can be concluded that the problem of low awareness is found both in parents and teachers.

The respondents discussed what can be done to facilitate the implementation of digital citizenship curriculum at schools. Firstly, both principals and teachers agree that school teachers and parents should be trained not only in using gadgets but also in all ten

domains of digital citizenship. They should be provided with basic information about digital citizenship. However, it should not merely be a 'riff-raff of foreign terms' and all parties involved should be able to understand and adapt them to their local school context. The state should develop a systemic approach to digital citizenship, involving the Ministry of Education, resource centers, and municipalities, which will work with schools to raise awareness of digital literacy in the school community. According to the respondents, in the past years training and other professional development activities on the subject of bullying were made compulsory and systematic, and this led to good results, the society became aware of the issue of bullying, and the awareness of teachers also increased in this regard.

The research revealed that the studied schools had not included digital citizenship issues at any point in their mission and vision. The research had an educational purpose as well. During the interviews, the principals began to reflect that it would be good to include the mentioned issues in the mission and goals of the school. Furthermore, according to the respondents, the principal should integrate the issues of digital citizenship into the school curriculum at each level. Most importantly, in their opinion, only ICT teachers are not enough to solve this issue. It is better if civil education and English³ teachers are also involved in this process. Teachers agree with the narrative mentioned above and say that they are confused due to having scarce information on digital citizenship, and do not know how to act, and awareness campaigns (trainings, videos, brochures, webinars, etc.) would positively affect them and the school community.

Teachers and principals noted that the pandemic had a positive impact on teachers' awareness of digital competencies and principles of digital citizenship. One of the respondents said that many teachers of the older generation were forced to equip themselves with digital competencies during the pandemic. If it were not for the pandemic, no one would have thought about the need for this.

IV. DISCUSSION

As can be seen from the study results, in the narratives of the principals and teachers, there is mainly a divergence. While the principals prefer the adaptive-evolutionary approach to curriculum implementation, the majority of the interviewed teachers prefer the programmed model of curriculum implementation. Such an attitude of teachers, on the one hand, can be explained by the fact that teaching digital citizenship is a novelty for the majority of the interviewed teachers; they

³ According to the respondents, English teachers can read and understand English-language sources that would be useful for civil society teachers in case they do not speak English well.

do not yet perceive and understand this field well, and they are afraid that the activities they initiate will lead the educational process in the wrong direction. However, it is also proved by the study that even those teachers who have more experience in this field refrain from using the adaptive-evolutionary approach at the initial stage, which suggests that the respondent teachers avoid taking too much responsibility for their actions, choosing a more accessible way - to act with predetermined "ready-made recipes". During the focus group, one of the teachers stated: "When we are not provided with a detailed plan and instructions for implementing an innovation, our actions begin to look like divination. It is not clear what we are doing". Teachers' reasoning echoes that of Fullan, who develops the opinion that problems in applying the adaptive-evolutionary model of curriculum implementation may arise due to ambiguous goals, varying implementation methods, and changing assessment criteria. At the same time, success is difficult to evaluate because there are no agreed-upon criteria from the outset, in contrast to the programmed approach, where evaluation criteria are unambiguous (Fullan, 1983).

The view of the respondent principals echoes the approach according to which practitioners should implement the curriculum idea in a specific situation, specific class, with specific students, within a particular interaction (An Introduction to Curriculum Research and Development, n.d.-b) and since the teachers themselves are the main actors of implementation and bear the responsibility for the educational process, they cannot delegate this responsibility to external agencies or curriculum developers and researchers. However, they must support practitioners, and this way encourage their practice (OpenLibrary.org, 1985b).

From the discussion of principals and teachers, it is not easy to distinguish which model of implementing innovations, in this case, digital citizenship, is preferable, considering the current situation and challenges within Georgia's general education system. Curriculum researchers assert that both approaches have advantages, and the implementation approach should be selected based on the situation at a particular school (Berman, 1980). The programmed approach is appropriate if the number of changes is not large or its implementation is organized in stages, if the persons interested in the curriculum implementation agree on the goals, ways of implementation and evaluation criteria, provided that the school is relatively integrated and its environment is stable. When these conditions are not met, the adaptive-evolutionary strategy might be more appropriate, which states that complex changes require studying again and thus invites participants to actively participate in the implementation process, which is viewed as the foremost opportunity to internalize the main features of the innovation. (Fullan, 1983)

Respondent feedback from teachers and directors directed toward the curriculum integration models reveals an interesting dynamic. While educators acknowledge the importance of the adaptive-evolutionary model, they tend to prioritize the programmed model in orienting their instructional practices toward student-centered learning conditions. Moreover, should there be support from both the school and governmental sectors, coupled with expert input from experienced practitioners in the realms of assessment, training, or other professional development activities, they will be better prepared to address challenges, mitigate fears, and take responsibility for the successful implementation of educational innovations.

As per the study results, it can be concluded that the changes introduced to the Teacher's Standard have a positive effect on informing teachers about digital citizenship, making teachers think that a change is needed, which will have a positive impact on raising students as digital citizens in the future. However, to overcome phobias and implement these changes in a quality way, teachers need support from the part of the school leader, the state, or various international and international governmental and non-governmental organizations. Based on this result, we can conclude that one of the crucial factors for the effective implementation of the curriculum is the clarity of the innovation. According to several studies of curriculum implementation, if practitioners do not understand what they are being asked to do and how, then the curriculum implementation process will fail. At the initial stage of implementation, teachers need support in implementing the curriculum. Proposals and recommendations should be clear about the ways of implementation, but not too linear and restrictive in the sense that there is only one strategy and way of implementation with absolutely no alternative. The confusion of teachers, on the one hand, is caused by the new challenges of innovation and, on the other hand, by the lack of competence of teachers (Lütgert, Stephan, 1983) and in order to overcome these challenges and develop the competences of teachers, both internal and external support of the school is important.

The present research revealed that one of the important factors for the successful implementation of the digital citizenship curriculum is not only the appropriate competence of teachers, but also the high awareness of the school community about the importance of digital citizenship in the modern world and establishing it as a school culture. As mentioned above, the knowledge, skills and attitudes of the individual teacher are important factors in implementing an innovative curriculum. However, a number of studies (Mestry & Govindasamy, 2021; DeMatthews, 2014; Nentwig, 2005) confirm that the number of teachers oriented on changes at schools is also determined by



the effect of a specific school culture. The principal and the school management team create the school culture. They constitute an influential group that determines the success of the change, it is them who can form the necessary organizational conditions for achieving success (Fullan, 1994).

First of all, they should understand the significance of innovation and they, as the "agents of change", should encourage teachers to deal with innovation, and foster the development of not only individuals but also the system for sustainable educational change. (Fullan, 1983).

It is widely accepted that one of the key factors contributing to the successful implementation of reforms in schools is the involvement of stakeholders in decision-making. The main barrier to successful reform lies not with conservative-minded educators but rather with conservatively-minded leaders. Moreover, even the best teachers may struggle with ineffective leadership in guiding successful organization and dissemination processes (Schleicher, 2018). The National Center on Education and the Economy (<https://ncee.org>), an organization conducting extensive research (in all countries whose students perform well in PISA's international assessment), investigated the role of school leaders in organizing and disseminating the process of education successfully. When considering leadership theories, transformational (Katherine E. Mckee 2020) and educational leadership (Anita Woolfolk & Wayne Hoy 2012) styles ensure effective implementation of change within schools.

Fullan also discusses the influence of those members of the school community on the implementation of innovations who are not directly involved in the implementation process, such as parents, who can become both obstacles and powerful levers and allies in the implementation of the innovation (Husén & Postlethwaite, 1994; Fullan, 1994).

A curriculum implementation study conducted in New Zealand also confirms the importance of parents and community involvement in implementing innovations at school (Curriculum Implementation Exploratory Studies 2, n.d.)

As the research revealed, more attention is paid to digital citizenship issues at high-contingent schools in Tbilisi than at schools outside Tbilisi. The better performance of urban schools in comparison to rural schools can be attributed to a variety of factors, and it is important to note that these generalizations may not apply universally. Here are some common reasons for the observed differences:

- *Resource Allocation:* Urban schools typically receive greater financial support and resources compared to their rural counterparts. Consequently, schools in towns and cities stand out for their superior

infrastructure, more qualified staff, updated learning materials, and access to advanced technologies.

- *Teacher Quality:* Cities typically draw and keep highly qualified teachers thanks to superior professional development opportunities, higher salaries, and a wider range of job choices. In contrary, rural schools may encounter difficulties in recruiting and retaining experienced teachers.
- *Infrastructure and Facilities:* Urban schools typically enjoy superior infrastructure and facilities, encompassing well-equipped classrooms, libraries, laboratories, and sports facilities. This can markedly influence the overall learning environment.
- *Extracurricular Opportunities:* Urban schools might provide a broader array of extracurricular activities, advanced placement courses, and specialized programs in comparison to rural schools. This diversity can enhance the overall educational experience.
- *Access to Technology:* Urban schools frequently have improved access to technology and the internet, allowing students to participate in digital learning and keep up-to-date with modern educational tools. This can increase the overall quality of education.
- *Community Support:* Urban schools might experience enhanced community support and engagement, forming partnerships with local businesses and organizations. This backing can result additional resources and opportunities for students.
- *Cultural and Socioeconomic Factors:* Urban areas usually host more diverse populations, providing students exposure to various cultures and perspectives. This diversity can cultivate a more enriching educational experience. In addition, urban areas may offer a more favorable socioeconomic environment, positively impacting student outcomes.
- *Transportation and Accessibility:* Urban schools are frequently more easily reached in terms of transportation, facilitating regular attendance for students. In rural areas, students may encounter difficulties accessing schools due to long distances and insufficient transportation infrastructure.

The research findings shed light on a notable discrepancy in the attention given to digital citizenship issues between high-contingent schools in Tbilisi and those located outside the city. Urban schools in Tbilisi demonstrate a higher level of engagement with digital citizenship concerns compared to their rural counterparts. However, it is essential to approach these observations with caution, recognizing that they may not universally apply.

Several factors contribute to the superior performance of urban schools in addressing digital citizenship issues. Foremost among these is the differential allocation of resources. Urban schools benefit from greater financial support and access to resources, resulting in superior infrastructure, more qualified staff, updated learning materials, and advanced technologies. This disparity in resource allocation significantly influences the overall educational environment.

Moreover, the quality of teaching staff in urban areas surpasses that of rural schools due to better professional development opportunities, higher salaries, and a wider range of job choices. In contrast, rural schools often struggle with recruiting and retaining experienced teachers, which impacts the quality of education they can provide.

Infrastructure and facilities also play a crucial role. Urban schools boast well-equipped classrooms, libraries, laboratories, and sports facilities, enhancing the learning environment and overall educational experience for students.

Furthermore, urban schools offer a wider array of extracurricular activities, advanced placement courses, and specialized programs, enriching students' educational journey. Access to technology and the internet is more prevalent in urban areas, enabling digital learning and keeping students abreast of modern educational tools.

Community support further distinguishes urban schools, as they often benefit from partnerships with local businesses and organizations, resulting in additional resources and opportunities for students.

Cultural and socioeconomic factors also contribute to the disparity between urban and rural schools. Urban areas host more diverse populations, exposing students to various cultures and perspectives, while also offering a more favorable socioeconomic environment that positively impacts student outcomes.

Finally, transportation and accessibility pose challenges for rural schools, with students facing difficulties accessing schools due to long distances and inadequate transportation infrastructure. In contrast, urban schools are more easily reachable, facilitating regular attendance for students.

In conclusion, while urban schools in Tbilisi demonstrate a greater emphasis on digital citizenship issues compared to rural schools, these discrepancies stem from a complex interplay of factors including resource allocation, teacher quality, infrastructure, extracurricular opportunities, access to technology, community support, cultural and socioeconomic influences, as well as transportation and accessibility constraints. Understanding and addressing these factors is essential for ensuring equitable access to quality education for all students, regardless of their geographic location. Further research and targeted

interventions are necessary to bridge the gap between urban and rural schools and promote inclusive educational practices that foster digital citizenship and academic success for every student.

In several studies, seven main indicators have been considered as characteristics of quality and sustainable implementation of curriculum at general education schools: a clear mission, vision, and goals of a school; effective learning environment; availability of physical resources and facilities; competence of teachers; continuing professional development opportunities; Motivation of teachers and students and effective supervision and leadership (Syomwene, 2018). If these indicators are relied upon and the present study results are analyzed, it is difficult to consider the existence of a sustainable and quality educational change in the field of digital citizenship at the target schools.

If we rely on these indicators and analyze the results of the present study, it becomes challenging to consider the existence of sustainable and high-quality educational change in the field of digital citizenship at the targeted schools. Targeted efforts of intentional and collaborative initiatives, whether from governmental or other external stakeholders, as well as organizations or individuals interested in education, are crucial for fostering a school culture focused on teamwork and mutual learning.

Furthermore, transportation and accessibility pose significant challenges for rural schools, where students often confront obstacles in accessing educational facilities due to considerable distances and limited transportation infrastructure. In contrast, urban schools enjoy greater proximity and accessibility, facilitating more consistent attendance among students.

To bolster the theoretical foundation of our discussion, it is imperative to incorporate additional theoretical perspectives and empirical research to elucidate the intricate dynamics of curriculum change and innovation adoption within educational settings. Drawing upon insights from educational psychology, organizational theory, and sociology can enrich our understanding of the research findings.

From the perspective of educational psychology, an in-depth exploration of cognitive processes involved in the implementation of digital citizenship education across diverse school contexts can provide invaluable insights. Examining how students assimilate and apply digital citizenship principles can inform the development of more effective pedagogical strategies tailored to their cognitive needs and learning styles.

Moreover, leveraging theoretical frameworks from organizational theory offers a nuanced understanding of the complexities inherent in driving change within educational institutions. Concepts such as organizational culture, leadership dynamics, and mechanisms of resistance to change illuminate the

underlying factors influencing the adoption of innovative educational practices, particularly within the contrasting environments of urban and rural schools.

Additionally, sociological perspectives afford a comprehensive examination of the socio-cultural and structural influences shaping educational experiences. By analyzing variables such as socioeconomic disparities, community dynamics, and cultural norms, we can unravel the intricate web of factors contributing to the observed disparities between urban and rural schools in addressing digital citizenship issues.

Incorporating these rigorous theoretical perspectives not only strengthens the theoretical framework of our study but also enriches the scholarly discourse surrounding curriculum development and innovation adoption in education. This interdisciplinary approach fosters a deeper appreciation of the multifaceted nature of educational reform and underscores the importance of addressing systemic inequalities to promote equitable educational outcomes for all students.

V. CONCLUSIONS AND IMPLICATIONS

The study shows the dynamics of digital literacy education in Georgia, with an emphasis on the adaptive-evolutionary model and compares it with programmatic implementation. Here, we discern the key elements and nuances, providing understanding of the preferences and challenges identified by educational directors and instructors.

- *Directorial Preferences:* The study accentuates the fact that educational directors reveal an inclination towards an adaptive-evolutionary model. This preference emphasizes a commitment to a dynamic and evolving curriculum in order to meet specific needs and challenges faced in Digital Citizenship Education. The adaptability aspect is essential for conforming to the ever-changing landscape of technology, where curricula must be developed to deal with newest trends and demands.
- *Educator Skepticism:* While educators are more skeptical to take on adaptive approach because of the intricacies connected with it, the programmatic model seems more acceptable to educators facing the challenges of higher qualifications as it has predefined structures and employs approved methodologies. This skepticism raises questions about educators' willingness to engage in innovative but potentially challenging pedagogical strategies.
- *Pedagogical Flexibility:* The emphasis on pedagogical flexibility in the text resonates with the mentorship approach discussed. This suggests that educators may find solace in guidance and mentorship, especially when navigating the uncharted waters of Digital Citizenship Education.

The mentorship approach implies a need for ongoing support structures, fostering a collaborative atmosphere for educators to effectively implement an adaptive-evolutionary model.

- *Pedagogical flexibility:* Which is emphasized in the mentoring approach suggests that teachers can rely on guidance and mentoring, especially when implementing unexplored digital citizenship education. A mentoring approach stresses the importance of ongoing support structures that stimulate a collaborative atmosphere for educators to implement an effective adaptive-evolutionary model.
- *Evaluation Challenges:* The challenges of evaluating success are caused by the absence of clear criteria for measuring the effectiveness of the programmatic approach objectively. In order to address this issue, well-defined evaluation metrics must be developed to comprehensively assess and compare any model.
- *Practitioner-Centric Decision Making:* The passage emphasizes the crucial role of school principals and educators in the decision-making process. It warns about the possible distortion of practice when decision-making is delegated to external agents or predetermined structures. This is in line with the larger conversation that underscores the importance of practitioners actively participating in the formulation and execution of curriculum development.

Based on all the above it can be concluded that the general education system of Georgia should create conditions and means for schools to select independently, considering their own capabilities, which of the approaches to implementation – the programmed one, the adaptive-evolutionary one or the hybrid one - would be more effective at a specific school and which approach would facilitate achieving the best results. To this end, not only the curriculum framework should be created, but also the recommended methodological guidelines and guides for the implementation of the curriculum and each school should be given freedom in the implementation process. At the same time, there professional support activities should be carried out by the state or other external providers, especially for those schools that decide to implement the adaptive-evolutionary model or the hybrid one.

The school principal should understand their responsibility for the implementation of innovations, support teachers to the maximum extent, and care not only about individual teachers but also about systemic and strategic change to achieve sustainable and long-term educational transformation.

In essence, the insights gleaned from the study prompt a deeper exploration of the dynamics at play in

the realm of Digital Citizenship education in Georgia. The discussion provides a foundation for further research, encouraging an in-depth examination of how these models manifest in real-world educational settings and their tangible impact on student learning outcomes. The considerations outlined here contribute to the ongoing dialogue on innovative curriculum development strategies and their implications for Digital Literacy Education in diverse educational contexts.

In conclusion, the study advocates for the creation of conditions and means for schools to independently select implementation approaches tailored to their capabilities. This entails providing a framework for curriculum development along with recommended methodological guidelines while granting schools autonomy in the implementation process. Professional support activities should be offered, particularly for schools opting for the adaptive-evolutionary or hybrid models.

School principals bear responsibility for innovation implementation, supporting teachers and driving systemic and strategic change to achieve sustainable educational transformation. The insights gleaned from the study prompt further exploration of the dynamics of Digital Citizenship education, encouraging in-depth research into real-world manifestations and their impact on student learning outcomes. These considerations contribute to the ongoing dialogue on innovative curriculum development strategies and their implications for Digital Literacy Education in diverse educational contexts.

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