

Exploring Lebanese Middle School Teachers' Perceptions of Digital Citizenship Education: A Qualitative Study

استكشاف تصورات معلمي المرحلة المتوسطة في لبنان حول تعليم المواطنة الرقمية: دراسة نوعية

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ABSTRACT

This qualitative study explores Lebanese middle school teachers' perceptions of digital citizenship and digital citizenship education (DCE) within the context of public and private schools in Mount Lebanon. The research investigates how teachers conceptualize digital citizenship, identify their perceived roles in its delivery, and articulate the challenges and supports required for effective implementation. Data were collected through semi-structured interviews with eleven teachers from diverse subject areas and school types. Thematic analysis, following Braun and Clarke's (2006) framework, revealed five key themes: definitions of digital citizenship and DCE, perceived teaching responsibility, significance of DCE in the Lebanese socio-political and educational context, and expectations for institutional and pedagogical support. The findings indicate that while teachers acknowledge the importance of digital ethics, responsibility, and virtual presence, their understandings of DCE are inconsistent and often shaped by the Lebanese curriculum limitations, crisis conditions, and lack of training. The study underscores the need for a comprehensive, interdisciplinary DCE framework along with targeted professional development to ensure that educators are well- equipped to foster responsible, critical, and participatory digital citizens.

Keywords: Digital citizenship education; teacher perceptions; Lebanon; thematic analysis; middle school; qualitative research; curriculum reform.

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1. الملخص

في تدريسها، أهميتها ضمن السياق اللبناني السياسي والتربوي، وتوقعات المعلمين للدعم المؤسسي والبيداغوجي. أظهرت النتائج أنَّ المعلمين يدركون أهمية الأخلاقيات الرقمية والمسؤولية والحضور الافتراضي، إلا أنَّ فهمهم للمواطنة الرقمية يبقى متبايناً، وغالباً ما يتأثر بقيود المناهج البنائية وظروف الأزمات وضعف التدريب. وتؤكد الدراسة الحاجة إلى إطار وطني شامل ومتكامل لتعليم المواطنة الرقمية، وتدريب مهنية مستهدفة، تمكن المعلمين من تنمية مواطنين رقميين ناقلين ومسؤولين ومتفاعلين.

الكلمات المفتاحية: تعليم المواطنة الرقمية، تصورات المعلمين، لبنان، تحليل موضوعي، المرحلة المتوسطة، بحث نوعي

1. Introduction

The rapid integration of digital technologies into educational and social systems has redefined the concept of citizenship in the 21st century. As students increasingly navigate online environments, the ability to do so responsibly, ethically, and critically has become foundational to modern education. Digital Citizenship Education (DCE), an interdisciplinary and values-based field, seeks to equip learners with the competencies necessary for ethical participation in digital society (Ribble, 2012; ISTE, 2022). These include

تستكشف هذه الدراسة النوعية تصورات معلمي المرحلة المتوسطة في المدارس الرسمية والخاصة في قضاء جبل لبنان حول المواطنة الرقمية وتعليمها. وتهدف إلى فهم كيفية تعريف المعلمين للمواطنة الرقمية، وتحديد أدوارهم المتصورة في تدريسها، والتحديات والدعائم التي يرونها ضرورية لتحقيق تطبيق فعال. جمعت البيانات من خلال مقابلات شبه مهيكلة مع أحد عشر معلماً ومعلمة من اختصاصات مدرسية متنوعة. وقد أُجري التحليل الموضوعي باستخدام إطار عمل براون وكلاارك (2006)، وكشفت خمسة محاور رئيسية: تعريفات المواطنة الرقمية وتعليمها، مسؤولية المعلم digital safety, communication, media literacy, civic engagement, and digital ethics.

In Lebanon, the urgency of DCE is intensified due to an outdated curriculum, socioeconomic instability, and the disruptions caused by the COVID-19 pandemic (Ghamrawi, 2018; Yehya, 2021). Although national and regional stakeholders have emphasized the need for digital transformation, the integration of DCE into Lebanese schools remains fragmented. Infrastructure gaps, inequitable access, and minimal teacher preparation have further widened

disparities, particularly between public and private institutions.

Teachers play a central role in shaping students' digital competencies and values. Yet little is known about how Lebanese middle school teachers conceptualize digital citizenship, view their role in DCE, or navigate its implementation amidst systemic challenges. While early research (e.g., Ghamrawi, 2018) offered preliminary insights, more recent, in-depth exploration is needed to capture evolving teacher perspectives, especially in the post-pandemic era.

This study addresses this gap by investigating how Lebanese middle school teachers define digital citizenship, understand its educational purpose, and perceive their responsibilities and needs in implementing it. Further, the research aims to inform both policy and practice in the development of effective, contextually relevant DCE strategies.

2. Statement of the Problem

Although digital technologies are increasingly embedded in educational systems worldwide, Lebanese curriculum and teacher training frameworks have not kept pace with the demands of digital citizenship. Teachers are expected to prepare students for ethical and responsible

digital participation, yet most have received little or no training in this domain. The absence of a national DCE framework has resulted in fragmented, inconsistent implementation that depends largely on individual initiative. This lack of systemic support is especially problematic in Lebanon's current context, marked by political instability, economic crisis, and technological inequities. Without a clear understanding of how teachers themselves perceive digital citizenship and their role in delivering it, educational reforms may fail to address real-world conditions in classrooms. Understanding these perceptions is essential to designing responsive and effective DCE initiatives.

3. Rationale and Significance

This study provides timely, context-specific insights into middle school teachers' perceptions of Digital Citizenship Education in Lebanon. While global frameworks such as those by ISTE (2022), OECD (2021), and Ribble (2012) define key DCE competencies, their interpretation and application within Lebanese schools remain under-explored. Existing research is limited, with few studies examining teachers' lived experiences, professional needs, or challenges in implementing DCE—particularly in

light of Lebanon's ongoing crises. By amplifying teachers' voices, this study contributes to regional discourse on educational reform and digital equity. It also lays the groundwork for developing culturally relevant training programs, instructional resources, and policy reforms that align global standards with local realities.

4. Purpose of the Study

The purpose of this study is to explore how Lebanese middle school teachers perceive digital citizenship and its education. Through interviews, research investigates how teachers define digital citizenship, which domains they prioritize, how they view their instructional responsibilities, and what barriers they face in implementation. The findings aim to inform curriculum designers, professional development initiatives, and national education policy about digital literacy and citizenship.

5. Research Questions

This study is guided by the following questions:

1. How do Lebanese middle school teachers conceptualize digital citizenship?
2. What roles do they perceive themselves to have in delivering Digital Citizenship Education (DCE)?

3. What challenges and supports do teachers identify in implementing DCE in their schools?

6. Literature Review

Digital Citizenship Education (DCE) has emerged as a critical component of modern education, reflecting the increasing integration of digital technologies in civic, social, and academic life. Ribble's (2012) foundational framework defines digital citizenship as the responsible and ethical use of technology, encompassing nine elements: digital access, commerce, communication, literacy, etiquette, law, rights and responsibilities, health and wellness, and security. This model has shaped global understanding of DCE, serving as a cornerstone for subsequent frameworks.

Recent efforts by the International Society for Technology in Education (ISTE, 2022) and the Organisation for Economic Co-operation and Development (OECD, 2021) have expanded this vision, emphasizing that digital citizenship extends beyond technical skills to include critical thinking, media literacy, civic participation, and ethical engagement. These frameworks present DCE as interdisciplinary and values-driven, aiming to prepare learners to navigate

and contribute to digital society in meaningful, effective ways.

Teachers are central to the implementation of DCE, as curriculum facilitators, digital role models and moral guides. Hollandsworth et. Al (2011) emphasize that without teacher preparedness, DCE risks remaining superficial or inconsistently delivered. However, several studies have identified significant gaps in teachers' readiness and institutional support. Du and Meier (2023), for example, found that although many teachers recognize the importance of DCE, they often lack the training and resources to effectively embed its principles into instruction.

In the Arab region, there has been progress in some countries, such as the UAE and Qatar, where DCE components have been formally integrated into educational policy and teacher development programs (UNESCO, 2022). However, Lebanon remains significantly behind. As Yehya (2021) notes, digital literacy in the Lebanese curriculum is primarily confined to basic ICT instruction, with limited incorporation of digital ethics, rights, or participatory competencies. Teachers are frequently expected to teach digital content without adequate preparation in topics such as online safety, misinformation, and civic engagement.

This gap is further reflected in Ghamrawi's (2018) qualitative study, which found that Lebanese teachers often equate digital citizenship with behavioral compliance, such as avoiding cyberbullying or using polite language online. Concepts like digital rights, democratic participation, and critical digital literacy were rarely addressed, highlighting a narrow interpretation of DCE. Similarly, Capuno et al. (2022) argue that in under-resourced and crisis-affected contexts, such as Lebanon, DCE can remain rhetorical unless there is coordinated investment in teacher capacity-building and digital infrastructure. Lebanon's enduring political instability, economic hardship, and the educational disruptions caused by the COVID-19 pandemic have exacerbated digital divides and highlighted the urgency of a comprehensive DCE approach. The country's lack of updated curricular frameworks and inconsistent teacher professional development continues to limit the potential of digital citizenship education. In light of these challenges, understanding how Lebanese educators perceive and interpret DCE is critical. This study responds to that need by offering an updated, in-depth exploration of middle school teachers' perceptions. It seeks to identify how digital citizenship is conceptualized and how institutional,

pedagogical, and systemic barriers shape its implementation in Lebanese schools.

7. Methodology

8.1 Research Design

This study employed a qualitative research design using semi-structured interviews to explore Lebanese middle school teachers' perceptions of digital citizenship and digital citizenship education (DCE). A qualitative approach was deemed appropriate to allow for in-depth exploration of participants' views, experiences, and contextual interpretations of DCE in Lebanese schools (Creswell & Poth, 2018). The study aimed to investigate how teachers conceptualize digital citizenship, perceive their role in its delivery, and articulate challenges and supports related to DCE implementation.

8.2 Participants and Sampling

Participants were selected using purposive sampling to ensure diversity in teaching subjects, school sector (public and private), and years of experience. A total of eleven middle school teachers from Mount Lebanon participated in the study. The sample included educators teaching a range of subjects, including science, mathematics, English, civics, Arabic, and technology. Teaching experience ranged from five to twenty years. The sample size was sufficient to reach thematic saturation, as no new codes or themes emerged in the final stages of analysis (Guest et al., 2006). Table 1 shows the detailed background information of the participating teachers.

Table 1: Teachers' background information

Teacher	Educational Level	Subject	Years of Experience	School sector
T1	Bachelor's degree	Sciences	15	Public
T2	Bachelor's degree	Sciences	12	Public
T3	Bachelor's degree	Arabic	10	Public
T4	Master's Degree	English	5	Public
T5	Bachelor's degree	Math	10	Private
T6	Master's Degree	Math	10	Private
T7	Master's Degree	Civics	11	Public
T8	Bachelor's degree	Technology	15	Public
T9	Bachelor's degree	Math	10	Private
T10	Master's Degree	Sciences	5	Public
T11	Master's Degree	English	20	Private

8.3 Data Collection and Analysis

Data were analyzed using thematic analysis, following Braun and Clarke's (2006) six-phase

framework: (1) familiarization with the data, (2) generation of initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report. Interviews, conducted in Arabic and later translated into English by the researcher, were transcribed and reviewed for accuracy prior to analysis. NVivo software was used to organize transcripts, facilitate systematic coding, and track emergent patterns. Codes were generated inductively and refined through constant comparison and iterative reflection, allowing for a data-driven understanding of participants' perspectives.

To ensure analytical rigor and credibility, multiple validation strategies were employed. Member checking was conducted during and after the interviews to confirm the accuracy of key interpretations. Thick description was used to preserve contextual meaning throughout the reporting of themes. Peer debriefing with an experienced qualitative researcher further supported theme refinement and mitigated researcher bias. An audit trail was maintained, documenting the coding process, theme development, and analytical memos, thereby enhancing the transparency and dependability of the analysis.

8.4 Ethical Considerations

All participants received detailed information about the study and signed written consent forms. They were assured of confidentiality, voluntary participation, and the right to withdraw at any time. Anonymized identifiers were used to protect participants' identities in all transcripts and reports.

8. Findings

Thematic analysis of interview data from eleven Lebanese middle school teachers revealed five major themes: (1) conceptualizations of digital citizenship, (2) perceptions of digital citizenship education (DCE), (3) perceived responsibility for DCE delivery, (4) the significance of DCE in the Lebanese context, and (5) expectations for institutional and pedagogical support. These themes are presented below with illustrative excerpts from participants, identified using anonymized teacher codes (e.g., T1, T2), and interpreted in relation to broader DCE literature and the Lebanese school context. A summary of the themes, subcodes, and their frequency of occurrence across interviews is presented in Table 2.

Theme number	Theme	Codes	occurrence
1	Concept of digital citizenship	1. Presence in the virtual world	13
		2. Standards and norms of a good citizen	22
2	Concept of DCE	1. Teaching/ teachers	11
		2. Knowledge/ skills/ attitudes	7
		3. Raise standards	7
		4. Virtual world	4
3	Responsibility of teaching DC	1. Teachers and parents	6
		2. Civics and technology teachers only	7
		3. All teachers	4
		4. DCE specialized teachers	2
4	Significance of DCE	1. Dangers faced online (cyberbullying, inappropriate content)	8
		2. online teaching/ COVID 19 era	3
		3. student's unawareness of rights and responsibilities	13
		4. importance of critical thinking	7
		5. Lebanese crisis	4
		6. Lack of parents' support	4
5	Expected support for better implementation	1. Extra Time	11
		2. Readymade Resources (lesson plans and printable documents)	10
		3. Internet connection and technology devices	7
		4. Spread awareness to parents	3
		5. Technology teacher allocated for support	10

Table 2: Teachers' Interviews Themes and codes

9.1 Conceptualizations of Digital Citizenship

Teachers' conceptualizations of digital citizenship (DC) varied in depth and scope but coalesced around two principal ideas: moral responsibility in digital spaces and active presence in the virtual world. Several participants emphasized behavioral norms, describing DC as the ability to act responsibly, ethically, and respectfully while using digital tools. T1 succinctly stated: "As I

understand, digital citizenship is to be a good citizen in the digital world." This interpretation echoed Ribble's (2012) emphasis on digital etiquette, safety, and civic behavior.

The notion of responsibility was repeatedly highlighted through descriptors such as "respect," "non-offensiveness," "anti-cyberbullying," and "not harming others." T3 reflected, "Is it the standards that should be found in every person who is online—how

to use technology well without any difficulty?” These perceptions point to an emerging understanding of DC as a behavioral and ethical construct yet often lacked mention of participatory or civic engagement elements emphasized in global frameworks (e.g., OECD, 2021).

In parallel, many teachers linked digital citizenship to participation in virtual spaces for purposes such as gaming, research, and content consumption. T5 noted: “DC is to be a good citizen while surfing digital platforms.” Teachers commonly associated students’ online presence with risks, but rarely extended their definitions to include digital rights, online activism, or media literacy, suggesting that DC was perceived primarily as personal responsibility rather than collective digital engagement. Overall, while teachers showed a growing awareness of digital ethics and respectful behavior online, their conceptualizations of DC were narrowly framed, omitting more critical, participatory, or political dimensions of citizenship in the digital age.

9.2 Concept of Digital Citizenship Education (DCE)

Teachers’ perceptions of DCE reflected a strong belief in its importance, though definitions varied

widely. Most participants viewed DCE as the instructional process of cultivating responsible digital behavior. T8 described DCE as “teaching to be a responsible citizen in the virtual world,” while T4 emphasized, “to teach students how to use technology effectively.” These statements reflect an implicit pedagogical orientation toward skills instruction, focused more on individual behavior than on transformative digital engagement. Several teachers articulated DCE as encompassing knowledge, skills, and attitudes, aligning with holistic definitions found in ISTE standards (ISTE, 2022). T11 remarked that “DCE should include attitudes in addition to skills and knowledge in its learning objectives,” indicating recognition that digital citizenship is not solely technical but also affective and ethical.

Some teachers linked DCE with raising ethical standards among youth. T2 stated that its goal should be “to raise good standards among all students at school,” referencing respect, responsibility, and positive digital behavior. A smaller subset framed DCE in terms of equipping students for the virtual world, suggesting a growing awareness of the need to prepare students for the complexities of online life. T6 noted, “DCE should prepare

students to navigate the complexities of the virtual world.”

Despite these insights, DCE was rarely linked to curriculum integration, interdisciplinary planning, or active digital citizenship. Most definitions remained behavior-focused rather than participatory or rights-based. This reflects a broader challenge in Lebanese education, where digital literacy is narrowly conceived and insufficiently embedded across subjects (Yehya, 2021).

9.3 Responsibility for Teaching Digital Citizenship Education

Teachers’ perspectives on who should be responsible for delivering Digital Citizenship Education (DCE) revealed significant variability and reflected broader lack of clarity in national educational policy. Four key positions emerged: (1) all teachers should be involved, (2) responsibility should be shared between teachers and parents, (3) only civics and technology teachers should deliver DCE, and (4) a specialized teacher role should be created.

A subset of participants advocated for a whole-school approach, suggesting that DCE should be integrated across subjects and taught by all educators. T8 emphasized, “All teachers can be involved, each based on the subject

they teach.” Similarly, T3 argued for differentiated DCE integration, noting, “Teachers are usually updated with the new trends in technology and can be more reliable to teach students these skills in a reasonable way and based on each student’s needs and level of thinking.” This aligns with global best practices, such as those proposed by Common Sense Education (2011), which promote interdisciplinary DCE integration.

Another group of teachers emphasized shared responsibility between educators and families, viewing parents as co-educators in digital ethics. T1 stated: “Teachers could teach DC, but someone should follow up with the students, whether they are applying the knowledge and skill they are being taught at school on in their daily life, referring to parents.” This view resonates with findings by Imran et al. (2023), who highlighted the importance of involving parents in fostering digital citizenship habits, particularly in middle school environments.

Conversely, several participants proposed a subject-specific model, assigning primary responsibility to technology and civics teachers. T9 asserted, “I believe it is merely the technology and civics teachers’ responsibility,” while T2 explained,

"I feel that civics and technology teachers are the teachers that mostly have the opportunity to do so as citizenship is most likely linked to these subject matters." This reflects existing curricular constraints in Lebanon, where digital and civic content is siloed within specific subjects (MEHE, 2012).

A smaller number of teachers proposed the creation of a specialized DCE teacher role. While less common, this idea underscores the desire for specialized expertise and dedicated instructional time.

Notably, no participants mentioned the role of school librarians or counselors in delivering DCE—highlighting a significant underestimation of their potential contribution. Research by Dawkins (2022) underscores the evolving role of school librarians in supporting digital legacy, media literacy, and responsible digital engagement, while Giordano et al. (2022) argue that school counselors must be equipped to address students' digital behavior, particularly in relation to online risk and well-being. Their absence in teacher discourse suggests a gap in institutional awareness and a need for interprofessional collaboration in implementing DCE.

In sum, teachers' perspectives on responsibility ranged from integrated,

collective models to specialized or siloed delivery—reflecting both philosophical beliefs and systemic limitations within the Lebanese educational structure.

9.4 The Significance of Digital Citizenship Education

Participants unanimously recognized the importance of Digital Citizenship Education (DCE), particularly in light of Lebanon's current sociopolitical, educational, and technological challenges. Their reflections revealed six interrelated subthemes: (1) student unawareness of digital rights and responsibilities, (2) online risks and safety threats, (3) critical thinking deficiencies, (4) post-pandemic digital behavior shifts, (5) the impact of the Lebanese crisis, and (6) lack of parental support.

A recurring concern was that students lacked awareness of their digital rights and responsibilities, often engaging in behaviors such as plagiarism or oversharing personal content online. T1 recalled: "Students used to do research by copying and pasting from the internet. They thought copy and paste were meant for that and this is their right!" Teachers also highlighted risks to students' digital footprints, with T7 warning, "In the digital world, there is no place

for mistakes. A mistake online is irreversible and may haunt students forever.” These observations mirror global concerns about youth’s limited understanding of digital permanence, privacy, and reputational risk (Karabatak & Karabatak, 2020).

Closely tied to this were concerns about online dangers, such as cyberbullying, harassment, and exposure to harmful content. T2 noted: “We have seen cyberbullying during online classes—even directed at teachers.” T5 added, “Students are prone to see pornography or violent content that includes all kinds of harassing actions.” These concerns are consistent with research highlighting the prevalence of online risks among Lebanese youth, particularly in unregulated digital spaces (Ghamrawi, 2018; Hawi, 2012).

Teachers also emphasized the urgent need to develop students’ critical thinking and media literacy skills, particularly in an era of misinformation. T8 commented: “During the corona era, students were traumatized by Facebook and social media campaigns that falsified every scientific fact they should know about the virus.” This aligns with studies emphasizing digital critical thinking as a core life skill necessary to combat fake news and algorithmic manipulation (Vang, 2021; Fahad, 2018).

Several teachers reflected on the impact of the COVID-19 pandemic, which accelerated digital tool use but also revealed significant gaps in students’ preparedness. T8 observed: “During compulsory online teaching, students needed to know what skills are needed to act wisely and responsibly.” These reflections reinforce global findings that the pandemic intensified digital engagement but also widened digital competency gaps (Du & Meier, 2023).

The ongoing Lebanese economic and political crisis was also seen as a compounding factor. T3 explained: “Lebanese students are in a more dangerous zone since there are no restrictions on some websites like in other Arab countries.” T9 added: “Lebanese students are psychologically fragile due to the traumatic change at their economic level.” This fragility, teachers noted, makes students more vulnerable to online grooming, exploitation, and identity-based cyberviolence—risks amplified by the lack of national cyber safety policies or DCE infrastructure.

Finally, teachers pointed to a growing disconnect between parents and their digitally active children, often rooted in generational and technological gaps. T11 observed: “Parents are under immense pressure

that makes following up with their kids' online activities a difficult task.” T7 added: “There is a gap between children and their parents due to huge technological advancements.” These findings highlight the need for family-school partnerships in digital education, particularly in contexts where home digital literacy may be low.

Teachers' responses present a compelling case for DCE as not merely relevant, but urgently necessary. They identified both the risks of inaction—student harm, misinformation, ethical breaches—and the transformative potential of effective DCE to equip students with resilience, discernment, and ethical digital agency in a rapidly shifting national and global environment.

9.5 Expectations for Support in Implementing Digital Citizenship Education

While teachers expressed strong support for the inclusion of Digital Citizenship Education (DCE) in schools, they also emphasized the need for systemic, pedagogical, and infrastructural support to implement it effectively. Five major expectations emerged: (1) professional training workshops, (2) time allocation, (3) ready-made instructional resources, (4) access to digital infrastructure,

and (5) institutional support through specialized personnel.

The most frequently mentioned need was for training workshops focused specifically on DCE. Nearly all participants cited a lack of formal preparation to teach digital citizenship. T1 emphasized, “To prepare our students for the digital world, we as teachers need to be trained in DCE.” Others stressed the urgency for workshops that reflect current trends and pedagogies, with T11 remarking, “Training and training and training—and then implementation!” This reflects broader findings in the literature that effective DCE requires targeted teacher capacity-building, not just general ICT training ((Warsi & Rani, 2024)

Second, teachers highlighted the need for dedicated instructional time within the curriculum. T4 suggested allocating “2 to 5 hours per week as extracurricular activities specifically targeting DC,” while T9 stressed that DCE should be integrated “in a way that doesn't cause the loss of objectives in other subjects.” These comments underscore the tension between curricular overcrowding and the demand for interdisciplinary digital citizenship content, especially in the context of Lebanese rigid national curriculum (Yehya, 2021).

The third expectation was access to ready-made teaching resources, such as lesson plans and printable materials. Teachers reported a lack of structured content and spent significant time designing lessons from scratch. T3 explained: "It would be really beneficial to have access to pre-made lesson plans on digital citizenship. Instead of spending hours creating classes from scratch, it would allow us to concentrate on delivering the content." This points to a need for centralized, localized, and culturally relevant teaching materials that support flexible DCE integration.

Fourth, participants emphasized the importance of reliable digital infrastructure, including devices and internet access. T4 stated: "Teachers require access to dependable internet and technology tools in order to properly teach digital citizenship." These remarks reflect the digital divide between and within Lebanese schools, which undermines equitable access to DCE and reinforces existing socio-economic disparities (Jarwan et al., 2003).

Finally, many teachers called for the allocation of a dedicated technology teacher or DCE support specialist. This role was envisioned as a bridge between curriculum demands and technological implementation. T5

suggested: "It would be really helpful to have a technology teacher to assist us. They could guide us on how to incorporate citizenship principles into our teaching." T10 added: "A technology teacher can bring expertise in navigating online platforms and addressing cybersecurity issues." This reflects international best practices that recommend specialized staff to facilitate DCE implementation across disciplines (Hollandsworth et al., 2011).

Consequently, these expectations demonstrate that while teachers are willing to engage with DCE, they cannot do so in isolation. Institutional readiness, infrastructure, and sustained professional development are prerequisites for meaningful and scalable DCE. Without systemic investment, the burden of implementation falls solely on individual teachers, limiting both reach and impact.

10. Discussion

This study explored Lebanese middle school teachers' perceptions of digital citizenship and Digital Citizenship Education (DCE), yielding five interrelated themes: teachers' conceptualizations of digital citizenship, their understanding of DCE, perceptions of responsibility,

recognition of DCE's significance, and expectations for implementation support. The findings reinforce, refine, and expand on previous research, offering a timely and localized contribution to the global and regional DCE discourse.

10.1 Teachers' Understanding of Digital Citizenship: Ethical, Yet Narrow

Teachers in this study largely framed digital citizenship through the lens of moral responsibility and respectful online behavior, echoing the behavioral domains emphasized in Ribble's early work (Ribble, 2012). Values such as responsibility, non-offensiveness, and the avoidance of harm were consistently mentioned, aligning with the digital ethics and etiquette elements found in ISTE (2022) and OECD (2021) frameworks.

However, their definitions were narrow, lacking references to critical digital competencies such as media literacy, digital activism, or online civic participation. This echoes Ghamrawi's (2018) earlier findings, which also revealed limited teacher understanding of digital rights and participatory dimensions of digital citizenship. While the emphasis on ethics is promising, the absence of a more holistic view reflects a limited

policy mandate and insufficient teacher training in Lebanon (Yehya, 2021).

10.2 Teachers Value DCE, but Interpret It as Behavior-Focused Instruction

Most participants viewed DCE as a necessary part of students' moral and technological education. Teachers described DCE as the instruction of responsible technology use, with some articulating a broader view that included knowledge, skills, and attitudes — consistent with 21st-century competency models (Sánchez-Cruzado et al., 2021). Yet, similar to their definition of digital citizenship, DCE was often interpreted as a form of behavioral guidance, not as a transformative or civic-oriented pedagogy.

This behaviorist orientation may stem from the absence of curricular models for interdisciplinary integration and from the legacy of traditional, exam-oriented teaching in Lebanon, which limits space for critical, project-based, or participatory learning (Ghamrawi, 2018). Unlike international frameworks that stress DCE's role in shaping empowered digital citizens (e.g., ISTE, OECD), Lebanese teachers' current interpretations remain compliance-driven rather than empowerment-focused.

10.3 Ambiguity Surrounding Who Should Teach DCE

Participants offered conflicting views on responsibility for DCE. Some supported a whole-school model, consistent with interdisciplinary recommendations (Common Sense Media, 2011), while others restricted responsibility to civics or technology teachers, an approach influenced by the compartmentalized structure of the Lebanese curriculum. The proposal to create a dedicated DCE teacher or subject further highlights systemic ambiguity and a lack of cross-subject integration.

Strikingly, no teachers mentioned school librarians or counselors as potential contributors, despite their well-documented roles in fostering digital literacy, online safety, and information ethics (Copenhaver, 2018; Dorn-Medeiros, 2021). This omission suggests the need to raise awareness among educators and policymakers about interprofessional collaboration in DCE.

10.4 The Lebanese Context Heightens the Urgency of DCE

The significance attributed to DCE by participants reflects deep concerns about student vulnerability, psychosocial fragility, and online exposure, particularly in light of Lebanon's ongoing crises. Teachers

pointed to rampant plagiarism, misinformation, online harassment, and risky digital behaviors as common student experiences — often linked to weak digital critical thinking and a lack of parental oversight. These findings align with studies noting Lebanese students' high exposure to digital risks (Hawi, 2012; Ghamrawi, 2018).

Teachers also noted that the COVID-19 pandemic and national economic collapse have exacerbated digital inequities and eroded student resilience, echoing World Bank (2021) reports on Lebanon's deteriorating education infrastructure. These crises have highlighted the importance of DCE not just as a curriculum add-on but as a protective, future-oriented educational pillar that builds student agency, safety, and discernment in times of instability.

10.5 Implementation Challenges: A System Unprepared for DCE

Despite their support for DCE, teachers emphasized multiple barriers to implementation, including the absence of training, time, instructional resources, and infrastructure. The demand for ready-made lesson plans, workshop-based training, and dedicated instructional hours illustrates that current conditions do not support sustainable integration.

Participants' calls for a dedicated technology teacher or DCE facilitator reflect international models in which digital specialists provide school-wide support (Hollandsworth et al., 2011). However, Lebanese schools often lack the staffing and funding to fulfill such roles, and even where technology teachers exist, their training tends to focus on basic ICT skills, not citizenship competencies (MEHE, 2012).

These gaps reveal that DCE is unlikely to thrive through teacher motivation alone. Structural reform, including teacher preparation programs, curriculum renewal, policy mandates, and cross-sector partnerships, is essential to ensure that schools can cultivate responsible, critical, and engaged digital citizens.

11. Conclusion and Implications

This study examined the perceptions of Lebanese middle school teachers regarding digital citizenship and Digital Citizenship Education (DCE). Through thematic analysis of eleven in-depth interviews, the study revealed a multifaceted but fragmented understanding of digital citizenship. While teachers strongly valued ethical online behavior and acknowledged the urgent need for DCE in the Lebanese context, their interpretations were often

limited in scope, focusing on digital responsibility over civic participation, critical engagement, or digital rights.

The findings suggest that although Lebanese educators are motivated to address DCE, they face substantial barriers, including curriculum rigidity, insufficient training, limited digital infrastructure, and a lack of institutional guidance. These challenges are further amplified by national crises, socioeconomic instability, and the educational disruptions caused by the COVID-19 pandemic.

This study contributes to the growing body of research on DCE in the Arab region by offering a current, contextually grounded, and account of teacher perceptions. It also extends prior work by Ghamrawi (2018), providing a deeper exploration of how teachers conceptualize their roles, identify implementation challenges, and envision the supports necessary for effective DCE integration.

11.1 Implications for Policy and Practice

Based on the findings, several practical implications emerge:

1. Curriculum Reform: There is an urgent need to revise the Lebanese national curriculum to embed DCE competencies across subjects, moving beyond isolated ICT or

- civics lessons. A framework that aligns with global standards such as ISTE (2022) and OECD (2021) can guide this integration.
2. Teacher Professional Development: Ministries and training centers should prioritize DCE-focused workshops that go beyond digital skills to include ethics, critical thinking, media literacy, and participatory citizenship. Pre-service teacher education programs should also include DCE components.
3. Resource Development: Schools require localized, culturally relevant teaching materials and ready-to-use lesson plans that can help teachers implement DCE without added workload or ambiguity.
4. Infrastructure and Staffing: Equitable access to internet connectivity, devices, and educational technologies is essential. In parallel, schools should consider appointing DCE coordinators or trained technology facilitators to support implementation.
5. Family and Community Engagement: Schools should involve parents in DCE efforts through awareness sessions and communication tools to reinforce responsible digital behavior both at home and at school.

6. Cross-Sector Collaboration: Partnerships between educational institutions, digital safety organizations, and civil society groups can enhance the design, delivery, and monitoring of DCE programs.

11.2 Directions for Future Research

While this study provides valuable insights into Lebanese middle school teachers' perceptions of digital citizenship and its education, it is limited by its small, region-specific sample. Future research should expand to include participants from multiple Lebanese regions and various educational levels to enhance representativeness and generalizability. Additionally, incorporating the perspectives of students and parents would allow for a more comprehensive, triangulated understanding of digital citizenship within the school community. Further studies are also needed to examine the effectiveness of pilot Digital Citizenship Education (DCE) programs and professional training models tailored to the Lebanese context. Finally, comparative research between public and private school approaches to DCE implementation would offer critical insights into sector-based disparities and inform more equitable policy development.

12. Final Note

As digital technologies continue to shape civic life, education systems have a responsibility to prepare students to function in the digital world and to question it, improve it, and contribute

to it ethically. This study reaffirms that teachers are central to this mission, but they cannot succeed without structural support. Addressing the gaps revealed in this study is a matter of policy reform and educational justice.

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