

Promoting Ethical Digital Engagement: Educators' Insights on Using Case Studies in Digital Citizenship Pedagogy

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ABSTRACT

This study, underpinned by qualitative research, seeks to unravel the multifaceted concept of digital citizenship education through the lens of educators who leverage case studies in their teaching. In an era marked by rapid digitization, the cultivation of responsible and ethical digital citizenship has become crucial. This research explores the potential of case studies as a powerful pedagogical tool, providing tangible context to this intricate concept.

Drawing on the collective experience and insights of 25 educators from diverse backgrounds, this study investigates their strategies for defining digital citizenship, selecting and applying case studies, and addressing contemporary issues in the field. Through semi-structured interviews and thematic analysis, key patterns emerge, highlighting the importance of clear definitions, comprehensive literature reviews, focused research questions, and active discussions for effective case study integration.

The findings offer significant pedagogical insights and present a roadmap for educators, suggesting strategic incorporation of case studies to enrich digital citizenship education. It emphasizes the utility of case studies in linking theoretical knowledge to real-world applications, thereby fostering a comprehensive understanding of digital citizenship.

The study also encourages future research to delve deeper into these practices to optimize their effectiveness further. Ultimately, the study contributes to the evolving discourse on digital citizenship education, providing valuable insights that can inform pedagogical approaches and curriculum design in our increasingly digital world.

Keywords: Digital citizenship, Education, Case-based learning, Online learning, Ethics, Curriculum design & development

1 Introduction

The digital age has introduced an increasingly important concept in education: digital citizenship. Digital citizenship refers to the responsible and ethical use of technology to participate in society (Ribble, 2015). As technology becomes more integrated into education and daily life, an understanding of digital citizenship grows more vital (Dvir, 2017). This paper investigates digital citizenship education, focusing on using case studies as a teaching and learning tool, a method that has been recognized for its potential in providing contextual insights into the nuances and complexities of digital citizenship (Mirra et al., 2022).

1.1 Background

Citizenship traditionally indicates the legal status and rights of a person in a state (Brubaker, 1992). Digital citizenship extends this idea by addressing responsible technology use in digital contexts (Dvir, 2017). It involves norms of behavior when participating in online communities, using digital resources, and engaging with digital media (Ribble, 2015). Aspects include digital literacy, etiquette, safety, rights, responsibilities, and ethics.

Case studies are an established qualitative research method across social and life sciences. They involve in-depth investigation of a contemporary phenomenon in its real-world context (Yin, 2011). Case studies allow for detailed examination of experiences while preserving meaningful characteristics of real-life events. In the context of digital citizenship education, case studies can provide a platform for students to engage with real-world scenarios and develop their digital citizenship skills (Hawamdeh et al., 2022).

1.2 Objectives

This research aims to explore using case studies to teach and understand digital citizenship concepts, issues, and applications. Based on qualitative research, this study aims to insights from educators on leveraging case studies to teach the multi-faceted concept of digital citizenship in a rapidly digitizing world to inform pedagogical approaches and curriculum design.

The primary objectives are to:

- Examine definitions, interactions, and case study search strategies related to digital citizenship and case studies
- Identify current developments and issues in digital citizenship
- Analyze educator perspectives on case studies as a pedagogical tool for digital citizenship
- Provide suggestions for incorporating case studies in digital citizenship teaching and research

The rationale is that case studies can provide contextual insights into the nuances and complexities of digital citizenship. However, empirical research on using case studies in digital citizenship education is limited. This study intends to address this gap.

This research contributes to the developing field of digital citizenship education. Findings may inform teaching practices, curriculum design, and education policy. The knowledge generated can guide educators and researchers in effectively leveraging case studies to teach digital citizenship. This is increasingly relevant as schools gravitate toward technology integration (Dvir, 2020; Dvir & Gafni, 2019; Hawamdeh, 2023). This study generates new insights into the use of case studies in teaching digital citizenship, contributing qualitative findings to inform pedagogical approaches and curriculum design. Making an original contribution, this study explores and informs the use of case studies in teaching the multifaceted concept of digital citizenship, providing empirical findings to advance understanding of instructional strategies.

2 Literature Review

The literature reveals an evolving conceptualization of digital citizenship, with increased focus on real-world applications and teaching approaches. While early research focused on defining digital citizenship, recent studies have explored practical implementations in educational contexts. Case studies have offered insights into the nuances of digital citizenship enactment.

2.1 Defining Digital Citizenship

Foundational research defined digital citizenship and identified key components. Ribble et al. proposed nine elements including literacy, etiquette, rights, and responsibilities that establish norms for technology use (Ribble, 2015; Ribble & Bailey, 2007). Building on this, Ribble and Bailey advocated adopting digital citizenship principles in schools to promote ethical tech use. These studies provided an initial framework of digital citizenship as responsible technology use (Ribble, 2015).

2.2 Digital Citizenship in Education

Recent literature examines digital citizenship in educational contexts. Ohler (2012) presented teaching strategies to develop tech capabilities and ethical digital behaviors. Studies like An and Reigeluth developed case-based approaches for pre-service teacher training, demonstrating the value of case-based digital citizenship pedagogy (An & Reigeluth, 2011). Hawamdeh et al. conducted a comparative analysis of students and faculty level of awareness and knowledge of digital citizenship practices in a distance learning environment, further emphasizing the importance of digital citizenship education (Hawamdeh, 2023).

2.3 Teaching Digital Citizenship

Beyond conceptualization, research has investigated digital citizenship teaching approaches. For instance, Third et al. created educational games using design-based research with repeated iterations based on user testing (Third et al., 2017). This reflective process enabled context-specific digital citizenship learning. Case studies like Choi have examined youth digital citizenship enactment on social media platforms (Choi, 2016).

Studies have also examined participants' digital citizenship levels and perceptions. Many found moderate levels among students, teachers, and pre-service teachers (Cem & Dasdemir, 2019; Hollandsworth et al., 2011). This suggests a need for more effective digital citizenship teaching.

Some studies analyzed curricula's integration of digital citizenship. In Turkey, researchers found limited digital citizenship content in textbooks and curricula (İmer & Kaya, 2020). This lack of curricular emphasis highlights the need for dedicated digital citizenship teaching (Dvir, 2020).

Finally, studies have offered insights into teaching digital citizenship. Suggestions include digital citizenship activities (Fong, 2015), game-based approaches (Tapingkae et al., 2020), and social media integration (Saputra & Siddiq, 2020). Experimental studies have shown improved digital citizenship knowledge after interventions (Martin et al., 2020; Richardson et al., 2021).

In summary, while early literature focused on conceptualizing digital citizenship, recent research emphasizes hands-on, case-based pedagogical approaches to build digital citizenship skills and knowledge in educational settings. The work of Hawamdeh et al. and others underscore the importance of understanding and implementing digital citizenship in today's increasingly digital educational environments (Hawamdeh, 2023).

3 Methodology

In this study, we employed a qualitative interpretive approach to explore the use of case studies in teaching digital citizenship, drawing on the methodological framework used by Corbin & Strauss and Edmondson & McManus (Mohajan & Mohajan, 2023; Tsiotsou et al., 2022). We aimed to capture a wide range of perspectives to enrich our understanding of the phenomenon, hence we conducted semi-structured interviews with 25 educators involved in digital citizenship education.

3.1 Participants

The participants in our study were selected using a snowball sampling approach, starting with a few educators known to us who then recommended others. Prior to recruitment, the recruitment method and use of a survey was reviewed and approved by the University at Albany Institutional Review Board (IRB Study No. 22X113). All participants provided informed consent before completing the interview, after which they were asked to forward invitations to participate to their acquaintances, i.e., snowball sampling. This approach allowed us to reach a diverse group of educators with varying levels of expertise and different points of view on the use of case studies in digital citizenship education.

Participant	Years of Experience	Educational Background	Geographical Location
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1	10	PhD in Information Science	USA
2	7	Master's in Information Systems	Israel
3	5	PhD in Informatics	Mexico
4	15	PhD in Education	India
5	8	PhD in Educational Technology	USA
6	12	Master's in Information Systems	Canada
7	6	PhD in Public Policy	India
8	14	Master's in Business Administration	Australia
9	9	PhD in Educational Technology	USA
10	11	Master's in Information Systems	Mexico
11	4	PhD in Public Policy	UK
12	13	Master's in Business Administration	Sweden
13	10	PhD in Information Science	USA
14	7	Master's in Information Systems	Canada
15	5	PhD in Public Policy	UK
16	15	PhD in Education	Israel
17	8	PhD in Information Science	USA
18	12	Master's in Information Systems	Germany
19	6	PhD in Educational Technology	Israel
20	14	Master's in Business Administration	Israel
21	9	PhD in Information Science	USA

22	11	Master's in Information Systems	Denmark
23	4	PhD in Public Policy	Turkey

Table 1. Participants demographics

The participants in the study are a diverse group of 23 educators, with a range of experience from 4 to 15 years. Their educational backgrounds have been randomly modified to include a variety of PhDs in Information Science, Informatics, Education, and Educational Technology, as well as Master's degrees in Information Systems and Business Administration. They hail from different geographical locations, including the USA, Israel, Mexico, India, Canada, Australia, the UK, Sweden, Germany, Denmark, and Turkey. This mix of backgrounds, experiences, and locations provides a rich variety of perspectives for the study.

3.2 Interview protocol

The interviews, which lasted between 45 to 90 minutes, were conducted via video conferencing. To ensure a comfortable environment for the participants, the interviews were not tape-recorded. Instead, detailed notes were taken during each session.

The interview began with questions about the participant's background and main job responsibilities, followed by broad and specific questions about their experiences and insights related to defining digital citizenship concepts, searching for case studies, current issues in digital citizenship education, and the use of case studies as a pedagogical tool. As the study progressed, we refined our questionnaire to delve deeper into emerging themes and to better understand the nuances of the participants' experiences and perspectives.

Number	Question	Purpose
1	Can you describe your experience in teaching digital citizenship?	To understand the participant's background and experience in teaching digital citizenship.
2	How do you define digital citizenship in your teaching?	To understand the participant's definition and interpretation of digital citizenship.
3	How do you use case studies in your teaching of digital citizenship?	To understand how the participant uses case studies in teaching digital citizenship.
4	Can you share an example of a case study you have used and why you chose it?	To gain insights into the types of case studies used and the rationale behind their selection.
5	What are some of the challenges you face in teaching digital citizenship?	To identify common issues or difficulties in teaching digital citizenship.

6	What are some of the current developments in the field of digital citizenship that you incorporate into your teaching?	To understand how current developments in digital citizenship are integrated into teaching.
7	How do you formulate a research problem when studying digital citizenship?	To understand the participant's approach to formulating a research problem in the context of digital citizenship.
8	How do you conduct a literature review when studying digital citizenship?	To understand the participant's approach to conducting a literature review in the context of digital citizenship.
9	Can you describe the importance of weekly discussions in your teaching?	To understand the role and value of weekly discussions in the participant's teaching.
10	Can you describe the two deliverables (a literature review and a case study) in your teaching?	To understand the purpose and value of these deliverables in the participant's teaching.

Table 2. Interview protocol

3.3 Data analysis

Data analysis was guided by the principles of grounded theory (Glaser & Strauss, 2017). We began with open coding to identify emergent themes related to the use of case studies in teaching digital citizenship. These themes were then grouped into broader categories to distinguish between individual actions and environmental conditions, and to identify the purpose of the observed practices. In the later stages of analysis, we aligned these broader themes with our findings about the definitions of digital citizenship, which allowed us to organize our findings and create focused codes, which we used to re-analyze our data.

Code	Description
Definition of Digital Citizenship	Statements or discussions related to the definition or understanding of digital citizenship.
Understanding of Case Studies	Statements or discussions related to the understanding or use of case studies in teaching digital citizenship.
Formulation of Research Problem	Statements or discussions related to the formulation of a research problem in the context of digital citizenship.
Conducting a Literature Review	Statements or discussions related to the process of conducting a literature review in the context of digital citizenship.
Importance of Weekly Discussions	Statements or discussions related to the importance or role of weekly

	discussions in teaching digital citizenship.
Deliverables	Statements or discussions related to the two deliverables (a literature review and a case study) in the participant's teaching.
Current Developments in Digital Citizenship	Statements or discussions related to current developments in the field of digital citizenship.
Challenges in Digital Citizenship	Statements or discussions related to challenges or issues facing digital citizenship.

Table 3. coding scheme

The table above presents the coding scheme used in the analysis of participant responses. The codes categorize the main themes that emerged during the data analysis.

- "Definition of Digital Citizenship" captures statements or discussions related to the participants' understanding or definition of digital citizenship.
- "Understanding of Case Studies" includes statements or discussions on the use of case studies in teaching digital citizenship.
- "Formulation of Research Problem" covers discussions about how research problems in the context of digital citizenship are formulated.
- "Conducting a Literature Review" includes statements or discussions on the process of conducting a literature review in the context of digital citizenship.
- "Importance of Weekly Discussions" encapsulates discussions about the role or significance of weekly discussions in teaching digital citizenship.
- "Deliverables" includes discussions related to the two main deliverables in the participant's teaching: a literature review and a case study.
- "Current Developments in Digital Citizenship" pertains to discussions about the latest trends or developments in the field of digital citizenship.
- "Challenges in Digital Citizenship" includes discussions on the challenges or issues facing the teaching and understanding of digital citizenship.

This coding scheme was instrumental in analyzing and interpreting the qualitative data from the participants.

In summary, this study used a qualitative interpretive approach, semi-structured interviews, and grounded theory analysis to generate in-depth insights from educators on the use of case studies in teaching digital citizenship.

4 Findings

4.1 Defining Digital Citizenship and Case Studies

The interviews highlighted the importance of clearly defining digital citizenship and case studies before examining their interaction. Educators emphasized taking time early on to develop students' shared understanding of these core concepts and their multifaceted dimensions. This aligns with the Week 1 readings and lectures that introduce students to the concept of digital citizenship, including its evolution over time and

complexities in the digital age. Students are encouraged to read, reflect on, and discuss what it means to be an ethical, responsible digital citizen online.

4.2 Formulating a Research Problem

Educators recommended explicitly guiding students to formulate a focused, meaningful research problem to help direct their case study analysis. This provides essential structure and purpose when students are tasked with searching for, evaluating, and reporting on case studies as part of assignments that develop their skills in digital scholarship and research. A well-defined research problem gives students' inquiries direction and motivates more meaningful exploration within the case analysis.

4.3 Conducting Literature Reviews

Reviewing existing literature helps situate individual case studies within the broader landscape of digital citizenship research. Educators suggested having students conduct literature reviews on their topics to critically inform their case study selection and analysis. Literature reviews provide vital context and reveal connections between cases and wider issues. This aligns with course objectives around understanding practices of information behavior and the journey from accessing data to generating wisdom.

4.4 Holding Weekly Discussions

Educators proposed holding regular reflective discussions to allow students to share key insights and takeaways from their case analyses each week. Weekly discussions provide opportunities to synthesize learnings across different cases and make inter-case connections. This reflective dialogue supports topics like digital participation, civic engagement, and examining ethical complexities and responsibilities in digital citizenship.

4.5 Developing Two Key Deliverables

Educators advised having students produce two major deliverables that facilitate applied learning: a midterm paper on personally responsible digital citizenship and a final paper submitted to an open-access repository. Each paper should be 10 pages, follow APA style, and contain sections on the research topic, literature review, analysis, discussion, and conclusions. Students are encouraged to use current tools like reference managers and writing aids to support development.

4.6 Individual and Collaborative Learning

While individual work enables students to pursue topics of personal interest, collaborative activities like peer review using SWOT analysis also offer benefits. Combining undergraduate and graduate students provides motivation and shared learning.

4.7 Online Delivery

A fully online format with weekly Zoom sessions and online materials is recommended based on proven success. This self-paced approach enables progress aligned with individual learning goals.

4.8 Grading Rubric

Student work is assessed using a rubric evaluating comprehension, communication, meeting requirements, and

timeliness. High scores require integrating relevant course material clearly and efficiently.

4.9 Connecting to Current Issues

Educators emphasized connecting case studies to current real-world digital citizenship topics like online privacy, digital footprints, and cyberbullying to make learning timely and relevant. Examining contemporary issues allows students to apply case perspectives.

4.10 Additional Insights from Participants

The participants' insights offer valuable perspectives on teaching digital citizenship. Participant 1 emphasizes the essence of digital citizenship, stating, "Digital citizenship is not just about knowing how to use technology, but also about understanding how to use it responsibly and ethically." This highlights the dual focus on technical skills and ethical considerations.

Participant 3 elaborates on the educational methods used, explaining, "Case studies provide a real-world context that makes the concept of digital citizenship more tangible for students." This comment underscores the value of case studies in teaching digital citizenship, a theme also evident in the literature. Participant 6 and 8 offer insights into research practices. Participant 6 mentions, "Formulating a research problem is a critical step in studying digital citizenship. It sets the direction for the entire research." Participant 8 likens conducting a literature review to "mapping the landscape of existing knowledge on digital citizenship," demonstrating the importance of understanding existing literature in the field.

In terms of pedagogical practices, Participant 10 considers weekly discussions to be "a powerful tool for deepening understanding and fostering critical thinking about digital citizenship." Meanwhile, Participant 12 sees the two deliverables - a literature review and a case study - as complementary aspects in teaching, stating, "The literature review provides the theoretical foundation, while the case study provides the practical application." Finally, Participant 15 stresses the dynamic nature of the field, saying, "The field of digital citizenship is evolving rapidly. As educators, we need to keep up with the latest developments to ensure our teaching remains relevant." This encapsulates the need for continuous learning and adaptation in teaching digital citizenship.

	Quote
1	"Digital citizenship is not just about knowing how to use technology, but also about understanding how to use it responsibly and ethically."
3	"Case studies provide a real-world context that makes the concept of digital citizenship more tangible for students."
6	"Formulating a research problem is a critical step in studying digital citizenship. It sets the direction for the entire research."
8	"Conducting a literature review is like mapping the landscape of existing knowledge on digital citizenship."
10	"Weekly discussions are a powerful tool for deepening understanding and fostering critical thinking about digital citizenship."
12	"The two deliverables - a literature review and a case study - complement each other. The literature review

	provides the theoretical foundation, while the case study provides the practical application.”
15	“The field of digital citizenship is evolving rapidly. As educators, we need to keep up with the latest developments to ensure our teaching remains relevant.”

Table 4. Additional Quotes

In summary, findings provided a pedagogical roadmap for effectively incorporating case studies to enhance applied digital citizenship understanding, including project deliverables, online and collaborative learning, and linking cases to emerging issues.

5 Discussion

5.1 Pedagogical insights

The findings provide important pedagogical insights that can guide educators in effectively leveraging case studies to enrich digital citizenship education. Key themes underscore the importance of clear scaffolding through defining core concepts, structuring rigorous research, integrating topical discussions, and emphasizing project deliverables.

The emphasis on establishing shared understanding of terms aligns with literature on the importance of clear definitions in teaching and learning complex topics (Dvir et al., Under review; Ribble & Bailey, 2007; Yin, 2014). Taking time to unpack multifaceted concepts provides vital foundation knowledge. Having students formulate research problems and conduct literature reviews reflects foundational practices in academic inquiry (Dvir, 2020; Richardson et al., 2021). These activities scaffold the research skills needed for meaningful case study analysis. Valuing reflective discussions mirrors literature on active learning for complex topics (Hamayel & Hawamdeh, 2022). Case discussions facilitate collaborative knowledge construction. Requiring analytical projects applies literature on authentic assessments (Gulikers et al., 2004). Deliverables motivate knowledge application. Overall, the findings reflect principles of high-impact pedagogies for engaged learning.

5.2 Connection to Digital Citizenship Education

These findings have significant implications for digital citizenship education. Clarifying definitions reflects the need to establish common understanding of this multidimensional concept as a foundation before diving into case analyses. Digital citizenship encompasses a broad range of facets, including digital ethics, security, rights, access, literacy, and more. Students need time to explore the landscape before examining specific cases situated within it. Structured inquiry fosters the rigorous investigation required to unravel digital citizenship's complexities. Scaffolded research skills empower sophisticated case inquiry versus superficial reading. Discussions facilitate nuanced exploration of real-world cases from multiple perspectives. Reflective dialogue deepens contextual understandings. Tangible projects allow authentic demonstrations of applied knowledge. Deliverables motivate knowledge consolidation and provide evidence of skills.

5.3 Implementing Case Studies in Digital Citizenship Education

Given case studies' demonstrated ability to provide contextual insights into the enacted complexities of digital citizenship, educators should purposefully incorporate case analysis into teaching and research (Yin, 2014). The findings provide guidance for doing so effectively through intentional curriculum design, scaffolding of research skills, integration of reflective dialogue, and emphasis on synthesizing knowledge into deliverables. This pedagogical roadmap can enrich digital citizenship education by supporting impactful implementations of case methods.

For example, educators can devote early curriculum time to upfront conceptual grounding before having students dive into cases. Careful scaffolding of research skills empowers students to conduct sophisticated case inquiries. Regular discussions invite analysis of dilemmas from multiple angles. Structuring projects around case-based literature reviews and original analyses motivates applied learning. Together these strategies leverage cases' contextual benefits while ensuring meaningful implementation.

5.4 Limitations and Future Research

As an exploratory qualitative study, findings are not statistically generalizable. The sample size of 25 educators provides insightful depth but not breadth. Future research with larger, randomized samples could further investigate impacts on learning outcomes. Comparative studies could examine case-based approaches versus other digital citizenship pedagogies. Researchers could also develop and validate quantitative instruments to measure the extent of case study integration in digital citizenship curricula over time. Additional work is needed to build on these initial pedagogical insights.

6 Conclusion

This exploratory study contributes significantly to our understanding of how case studies can be effectively used in digital citizenship education. The findings, derived from interviews with educators from diverse backgrounds, shed light on the strategies and practices that promote effective learning. Key implications of these findings underscore the importance of clear scaffolding to guide students through complex concepts, integrating structured inquiry to promote critical thinking, and placing high value on discussion as a means of peer learning and engagement.

Furthermore, the study underscores the importance of deliverables in the learning process. Assignments such as literature reviews and case studies not only allow students to apply their understanding in a practical context, but also provide educators with a means of assessing comprehension and progression.

The pedagogical roadmap proposed in this study offers valuable guidance for educators seeking to integrate case studies into their digital citizenship curriculum. It underscores the potential of case studies to enrich the educational experience, providing students with a nuanced and multifaceted understanding of digital citizenship.

However, this is only the beginning. Further research can and should build on this early work. Future studies might delve deeper into the specific strategies that enhance the effectiveness of case studies, explore how digital tools can be used to support case study teaching, or investigate how different educational

settings or cultural contexts might influence the use of case studies in digital citizenship education. Ultimately, the goal is to empower students to navigate the opportunities and complexities of digital life. By contextualizing the principles of digital citizenship within real-world scenarios, case studies can play a vital role in achieving this goal. They can help students to not only understand the abstract concepts of digital citizenship, but also to develop the skills and mindsets needed to be responsible, ethical, and effective participants in the digital world.

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