

Social Sciences Spectrum

A Double-Blind, Peer-Reviewed, HEC recognized [Y-category](#) Research Journal

E-ISSN: [3006-0427](#) P-ISSN: [3006-0419](#)

Volume 04, Issue 04, 2025

Web link: <https://sss.org.pk/index.php/sss>



Check for updates

Digital Social Responsibility in the Classroom: Preparing Teachers to Cultivate Ethical Online Engagement

Ali Haider

M Phil Scholar, University of Education, Lahore, Multan
Campus Pakistan

Correspondence Author: alihaideralihaider1100@gmail.com

Atika Yasin

M Phil Scholar, University of Education, Lahore, Multan
Campus, Pakistan

Email: atikayasin8@gmail.com

Asma Muneer

M Phil Scholar, University of Education, Lahore,
Multan Campus, Pakistan

Email: asmamuneermcf1801744@gmail.com

Article Information [YY-MM-DD]

Received 2025-08-20

Accepted 2025-10-12

Citation (APA):

Haider, A., Muneer, A & Yasin, A. (2025). Digital social responsibility in the classroom: Preparing teachers to cultivate ethical online engagement. *Social Sciences Spectrum*, 4(4), 12-28. <https://doi.org/10.71085/sss.04.04.358>

Abstract

This study examines the role of teachers in promoting Digital Social Responsibility (DSR) within classroom settings, highlighting their impact on shaping ethical online behavior among students. Using a mixed-methods approach, data were collected from 200 teachers through structured questionnaires and semi-structured interviews. Thematic analysis of qualitative data highlighted key areas including role modeling, curriculum integration, ethical awareness, and the need for ongoing professional development. The results showed that many teachers show responsible digital behavior and bring digital safety into their lessons. But problems remain. Not all students have equal access to technology. Many teachers do not get proper training. Moreover, online misconduct still happens. The study concludes that to cultivate effective, ethical, and inclusive digital learning environments, educational institutions must support teachers through targeted training, policy reforms, and equitable access to digital tools. These measures are essential for preparing students to become responsible digital citizens in an increasingly connected world.

Keywords: Digital Social Responsibility, Ethical Online Behavior, Digital Citizenship, Teacher Role Modeling, Educational Technology, Digital Ethics, Mixed-Methods Research, Professional Development.



Content from this work may be used under the terms of the [Creative Commons Attribution-Share-Alike 4.0 International License](#) that allows others to share the work with an acknowledgment of the work's authorship and initial publication in this journal.

1. Introduction

The implementation of digital technology in education has changed the conventional classroom into an animated, interconnected learning space. These classrooms stay connected only if students have internet access. Mobile devices and educational software are standard in classrooms. Digital tools are not just extras anymore. They are now at the heart of how we teach and how students learn (Nora A. Mothafar et al., 2024). The essential components of educational practice across all levels today are learning management systems (LMSs), virtual classrooms, digital assessments, and AI-powered learning platforms (Millagala, 2023). This COVID-19 pandemic has accelerated the shift to distance learning. Schools and universities across the globe were compelled to adopt new technologies to ensure educational continuity. In turn, this has forced many educators to reevaluate the role of technology in education. Moreover, it was found that it functions effectively as a bridge to the future but is only partially adequate as a safeguard for the present (Vershon, 2024).

The increase in digital integration presents new challenges to overcome, including those related to ethics, behavior, and online responsibility. The widespread prevalence of digital platforms has blurred the boundaries between structured learning environments and unstructured online exchanges. Today, students traverse complex digital environments in which cyberbullying, disinformation, data privacy, and digital addiction have the potential to affect not only their academic lives but also their personal development (Hsu et al., 2023). Within this framework, the classroom is not just a site for cognitive learning. It is also a space where students can practice what it means to act ethically when using digital technologies. Teachers play a crucial role in promoting a culture of Digital Social Responsibility (DSR) among their students. This is in part because DSR primarily focuses on the way individuals interact with one another in a digital environment, and teachers have significant opportunities to model for their students the appropriate way to behave in public digital spaces (Vettriselvan, 2025).

The increasingly connected world demands not just DSR but a global digital citizenship that emphasizes ethics and teaches not only what one can do online, but what one should do. When students are online—whether learning, engaging, or expressing themselves—they are frequently required to make ethical decisions. Moreover, research argues that those decisions, if made without reflection, can have a profound impact not only on students' digital footprints but also on the well-being of others (Mattson, 2024). The DSR highlights the importance of accountability, empathy, and respect for others in digital interactions. It guides students to become not merely acceptable but responsible community members in the digital world. It imparts principles such as online integrity, respect for intellectual property, and awareness of the diverse online environment (Lauricella et al., 2020). By cultivating a sense of ethical awareness, DSR helps students recognize the ramifications of their online behavior, encouraging them to engage in critical reflection about the types of actions they may undertake in professional roles that involve digital communication, such as sharing, signaling, or expressing themselves online (Eden et al., 2024).

Additionally, DSR supports the growth of a positive digital culture in schools and broader educational environments. Modeling ethical behavior through structured digital citizenship education equips today's students to counteract harmful online behaviors. These unethical online practices include spreading misinformation, trolling, and the widespread occurrence of

cyberbullying. In today's world of disorganized online behaviors, it is important to stress the basic ethics of responsible digital conduct (Mulyono et al., 2021). The DSR attitude prepares pupils with approaches to stimulate harmless and more inclusive online situations. Pupils can serve as suppliers to the progress of respectful and inclusive online environments (Manca & Delfino, 2021). When educators assimilate DSR conceptions into their lessons, they can support and nurture students who act sensibly and demonstrate ethical responsiveness in online contexts. This could contribute to shaping a generation of learners who engage with digital environments ethically and responsibly. Digital Social Responsibility (DSR) encompasses beyond influencing individual behaviors, but also adds to describing the shared standards of digital citizenship in today's society. Though some educators continue to be pessimistic about its impact, the findings suggest that DSR implementation may contribute to a reduction in cyberbullying incidents (Sato et al., 2023).

These days, teachers seem to do more than just teach facts. They may act as role models, both in class and online, shaping how students think, act, and relate. This larger duty feels uncertain, yet it guides daily student behavior (Kearney & Levine, 2020). When students see teachers' usage of technology and involvement in online settings, they may adopt these behaviors. At the same time, students may question whether imitation is always suitable, predominantly in relation to current ethical problems on the Internet (Istenič Starčič & Lebeničnik, 2020). Teachers model suitable digital practices, including exact source citation, safeguarding personal data, and using inclusive language in online communication (Kearney & Levine, 2020). Teachers struggle to keep polite and respectful communication on social media, even in enthusiastically exciting circumstances.

Every day, digital interfaces in the classroom offer students hands-on supervision on accountable internet usage and the refinement of digital citizenship (Carpenter et al., 2023).

Educators continue to play an essential role in determining how students hypothesize and engage with digital life. By inserting digital morals into their instruction, teachers can address persistent issues such as cyberbullying, propaganda, and digital obsession. Such an obsession has the potential to promote pupils' rational thinking and moral reasoning, though outcomes may differ across classroom settings (Fitria & Suminah, 2020). Furthermore, educators can nurture understanding, answerability, and association within digital surroundings. When Digital Social Responsibility (DSR) values are purposely combined into lessons, teachers act as enablers of change, guiding pupils to worldwide awareness, moral decision-making, and meaningful online contribution. The outcome is the development of more thoughtful, collaborative, and responsible digital citizens (Muir et al., 2021).

Integrating Digital Social Responsibility into everyday instruction has the potential to transform school practices. This indicates that educators need to balance technical skill development with teaching on digital respect and moral online conduct. The purpose of digital education is dual: to prepare pupils with technological skill while also educating accountable and moral digital practices. Though, questions continue regarding the efficacy of such methodologies in modern classroom settings (Al-Abdullatif & Gameil, 2020). The increasing emphasis in educational governance frameworks is on having policies and curricula that not only ensure students achieve academically but also promote their ethical development, particularly in digital spaces (Villar-Onrubia et al., 2022). Incorporating DSR, schools, and educational authorities can ensure that students possess the knowledge and the correct values to navigate digital spaces responsibly. A

school culture founded on accountability, respect, and civic participation cannot be attributed solely to school leadership. It is also shaped by the culture of accountability, respect, and participation that parents and the community model for students. School leaders cannot effectively eliminate an unhealthy culture if the two worlds—school and community—are not aligned in their practices (Dunaway & Macharia, 2021).

Moreover, the subject is closely intertwined with digital citizenship and human conduct in this respect, as it examines how people engage, converse, and form judgments in contexts mediated by technology. Being a digital citizen is more than just possessing technical skills; it also entails having an ethical awareness, a sense of social responsibility, and knowledge of the behavioral norms expected in digital communities (Dunaway & Macharia, 2021). The DSR framework teaches students to embrace a multitude of viewpoints, critically evaluate and discard poor content, and maintain online integrity. Comprehending and promoting DSR contributes to the formation of a positive human condition, especially among digital natives. Not only does it encourage the behaviors that are desirable in the younger generation, but it also serves to guide their digital interactions with constructive real-world parallels. Digital Social Responsibility (DSR) covers outside teaching methodologies; it also concerns how communities make entities to contribute effectively in a digitally mediated and democratic future (Öztürk, 2021). This study inspects the application of Digital Social Responsibility (DSR) in schools, with a specific emphasis on teacher preparedness. It proposes that educators may assist as digital role models for pupils. It also recognizes approaches through which schools can mix Digital Social Responsibility (DSR) into teaching learning environment. The paper proposes wider suggestions for school strategies and raises questions round the role of digital citizenship in determining future generations.

2. Research Objectives:

1. To define and contextualize Digital Social Responsibility (DSR) within the framework of modern education.
2. To investigate the role of teachers in modeling and promoting ethical digital behavior among students.
3. To analyze the challenges and opportunities associated with integrating DSR into classroom teaching.
4. To examine the relationship between DSR, educational governance, and the development of digital citizenship.
5. To recommend practical strategies for teacher training programs to enhance educators' capacity to foster DSR in students.

3. Theoretical and Conceptual Framework

Digital Social Responsibility involves the vigilant and moral usage of online tools. Digital tools have the potential to either advantage or damage entities, and harmful effects can range to the wider public. It is significant to work out carefulness before sharing a post or any content on social media. DSR is concerned not only with avoiding harmful uses but also with promoting responsible uses of digital technologies grounded in community values. DSR applies to digital communities (Lan, 2025). Online communication involves representing respect, protecting personal information, and distributing only content that can be morally copied by others. Furthermore,

positive discourse should be encouraged, though entities frequently neglect these central norms in online settings. DSR has been conceptualized as an extension of the Corporate Social Responsibility (CSR) framework into the realm of software development. While CSR addresses the societal impacts of businesses broadly, DSR is more narrowly focused on the decisions made by software developers that affect the societies in which their products are deployed (Nora A. Mothafar et al., 2024). As digital technologies permeated daily life, the principles of DSR—adapted for behaviors in online environments—were applied to human actions in both individual and institutional contexts. Initially, DSR was applied to domains such as social media, digital marketing, and public communication. Scholars later extended DSR to the fields of education and youth development (Carroll, 2020).

There is increasing academic and instructive attention in Digital Student Research (DSR). This may contain educators and pupils engaging more often in online classroom environments, not only for formal teaching but also for combined projects and reliable forms of digital expression. As a result of this shift, schools must move beyond a special emphasis on students' achievement scores. Teachers must also monitor how pupils act online and advance their digital individualities. This supervision has the potential to update wider educational policies (Yatsenko, 2023). Progressively, schools are likely to move beyond the spread of actual knowledge toward preparing pupils as digital citizens who are sensibly involved in online settings. This viewpoint is consistent with Bandura's Social Learning Theory, which postulates that entities obtain both productive and harmful actions through observation of others. Within digital settings, this suggests that educators and peers play an important role in determining one another's choices and practices. For students, this procedure includes identifying how their online activities, including the posts or content they share and the communications they initiate, contribute to the overall environment of digital spaces. Such consciousness signifies a vital step to nurturing more accountable and moral internet usage (Soriani, 2018).

Digital Social Responsibility (DSR) is narrowly linked to conceptions of digital ethics, online human rights, and civic duty, establishing a coated framework for answerable and responsible online engagement, even as meanings continue to grow (Pucelj & Bohinc, 2024). The ethical basis of DSR rests on digital ethics, which pursue to monitor the responsible usage of technology and alleviate its impending harms. In this respect, DSR functions as a range for addressing pressing digital encounters, including data protection, online privacy, equality, and the clear usage of artificial intelligence (van der Merwe & Al Achkar, 2022). Within instructive settings, pupils and educators alike draw upon elementary digital moral values in their daily practices, which inspire justice, precision, and reverence in communication. For example, DSR in schools encompasses beyond stopping cyberbullying or plagiarism; it also highlights the cultivation of uprightness, responsiveness, and responsibility in digital connections. As such, DSR delivers a framework through which moral values are endorsed not only within the classroom but also across broader online settings (Mueller, 2022).

According to Pucelj and Bohinc (2024), Digital Social Responsibility (DSR) is narrowly connected to human rights, addressing issues such as confidentiality, freedom of expression, access to information, and online safety. Within educational settings, pupils are educated not only regarding their privileges but also about their tasks in digital settings. This placement inspires them to

advocate for reasonable access and to add to the expansion of more comprehensive online spaces. Educators, temporarily, highlight the threats of discrimination and the importance of regulatory frameworks that guard all users (Kaitatzi-Whitlock, 2021). By promoting this responsiveness, DSR nurtures a sense of civic duty that encompasses beyond professional or academic responsibilities to sincere public engagement. For example, pupils may be stimulated to apply digital tools in socially useful ways, such as supportive local contributions or public initiatives. Though the room of such energies may initially seem limited, these practices deliver valuable chances for students to progress digital citizenship grounded in reverence, social responsiveness, and shared responsibility (Wulandari et al., 2021).

Digital Social Responsibility (DSR) has the potential to foster just and comprehensive online classrooms by stressing compassion and reverence. Though, queries continue regarding its capability to reach all pupils, mainly those who lack satisfactory technological access (Siddiqi, 2024). In current practice, educators progressively depend on digital technologies for teaching, discussion, and assessment. Within this context, DSR provides a framework for ensuring that all learners, regardless of background, skill level, or prior technological experience, are able to participate meaningfully and achieve academic success. Yet, persistent challenges continue to hinder this goal (Ngqunguza et al., 2024). Equity in digital education also aligns with initiatives such as the Digital Bill of Rights, which seeks to guarantee universal access and fair treatment in online learning environments. Embedding DSR within classroom practices may therefore contribute to cultivating safe and respectful digital spaces. Conversely, the absence of respect and inclusivity risks marginalizing certain learners, contradicting the broader societal expectation that schools function as equitable and supportive institutions (Kulal et al., 2024).

The balanced teaching methods look as if to be related to DSR. Educators who apply DSR are more likely to choose digital materials that are available to all pupils. They may also make online settings for collaborative and struggle to design spaces where each learner's point of view is valued. Therefore, classroom learning can be enhanced (Mothafar et al., 2024). Digital Social Responsibility (DSR) can support students in actively participating within online settings, encouraging respect and accountability. While it empowers learners and promotes responsible and secure practices in virtual classrooms, it can limit their creative expression sometimes (Herwix, 2024).

DSR is often linked with international guidelines designed to ensure the secure use of technology in schools. On the other hand, digital citizenship highlights each person's accountability for navigating digital environments. Therefore, Teachers and students are encouraged to utilize critical thinking before sharing or uploading content. It could assist in preventing misconduct and enhancing daily learning. (João Mattar et al., 2022). DSR appears to be based on UNESCO's 2018 framework on digital competencies for educators, which offers recommendations for the skills, dispositions, and knowledge required for successful practice.

Thus, educators are urged to introduce technology into their regular lessons, to promote inclusive and moral methods that give students around worldwide chances to learn effectively. (João Mattar et al., 2022). Teachers' rising engagement in online communities demonstrates the value of digital tools in teaching. Even though these tools might empower students, there are still unresolved ethical and inclusivity issues, which highlights the need for stronger policy initiatives and

defending for digital rights. (Zakirova & Pol, 2024). Teachers may need to demonstrate honesty, fairness, and empathy online because these abilities seem to align with the DSR concept. Additionally, the International Society for Technology in Education (ISTE) Standards provide objectives for educators and students. Ultimately, the expectation goes further than accountability to include promoting digital citizenship, which promotes resilience and collective growth in a society that is becoming more and more digital. ISTE defines digital citizenship as engaging with technology in an ethical and responsible manner while actively contributing to professional and social online communities. (Nora A. Mothafar et al., 2024).

4. Research Design

This study used a mixed-methods approach, integrating test results and interview data to give an extensive understanding of how educators view and implement digital social responsibility in the classroom. The researchers thought using two approaches would yield information that one approach might miss. They might get a closer look at how DSR influences instruction and student conduct as a result. Since complex and interconnected factors frequently converge in the field of education, the choice of this design is appropriate. Although managing and funding two data streams is still a practical challenge for many educational contexts, researchers can validate their findings and cultivate confidence in conclusions by integrating both data sources. (Creswell & Plano Clark, 2018). It might appear that the study identifies trends in teachers' knowledge, perspectives, and behaviors regarding DSR. mostly in data that is numerical.

Convergent parallel design was used by the researchers, who simultaneously gathered qualitative narratives and quantitative data. Before combining the results, the researchers looked at each data set independently, a method that could provide more insight for later research. (Creswell, 2014). By using the combination of personal narratives and quantitative data, this method provides a balanced viewpoint on the problem. The pedagogical and behavioral aspects of DSR align with a mixed-methods framework. One approach could limit the outcomes while increasing the risk of overlooking crucial insights. (Creswell, 2014).

The target population of this study consisted of teachers at the primary, secondary, and higher secondary levels employed in both public and private educational institutions. Teachers were selected for a fundamental reason: they play a central role in shaping students' behavior regarding digital engagement. Not all of them possess the same level of exposure to digital technology in the classroom (Zhao et al., 2013). However, they span a spectrum of experiences and are collectively responsible for guiding students toward digital citizenship.

In the quantitative phase, a diverse and representative sample was ensured through the use of a stratified random sampling technique. This approach enabled the inclusion of educators from varied geographic locations (urban and rural), academic levels, and gender identities, allowing for a broad range of perspectives in the DSR discourse (Willie, 2024). For the qualitative phase, participants were purposefully selected based on their digital competence and classroom technology experience. This strategy was expected to yield richer insights for the researchers. (Almeida, 2018; Morse, 2016).

Fifteen teachers participated in semi-structured interviews, though the format seemed to be fairly adaptable. A self-created questionnaire was then given out by the researchers to address four main

themes: (1) whether technology was used in an ethical manner; (2) how teachers handled students' online conduct; (3) how much digital practices encouraged social responsibility and digital citizenship; and (4) whether DSR content was included in classroom instruction. It is important to note that some could argue that other important factors are not included in this list. Further professional development could lead to improved results. (Schoonenboom & Johnson, 2017). Using a questionnaire, teachers' opinions, strategies, and challenges in encouraging responsible online behavior were most likely investigated. The classroom outcome is still unknown.

Content validity was established by having experts review the material. That could indicate that the study is more trustworthy. Various strategies were used to maintain the findings' usefulness. The instruments were revised following a pilot study, after which data were collected from the target sample. (Mohamad et al., 2015). We attempted to demonstrate content validity during the qualitative stage by gathering information from various sources. Triangulation, which compares interviews, logs, and surveys, probably increases credibility, but it might overlook some bias. (Souza et al., 2017; Ruslin et al., 2022). The study observed to ethical guidelines that protected the dignity and well-being of its participants. Withdrawal was allowed at any time, and consent was obtained in advance. The study was voluntary, and raw data were returned if requested. Each participant was given a code instead of a name, and no results were linked back to individual codes. (Khan, 2016).

5. Data Analysis

We collected information from two hundred educators and performed quick statistical analyses. According to the data, the mean DSR score appeared to be moderately high. It may indicate that most teachers possess a basic understanding of digital ethics. To investigate variability, the analysis used quartile distributions, score ranges, and standard deviation. Additionally, inferential tests were used to investigate potential variations between regions or grade levels. The results indicated a small but not significant variation. Although other factors might affect results, overall, the results point to a general awareness of digital ethics. More investigation is required to find more profound trends among schools. An ANOVA test revealed no statistically significant difference in DSR scores across primary, secondary, and higher secondary teachers, $F(2, 197) = 1.96$, $p = .144$. Similarly, an independent samples t-test comparing the DSR scores of urban and rural teachers indicated no significant difference, $p = .801$. These results suggest that perceptions and practices of DSR were consistent across teaching levels and locations within the sample.

Table 1 presents the descriptive statistics for the DSR scores of 200 teachers. The mean (M), standard deviation (SD), and quartile values indicate a moderately high level of DSR awareness among participants.

Table 1: *Descriptive Statistics of DSR Scores*

N	M	SD	Min	Q1	Median	Q3	Max
200.0	70.42	9.43	46.98	64.06	70.23	76.64	91.9

Table 2 shows the average DSR scores categorized by teaching level and location. While variations exist, inferential statistics confirmed that these differences were not statistically significant.

Table 2: Mean DSR Scores by Location and Teaching Level

Location	Higher Secondary	Primary	Secondary
Rural	71.06	70.73	70.07
Urban	72.88	70.1	66.67

Figure 1 displays the distribution of DSR scores by teaching level using a boxplot. It illustrates the range and median scores across primary, secondary, and higher secondary groups.

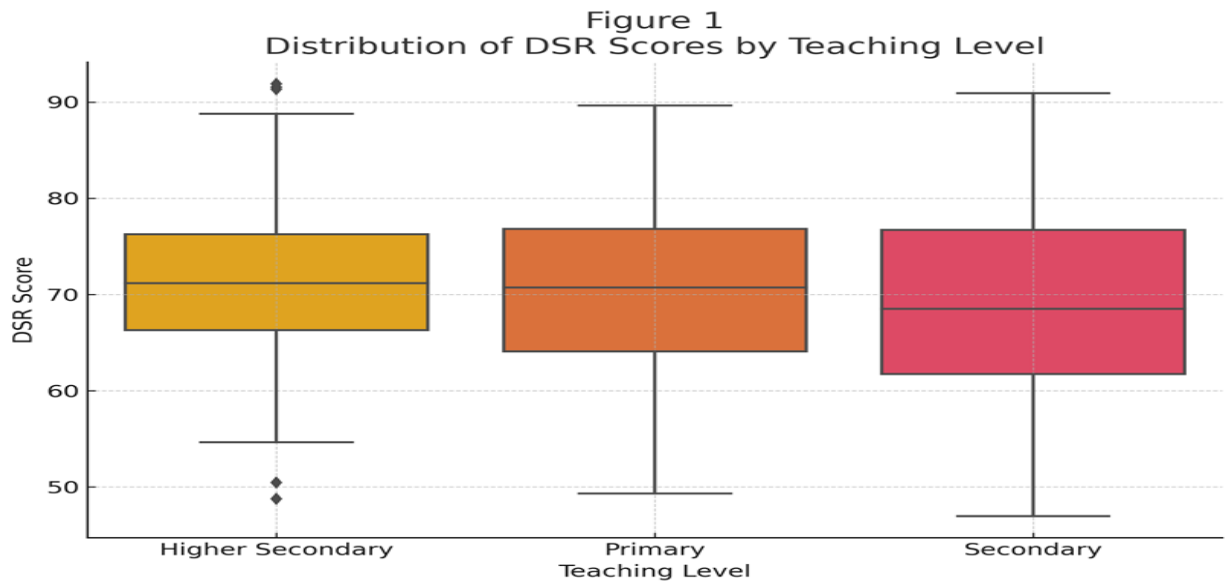
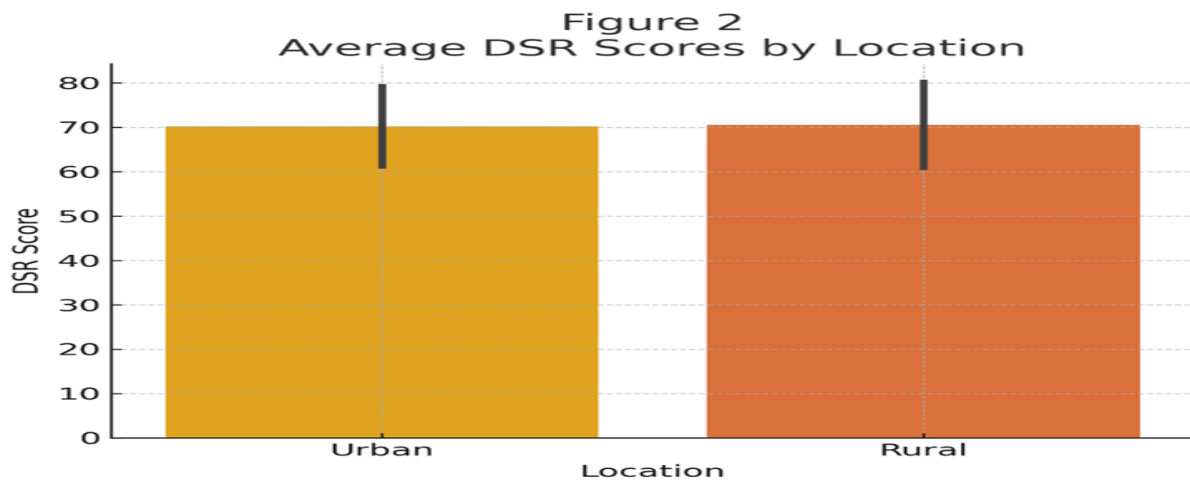


Figure 2 presents a bar chart comparing the average DSR scores between urban and rural teachers. The means appear relatively close, supporting the t-test result showing no significant difference.



6. Qualitative Data Analysis

The table below presents the key themes and sub-themes identified during the thematic analysis of teachers' perceptions and experiences regarding Digital Social Responsibility (DSR).

Theme	Sub-Themes	Description
Role Modeling	Demonstrating Responsible Use of Technology, Setting Online Etiquette Standards	Teachers highlighted the importance of their behavior in influencing students' digital ethics.
Curriculum Integration	Incorporating DSR Topics, Promoting Digital Citizenship in Lessons	Teachers reported integrating DSR through specific topics and structured class discussions.
Digital Challenges	Cyberbullying, Misinformation, Access Inequality	Participants discussed real-world issues such as digital safety and unequal access to technology.
Ethical Awareness	Understanding of Online Ethics, Promoting Respect and Empathy	Teachers emphasized fostering a culture of empathy, respect, and critical thinking online.
Professional Development	Need for Training, Continuous Learning on Digital Tools	Respondents stressed the need for ongoing training to adapt to evolving digital responsibilities.

Many teachers emphasized their responsibility as digital role models, noting that students often mimic their behavior online. One participant shared, *"If I forward unauthenticated news or post something inappropriate on WhatsApp groups, how can I expect my students to behave responsibly online?"* This quote reflects the recognition that ethical digital behavior must be demonstrated by teachers themselves, reinforcing Bandura's Social Learning Theory which emphasizes learning through observation.

The importance of teaching by example was frequently cited by teachers when talking about digital etiquette. One teacher said, *before starting any Google Classroom session, I remind students about respectful commenting and online manners.* This kind of consistent reinforcement, by a multitude of teachers across various online platforms, helps in fostering a still nascent online learning environment.

Intentional integration of digital ethics was reported by a few teachers. One participant explained, *During English lessons, I assign tasks that involve identifying fake news or writing emails with proper digital tone. It's subtle, but students learn the value of online responsibility.* This approach indicates that there is a vehicle for embedding DSR in the curriculum without necessitating a separate subject.

Teachers also described project-based learning as an effective method to foster digital responsibility. For example, one teacher mentioned, *"I ask students to design digital posters on*

cyberbullying awareness. This way, they not only learn the topic but become ambassadors of digital ethics." Such activities empower students and make DSR practical and action-oriented.

Teachers commonly struggle with how students act in digital spaces. One teacher stated, "Students take screenshots of jokes and share them online, which can quickly escalate into cyberbullying." It demonstrates the real-world consequences of online misconduct while exposing the limited authority teachers have in virtual learning settings.

It demonstrates the real-world consequences of online misconduct while exposing the limited authority teachers have in virtual learning settings. A small-town student stated, "Rural children frequently lack online manners. Before now, they had no tools or training." That demonstrates the correlation between digital skills and inclusion, which may necessitate more extensive, inclusive curricula in schools today.

Many educators believe that empathy and DSR are closely related. One even states, "Awareness that digital comments can cause real harm may encourage students to reflect before typing." This suggests that DSR should go above and beyond the rules in order to focus on human values and ethical emotions for all of the learners here.

According to one teacher, "I instruct students in recognizing tricks and challenging sources. That appears to be the starting point for digital responsibility." This suggests that DSR goes beyond actions, requiring cognitive skills. Critical thinking appears essential in navigating today's complex online world.

Many educators claim they are undertrained. One even stated, "We are learning alongside the students because no one taught us how to teach digital responsibility." This points to a gap that might enhance the implementation of DSR in schools if it were closed. Morale among teachers frequently declines. Teachers acknowledge that digital tools evolve rapidly. One educator even stated, "Students engage daily with platforms such as TikTok, Instagram, and AI tools." Without staying current, teachers risk losing their ability to mentor students. Continuous school-based training appears vital for sustaining their role.

Discussion

There is a growing focus on digital social responsibility in the classroom. Teachers establish conventions for students' behavior on the internet by using tablets and online platforms. Students' interactions with one another in a virtual room may be influenced by that. Some argue that although teachers aren't always good role models, students still behave in ways that reflect their own habits. Therefore, educators should think twice about their very digital conduct (Ribble, 2011). According to Bandura's Social Learning Theory, learning can be guided by observing a peer solve a math problem. Since imitation and observation serve as an essential component of this process, models are crucial to the growth of young students. (Bandura, 1977). Students frequently take inspiration from their teachers who set an example of appropriate online behavior. Despite a few challenges, this strategy supports a more widespread culture of digital responsibility.

Teachers' use of DSR concepts in the classroom could be an additional outcome of the study. Some educators claim that topics like misinformation, cyberbullying, and digital etiquette were included in computer labs, social studies units, and English classes. The integration across subjects indicates

that teachers consider DSR important in multiple areas and are capable of embedding its principles into their teaching. (Choi et al., 2018). Teaching DSR through real-world projects may boost student interest, and it seems to deepen their sense of digital ethics. Additionally, graduates may be more prepared to apply DSR concepts in a work setting with such hands-on experience, though actual outcomes may differ.

Even with positive efforts, barriers remain, particularly the shortage of digital tools reported by teachers in rural contexts". Digital proficiency varies among students, and there appears to be an increase in online misconduct. Teachers often worry about student safety in digital settings. Such concerns reflect findings by Livingstone et al. (2017), highlighting how biased access and scarce professional development affect students' online safety. To address this, additional funding for infrastructure and internet, equal access for all, and continuous training that benefits teachers may be required. Individuals may fall behind if these adjustments are not made. If schools don't act now, progress will slow down.

Findings from the interviews suggest that the affective dimension of digital responsibility is highly valued. Teachers frequently point out that before posting anything online, students must have empathy, respect, and some thought. Ohler (2012) emphasizes that developing digital character, values, and accountability is as crucial as teaching technical software skills. Additionally, the study seems to identify a gap: professional-development programs that emphasize digital social responsibility are not offered in schools. Many teachers report insufficient training and feel overwhelmed when put it to with numerous digital tools. One teacher once told me, for instance, that they were unsure of how to discuss cyberbullying in a math class. Thus, the ISTE (2016) standards may be useful if they call for a deeper discussion of moral decisions made online rather than just technical expertise. Also, these programs might help people who are feeling stressed out.

In conclusion, by emphasizing the function of educators as digital mentors, this study adds to the current conversation on digital ethics and citizenship. The different aspects of digital responsibility were successfully expressed by the mixed-methods design. Although the results are encouraging and demonstrate teachers' attempts to set a good example for students online, they also highlight shortcomings in structural support and training. These findings urge policymakers, curriculum designers, and school administrators to work together to establish inclusive, moral, and equitable learning environments. Therefore, meaningful change needs to take place.

Conclusion

In the classroom, teachers play a crucial role in promoting Digital Social Responsibility (DSR). They demonstrate leadership by modeling appropriate behavior on the internet for students in addition to remaining true to the classroom plan. Simultaneously, they offer straightforward guidance, such as reminding students to think before clicking or not to disclose sensitive data. Findings indicate that although teachers strive to embed DSR in classroom practice, challenges including digital inequities, insufficient training, and privacy issues restrict progress. Overall, the situation is not encouraging because some schools have better resources than others. In order to prepare the future generation of digital citizens, these barriers have to be overcome. This might involve developing lessons that let students practice responsible behavior, increasing the number of teacher training workshops, and making sure schools offer enough assistance. Ultimately,

schools must provide continuous support otherwise, any progress may be momentary and how well learners understood could decrease.

Recommendations

Based on the results, incorporating DSR into professional development and regular classroom programs appears sensible. This could provide educators with a consistent set of moral resources for online scenarios. Furthermore, educational institutions should probably occasionally organize workshops to give teachers the skills they need to deal via issues like data privacy, false news, and cyberbullying. Such problems appear to be just as significant as those previously taught. It might also make students safer. These workshops should be designed to have a tangible and immediate impact on teachers' day-to-day practice. In addition, providing equitable access to online resources in both urban and rural schools is another measure educational policymakers can adopt to reduce the digital divide. By ensuring that all students have equal access to technology, policymakers enable them to engage with and benefit from DSR. Schools can further advance this initiative by involving not only educators and students but also parents in discussions about respectful, responsible, and inclusive online behavior.

Author Contributions:

Conceptualization, M.N.S. AND., Z.J. methodology, M.N.S. and M.A.S.; validation, M.N.S. and M.A.M; formal analysis, M.N.S. and Z.J.; investigation, M.N.S. and M.A.S.; data curation, M.N.S. and M.A.M.; writing—original draft preparation, M.N.S, Z.J. M.A.S.; writing—review and editing, M. N.S., Z.J; supervision, M.N.S. All authors have read and agreed to the published version of the manuscript.

Funding

This research received no external funding.

Institutional Review Board Statement

The researchers received prior approval from the university's Institutional Review Board (IRB). The Ethics Committee of the institution approved this research, as indicated by letter number 47-18/CMS, dated 2 August 2024. Informed written consent was obtained from all participants involved in this study.

Data Availability Statement

The research data used to support the findings of this study are available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

References

- Al-Abdullatif, A., & Gameil, A. (2020). Exploring students' knowledge and practice of digital citizenship in higher education. *International Journal of Emerging Technologies in Learning (iJET)*, 15(19), 122-142.
- Almeida, F. (2018). Strategies to perform a mixed methods study. *European Journal of Education Studies*.
- Carpenter, J. P., Shelton, C. C., & Schroeder, S. E. (2023). The education influencer: A new player in the educator professional landscape. *Journal of Research on Technology in Education*, 55(5), 749-764.
- Carroll, A. B. (2020). Responsible management education: The role of CSR evolution and traditions. In *The SAGE Handbook of Responsible Management Learning and Education* (pp. 73-91). SAGE Publications Ltd.
- Dunaway, M., & Macharia, M. (2021). The effect of digital citizenship on negative online behaviors and learning outcomes in higher education. *Journal of Information Systems Education*, 32(4), 294-307.
- Eden, C. A., Chisom, O. N., & Adeniyi, I. S. (2024). Promoting digital literacy and social equity in education: lessons from successful initiatives. *International Journal of Management & Entrepreneurship Research*, 6(3), 687-696.
- Fitria, H., & Suminah, S. (2020). Role of teachers in digital instructional era. *Journal of social work and science education*, 1(1), 70-77.
- Herwix, A. (2024). *Toward a Responsible Design Science Research Ecosystem for the Digital Age: A Critical Pragmatist Perspective* Universität zu Köln].
- Hsu, C.-H., Hsu, P.-C., & Chen, R.-S. (2023). Early childhood preservice teachers' attitudes towards online engagement, civic responsibility, and service learning. *Education and Information Technologies*, 28(3), 3173-3190.
- Istenič Starčič, A., & Lebeničnik, M. (2020). Investigation of university students' perceptions of their educators as role models and designers of digitalized curricula. *Human Technology: An Interdisciplinary Journal on Humans in ICT Environments* (1).
- Kaitatzi-Whitlock, S. (2021). Toward a digital civil society: digital ethics through communication education. *Journal of Information, Communication and Ethics in Society*, 19(2), 187-206.
- Kearney, M. S., & Levine, P. B. (2020). Role models, mentors, and media influences. *The Future of Children*, 30(1), 83-106.
- Kostadinova, I. (2019). Digital models for transformation of corporate social responsibility education. 2019 29th Annual Conference of the European Association for Education in Electrical and Information Engineering (EAEEIE).
- Khan, I. A. (2016). Ethical considerations in an educational research: a critical analysis. *British Journal of Education, Society and Behavioural Science*, 13(2), 1-8.

- Kulal, A., Dinesh, S., Abhishek, N., & Anchan, A. (2024). Digital access and learning outcomes: a study of equity and inclusivity in distance education. *International Journal of Educational Management*, 38(5), 1391-1423.
- Lan, H. (2025). Sustainable development of social responsibility in universities in the digital era: Perceptions and advances. *Information Development*, 02666669241303124.
- Lauricella, A. R., Herdzina, J., & Robb, M. (2020). Early childhood educators' teaching of digital citizenship competencies. *Computers & Education*, 158, 103989.
- Manca, S., & Delfino, M. (2021). Adapting educational practices in emergency remote education: Continuity and change from a student perspective. *British journal of educational technology*, 52(4), 1394-1413.
- Mattar, J., Santos, C. C., & Cuque, L. M. (2022). Analysis and comparison of international digital competence frameworks for education. *Education Sciences*, 12(12), 932.
- Mattar, J., Santos, C. C., & Cuque, L. M. (2022). Analysis and Comparison of International Digital Competence Frameworks for Education. *Education Sciences*.
- Mattson, K. (2024). *Digital citizenship in action: empowering students to engage in online communities*. International Society for Technology in Education.
- Millagala, N. (2023). Towards a self-directed ethical framework for digital communication, fostering responsible engagement in social media and digital media. *SSRN Electronic Journal*.
- Mohamad, M. M., Sulaiman, N. L., Sern, L. C., & Salleh, K. M. (2015). Measuring the validity and reliability of research instruments. *Procedia-Social and Behavioral Sciences*, 204, 164-171.
- Morse, J. M. (2016). *Mixed method design: Principles and procedures*. Routledge.
- Mothafar, N. A., Zhang, J., Alsoffary, A., Masoomi, B., Al-Barakani, A., & Alhady, O. S. (2024). Digital social responsibility towards digital education of international higher education students' institutions: Digital culture as mediator. *Heliyon*, 10(17).
- Mothafar, N. A., Zhang, J., Alsoffary, A., Masoomi, B., AL-Barakani, A., & Alhady, O. S. (2024). Digital social responsibility towards digital education of international higher education students' institutions: Digital culture as mediator. *Heliyon*, 10.
- Mueller, B. (2022). Corporate digital responsibility. *Business & Information Systems Engineering*, 64(5), 689-700.
- Muir, C., Dörnyei, Z., & Adolphs, S. (2021). Role models in language learning: Results of a large-scale international survey. *Applied Linguistics*, 42(1), 1-23.
- Mulyono, B., Affandi, I., Suryadi, K., & Darmawan, C. (2021). Digital citizenship competence: Initiating ethical guidelines and responsibilities for digital citizens. *Ichelss 2021*, 165-175.

- Ngqunguza, A., Seleke, Z., & Makhoba, T. (2024). Digital Transformation in Higher Education: Leadership Strategies for Ensuring Equity and Inclusion in Digital Learning Environments. *Journal of Public Administration and Development Alternatives (JPADA)*, 9(2), 101-114.
- Öztürk, G. (2021). Digital citizenship and its teaching: A literature review. *Journal of Educational Technology and Online Learning*, 4(1), 31-45.
- Pucelj, M., & Bohinc, R. (2024). *Balancing Human Rights, Social Responsibility, and Digital Ethics*. IGI Global.
- Ruslin, R., Mashuri, S., Rasak, M. S. A., Alhabsyi, F., & Syam, H. (2022). Semi-structured Interview: A methodological reflection on the development of a qualitative research instrument in educational studies. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 12(1), 22-29.
- Schoonenboom, J., & Johnson, R. B. (2017). How to construct a mixed methods research design? *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 69(Suppl 2), 107-131.
- Souza, A. C. d., Alexandre, N. M. C., & Guirardello, E. d. B. (2017). Psychometric properties in instruments evaluation of reliability and validity. *Epidemiologia e servicios de saude*, 26, 649-659.
- Sato, S. N., Condes Moreno, E., Rubio-Zarapuz, A., Dalamitros, A. A., Yañez-Sepulveda, R., Tornero-Aguilera, J. F., & Clemente-Suárez, V. J. (2023). Navigating the new normal: Adapting online and distance learning in the post-pandemic era. *Education Sciences*, 14(1), 19.
- Siddiqi, M. M. (2024). Future of digital education: inclusive, immersive, equitable. *MediaSpace: DME Media Journal of Communication*, 5(01), 8-24.
- Soriani, A. (2018). From media education to digital citizenship. Origins, perspectives and policy implementations in the school systems across Europe. *Ricerche di Pedagogia e Didattica*, 13(3), 85-113.
- van der Merwe, J., & Al Achkar, Z. (2022). Data responsibility, corporate social responsibility, and corporate digital responsibility. *Data & Policy*, 4, e12.
- Vershon, E. C. (2024). *Role of Teacher Attitude on Digital Citizenship Skills and Digital Footprint Awareness in the Academic Outcomes of Middle School Students* University of St. Thomas (Houston)].
- Vettriselvan, R. (2025). Empowering Digital Education: The Future of Value-Based Learning in the Digital Era. In *Empowering Value Co-Creation in the Digital Era* (pp. 199-228). IGI Global Scientific Publishing.
- Villar-Onrubia, D., Morini, L., Marín, V. I., & Nascimbeni, F. (2022). Critical digital literacy as a key for (post) digital citizenship: an international review of teacher competence frameworks. *Journal of e-Learning and Knowledge Society*, 18(3), 128-139.
- Wulandari, E., Winarno, W., & Triyanto, T. (2021). Digital citizenship education: Shaping digital ethics in society 5.0. *Universal Journal of Educational Research*, 9(5), 948-956.

- Willie, M. M. (2024). Population and target population in research methodology. *Golden Ratio of Social Science and Education*, 4(1), 75-79.
- Yatsenko, V. (2023). Formation of social responsibility in higher education institutions: modeling mechanisms in the context of structural and innovation transformations. *Економіка розвитку систем*, 5(1), 35-41.
- Zakirova, D., & Pol, M. (2024). Social responsibility in the context of digitization of higher education: cybersecurity as a key factor of change. *Public Administration and Civil Service*.
- Zhao, L., Tian, L., Cai, T., Claggett, B., & Wei, L.-J. (2013). Effectively selecting a target population for a future comparative study. *Journal of the American Statistical Association*, 108(502), 527-539.