Interplay between digital citizenship skills and teaching styles of public elementary school teachers in Quezon district, Nueva Vizcaya

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Abstract

This quantitative, descriptive-correlational study explored the relationship between digital citizenship skills and teaching styles among 105 public elementary school teachers in Quezon District, Nueva Vizcaya, during the 2023-2024 academic year. Teachers perceived digital citizenship skills—digital access, communication, literacy, etiquette, health and wellness, and security—were assessed alongside their preferred teaching styles: expert, formal authority, personal model, facilitator, and delegator. Data collection used a validated instrument, and statistical analysis provided insights into the correlations between these variables. Overall, teachers rated their digital citizenship skills as very good, with a grand mean of 3.25. High scores were noted in digital access (3.48), literacy (3.47), and communication (3.45), while health and wellness (3.00) and security (2.63) scored lower. Preferred teaching styles included personal model (3.66) and facilitator (3.67), emphasizing personalized and collaborative methods. Correlation analysis showed a strong positive correlation (r = 0.715) between digital citizenship skills and the facilitator style, suggesting that a collaborative approach enhances digital citizenship. Findings informed a management intervention program to enhance digital citizenship skills and teaching styles in Quezon District.

Keywords: digital citizenship skills, teaching styles, public elementary teachers

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1. Introduction

In the post-pandemic era, the importance of digital citizenship skills among elementary school teachers globally has significantly heightened. The pandemic accelerated the integration of technology into education, making it an essential tool for both teaching and learning. Elementary school teachers are now not only educators but also digital guides, responsible for imparting critical skills to their students. Digital citizenship skills empower teachers to educate young learners about responsible digital behavior, including ethical conduct, respectful communication, and cyber etiquette. These skills form the foundation for positive online interactions and safe internet use. Teachers must navigate a complex online landscape, being well-versed in online platforms to guide their students effectively. Digital citizenship skills ensure students' safety while promoting healthy digital habits. These skills also enhance critical thinking and evaluation, helping students discern credible sources, analyze online content critically, and understand the consequences of their online actions. Additionally, they address cybersecurity and online safety, teaching students to protect personal information and stay safe online.

In the Philippine context, elementary teachers face challenges integrating digital citizenship skills due to resource constraints, limited access to technology, and inadequate infrastructure. Developing age-appropriate content that aligns with the curriculum and providing comprehensive teacher training are significant hurdles. Ensuring equitable learning opportunities across different socioeconomic backgrounds and encouraging parental involvement in digital citizenship education are also challenging. In the Department of Education-Quezon District in Nueva Vizcaya, public elementary school teachers encounter significant obstacles, including limited access to technology, insufficient teaching materials, and inadequate training. Maintaining student engagement in digital citizenship topics and balancing traditional content with these skills is challenging. Continuous adaptation to evolving technology and addressing cybersecurity concerns without causing fear are crucial.

In the post-pandemic era, varied teaching styles have become essential in shaping education. Flexibility in teaching methods is crucial to meet students' evolving needs. Teachers must employ various styles, including expert, formal authority, personal model, facilitator, and delegator, to engage diverse learners effectively. This adaptability ensures education remains engaging and effective, emphasizing the development of digital citizenship skills for responsible digital navigation. In the Philippine context, adaptable teaching methods are crucial for catering to the diverse cultural and socioeconomic backgrounds of students. Utilizing a mix of teaching styles fosters an inclusive, dynamic learning environment, ensuring effective engagement for students with different learning preferences and abilities.

The public elementary school teachers in Quezon District, Nueva Vizcaya, face a spectrum of concerns and challenges in implementing effective teaching styles. Resource limitations often pose a significant hurdle in diversifying teaching methodologies. The lack of access to updated teaching materials, technological resources, and adequate training impedes their ability to adopt innovative and varied teaching approaches. This often results in a reliance on traditional teaching methods that may not always cater to the diverse learning needs of students. Moreover, the cultural and socioeconomic diversity within the district adds complexity to the challenge. Adapting teaching styles to meet the needs of students from varying backgrounds and with different learning preferences demands a considerable amount of effort and tailored approaches.

Additionally, the transition to digital education has posed substantial challenges for teachers in the district. Integrating technology into their teaching styles requires not only access to resources but also the expertise to effectively utilize these tools. Balancing the incorporation of digital tools while ensuring accessibility and equity

for all students becomes a significant concern in this context. Another notable challenge involves classroom management. With potentially larger class sizes and a variety of learning abilities within a single classroom, maintaining a balanced and interactive teaching environment can be demanding. This requires teachers to tailor their teaching styles to ensure engagement and inclusion for all students, which can be a daunting task in such diverse classrooms. Moreover, the need for ongoing professional development to enhance teaching skills and explore new methodologies is a concern. Limited opportunities for continuing education or professional training hinder the teachers' capacity to adapt and innovate in their teaching practices. These challenges highlight the multifaceted nature of teaching in Quezon District, Nueva Vizcaya. As educators strive to address these concerns, it is crucial to have ongoing support, access to resources, and tailored professional development opportunities to foster a more diverse and effective teaching approach.

The one-peso question is- can digital citizenship skills of public elementary school teachers correlate with their teaching styles or vice versa? It is the assumption of this current investigation that the correlation between digital citizenship skills of public elementary school teachers and their teaching styles presents a research gap needed to be addressed. Digital citizenship skills encompass various proficiencies required to navigate the digital landscape responsibly. In contrast, teaching styles encapsulate the diverse methodologies teachers use to impart knowledge and engage with their students. There is a considerable debate on whether these two areas interconnect or influence each other which the current study would like to prove.

2. Review of Literature

This study is anchored on Social Learning Theory by Bandura (1977) in the case of digital citizenship skills, and Theory of Constructivism by Piaget (1970) for the research construct teaching styles. These theories were discussed below in the first three paragraphs to have a better understanding of their role in the assumption that there is correlation of the two main research variables considered in this study. After which, the researcher discussed each theory separately in the succeeding pages followed by salient concepts related thereto. The theories of Constructivism and Social Learning provide vital insights into the potential correlation between digital citizenship skills and teaching styles. Constructivism, a foundational theory in education introduced by Piaget, Vygotsky, and Dewey, emphasizes active learning and knowledge construction by individuals through experiences, social interactions, and reflection. This approach closely aligns with teaching styles such as student-centered and collaboration-driven methods, emphasizing interactive learning environments and hands-on experiences. When applied to digital citizenship skills, Constructivist-based teaching styles prioritize student engagement, critical thinking, and problem-solving, laying the groundwork for responsible digital behavior and ethical use of technology.

On the other hand, Social Learning Theory, as advocated by Bandura, highlights the influence of observation and social interactions in the learning process. This theory stresses the significance of role models, peer interaction, and observational learning in shaping behaviors. In the context of digital citizenship skills, the Social Learning Theory supports teaching styles that encourage peer learning, modeled behaviors, and cooperative group activities. Observational learning in the digital environment is pertinent in understanding and emulating appropriate online behavior, privacy protection, and ethical use of digital resources.

The probable correlation between digital citizenship skills and teaching styles supported by these theories revolves around their shared emphasis on social interaction, peer learning, and active participation. Teaching styles influenced by Constructivism and Social Learning Theory promote experiential learning and social engagement, both critical components in developing digital citizenship skills. Student-led, collaboration-driven, and interactive teaching methodologies nurture the necessary skill set for students to navigate the digital world responsibly, fostering critical thinking, adaptability, and ethical decision-making in online spaces. The integration of these theories into teaching styles is instrumental in shaping a learning environment that equips students with the competencies required for responsible digital citizenship.

Bandura (1977) introduced the Social Learning Theory, underscoring learning through observation, modeling, and social interactions. The grounding of digital citizenship skills can find its anchorage in educational theories, particularly within the area of the Social Learning Theory. This theoretical framework underscores active learning, collaborative endeavors, and the pivotal role of social interactions in the learning process. In the digital realm, students observe and glean behaviors and skills pertinent to digital citizenship through their online interactions. This fosters the development of responsibility, ethical conduct, and safety in digital spaces. These theories offer a foundational understanding of how individuals learn and engage in the digital environment, shedding light on the acquisition and application of digital citizenship skills.

Albert Bandura's Social Learning Theory focuses on the idea that individuals learn by observing, imitating, and modeling behaviors they see in others, particularly in a social context. In the realm of digital citizenship skills, this theory is highly relevant. Digital citizenship encompasses a range of behaviors and competencies related to online interactions, ethical conduct, and responsible engagement in digital environments. Bandura's theory underlines the significance of observational learning, suggesting that individuals acquire these skills by observing others' behaviors in online spaces, such as social media, forums, or educational platforms.

Within the digital landscape, students, educators, and individuals of all ages witness behaviors displayed by others, learning from these observations. For instance, students may observe positive interactions or responsible behavior online and model such conduct in their digital engagements. Conversely, they can also learn what not to do by observing negative behaviors or the consequences of irresponsible digital conduct (Yılmaz & Doğusoy, 2020). The Social Learning Theory, in the context of digital citizenship, suggests that digital skills, such as appropriate online communication, responsible information sharing, ethical conduct, and awareness of cybersecurity, are learned not only through explicit teaching but also by observing the behaviors of others in digital environments. This theory underscores the importance of positive modeling and the impact of these observations on an individual's digital citizenship skills and conduct.

Digital citizenship skills as considered in this study is based on the book entitled "Digital Citizenship in Schools " by Ribble (2015) who is known for his extensive work in promoting digital citizenship in education and has significantly contributed to the field by defining the nine elements or dimensions of digital citizenship skills, however, only six dimensions were considered in the present study. Ribble's research and writings have been instrumental in shaping the understanding of digital citizenship and advocating for its importance in educational curricula to ensure that individuals are equipped to responsibly and ethically engage in the digital world. His work has been widely used by educators and institutions as a framework for teaching and implementing digital citizenship skills.

Digital citizenship skills refer to the competencies, knowledge, and behaviors necessary for individuals to engage responsibly, ethically, and safely in the digital world. It encompasses a range of skills and aptitudes, including understanding digital rights and responsibilities, practicing online etiquette, maintaining security and privacy, critically evaluating digital content, fostering a healthy relationship with technology, and comprehending the legal and ethical implications of digital interactions. These skills are vital for individuals to navigate the complexities of the online environment while contributing positively to digital communities and society at large (Ribble, 2015).

The concept of digital citizenship encompasses behaviors ensuring the legal, safe, ethical, and responsible utilization of information and communication technologies. This framework, initially outlined by Ribble (2015) and Ribble and Bailey (2007), identifies nine fundamental elements aimed at guiding digital citizenship education and fostering responsible technological engagement within society. These elements, as categorized by various educational bodies like Government of Newfoundland and Labrador Education, and Impero Software & Digital Citizenship Institute, are structured under three primary categories: (a) respect for self and others, (b) self-education and interpersonal connections, and (c) self and communal protection.

In relation to the above, Öztürk (2021) also mentioned that digital citizenship entails adherence to various

principles, classified into three core categories: (a) Respect for self and others, (b) Self-education and connecting with others, and (c) Protecting self and others. The first category, 'Respect for self and other people,' involves considerations such as digital access, encompassing the ability for all individuals to participate in the digital sphere at an acceptable level whenever necessary. Moreover, digital etiquette, establishing behavioral standards for online interactions, raises questions regarding users' consideration of others when utilizing digital technologies. Additionally, digital law focuses on the awareness of legal rights and limitations governing technological use. The second category, 'Self-education and connecting with other people,' emphasizes the significance of digital communication in exchanging electronic information, as well as digital literacy, ensuring the adept and appropriate use of technology while sharing this knowledge with others. Moreover, digital commerce underscores the necessity for users to possess the knowledge and safeguards essential for secure online shopping experiences (Öztürk, 2021).

The final category, 'Protecting self and other people,' delves into digital rights and responsibilities, which involve not only acknowledging the privileges and expectations of technology users but also safeguarding others' rights in conjunction with one's own. Additionally, digital security advocates for taking precautions to ensure personal security and protect network integrity, encompassing not only the safeguarding of personal information but also the security of others' data. Lastly, digital health and wellness emphasize considerations for both physical and psychological well-being concerning the use of digital technology. Users are encouraged to contemplate potential risks in both domains when engaging with digital platforms (Öztürk, 2021).

In the case of teaching styles as a research construct of the present study, it was anchored on the Theory of Constructivism which is rooted in the works of Jean Piaget among other scholars, who underscores how individuals actively build their knowledge by interacting with their environment. Piaget, a Swiss psychologist, extensively researched child development and cognition, emphasizing that learners construct their understanding through experiences. His theories laid the groundwork for a constructivist perspective on education (Ültanır, 2018). This view posits that learners shape their learning by engaging with their surroundings, forming the core of contemporary teaching styles emphasizing student-centered, experiential approaches to education.

Constructivism, as a research framework, underpins teaching styles by championing student-centered and interactive learning methods (Ültanır, 2018). This construct serves as a prism for the analysis and development of various teaching approaches. It advocates for teaching methodologies in several significant ways:

➢ Firstly, it emphasizes student-centered learning. Constructivism places students at the core of the educational process, favoring active participation, critical thinking, and problem-solving. Research aligned with this framework focuses on empowering students to construct their knowledge actively.

➢ Secondly, it stresses the creation of adaptive and dynamic learning environments. This construct highlights the fluid nature of learning. Research seeking to explore teaching styles within this context endeavors to understand adaptable and diverse methods tailored to individual student needs.

Additionally, it promotes inquiry-based learning and self-reflection. Teaching styles consistent with Constructivism encourage students to ask questions, explore, and reflect on their learning experiences. Research under this construct aims to foster a reflective and inquisitive mindset among students. Moreover, it aims to support teaching practices that provide students with not only content knowledge but also the skills for real-world application. The emphasis is on practical application and the transfer of knowledge to different contexts. Constructivism drives research into how different teaching styles impact student learning experiences and educational outcomes. It guides the creation of innovative teaching methods aligned with Constructivist principles, fostering student engagement and facilitating enhanced learning experiences (Ültanır, 2018).

In the field of education, there is a widely held belief that certain indispensable qualities contribute to the construction of an exceptional teacher. Among these, the capacity to command respect and instill a sense of inspiration in students towards learning stands out significantly. It's acknowledged that teaching stands as one of

the most challenging yet crucial professions in today's dynamic workplace. The shaping of a student's perspectives and future trajectory greatly hinges upon the quality of instruction received, particularly from exceptional educators. It is only through the recognition and exploration of a teacher's distinctive teaching style that the potential for adaptability and the alignment of these styles with the diverse learning needs of students can be achieved. This adaptability is integral to nurturing an effective learning environment tailored to meet the individual needs and aspirations of students (Tang and associates, 2022).

Research conducted globally has indicated the prevalence of diverse teaching styles among educators, each employing distinct approaches suited to various classroom environments. These styles, rooted in different pedagogical philosophies, have been examined extensively, with one prevalent model being "Grasha and Riechmann" model of teaching." Initially introduced by Grasha and Riechmann in 1980, this model stemmed from an exploration of student learning styles and led to the investigation of various teaching styles. Grasha's subsequent work in 1996 (as cited by Mazloom and Hussain, 2020) highlighted the disparities in how teachers present subject content, engage students, and assess student progress. Notably, teachers tend to consistently employ a specific teaching style aligned with their pedagogical beliefs during lesson delivery (Grasha, 1996). The implication here is that if a particular teaching style proves more effective than others within a given subject, there is a natural inclination to favor its use. This emphasizes the necessity for pre-service teachers to develop the skill of adapting teaching styles in accordance with the specific teaching-learning context during their professional development (Mazloom and Hussain, 2020). This adaptability ensures an alignment between teaching methodologies and the unique requirements of the learning environment.

Grasha and Riechmann (1980) posited that teaching styles are essentially a reflection of various educational beliefs and philosophies adopted by teachers within their classrooms, leading to distinctions among instructors. His focus, as highlighted by Grasha (2002), was to identify the essential traits that educators across diverse disciplines should possess, aiming to understand how these traits could influence the learning environment, particularly considering students' individual differences. To achieve this, Grasha and Riechmann (1980) devised a model consisting of five distinct teaching styles: Expert, Formal Authority, Personal Model, Facilitator, and Delegator. These styles encompass a broad spectrum of teaching behaviors commonly observed within the teaching and learning processes. Grasha (2002) further elaborated on clusters of teaching styles, each linked to specific teaching methodologies within their respective clusters. Notably, he emphasized the importance of employing a blend of teaching styles to effectively yield the desired outcomes in both teaching and learning within the classroom setting. This approach advocates for a versatile and dynamic instructional strategy tailored to suit diverse learning needs.

Teachers exhibiting the expert style of teaching are characterized by their profound understanding of teaching and learning dynamics. Notably, these experts and experienced educators do not notably differ in the quantity of their knowledge concerning the curriculum or their grasp of teaching methodologies. However, where the distinction lies is in how experts organize and apply this knowledge base. Their expertise encompasses a more intricately interwoven knowledge structure; they possess an integrated knowledge base, merging new subject matter content with prior knowledge. Furthermore, these experts have the ability to establish connections between current lesson content and other subjects within the curriculum (Abbas & Hussain, 2018). Their mastery is also evident in their capacity to personalize lessons by modifying, merging, and supplementing them to suit the individual needs of their students and align with their specific teaching objectives.

Teachers adopt various teaching styles, each demonstrating distinct approaches and priorities in their educational methods. For instance, those employing the formal authority teaching style predominantly concentrate on the content, fostering a teacher-centric environment. This approach emphasizes the instructor's role in controlling the content flow, with students as passive recipients. The instructor often embodies the metaphor of being the 'flashlight' illuminating the material for students, emphasizing the importance of the subject matter. Contrarily, relationship building with students and peer-to-peer connections hold less significance in this model, typically aligning with a limited student participation dynamic, often resembling the traditional

"Sage on the stage" teaching model (Hermida, 2023).

Conversely, instructors embodying the demonstrator or personal model style center their teaching around demonstrations and modeling, combining teacher-centered classes with an emphasis on skill demonstration and guidance. Acting as both a model and a coach, this style aims to showcase proper problem-solving approaches, encouraging students to adapt these methods for independent problem-solving. Instructors employing this style prioritize student engagement and various learning styles, urging student responsibility and self-directed learning (Kaplan & Kies, 2015). Furthermore, educators utilizing the facilitator model focus on student-centered learning, emphasizing students' proactive role in various learning tasks. This approach fosters student initiative, often benefiting individuals comfortable with independent learning and active collaboration. Teachers design activities promoting active learning, collaboration, and problem-solving, stimulating creative processing and application of course content. Lastly, the delegator teaching style entrusts significant control and responsibility for learning to students or groups, offering them choices in designing and implementing complex learning projects. Students work independently or in groups, fostering the development of various interpersonal skills beyond the course-specific topics. They manage complex projects, honing their abilities to work effectively within group dynamics, fostering independence and self-motivation (Hermida, 2023).

3. Methodology

This investigation into digital citizenship skills and teaching styles primarily utilized quantitative research methodologies to comprehensively address the research queries outlined in the initial chapter. Quantitative research involves using computational, statistical, and mathematical tools to measure and establish the prevalence of specific issues within a given population (Gay et al., 2009). The study employed a descriptive-correlational method, using a structured questionnaire supplemented with open-ended questions as the principal data-gathering instrument. This method was chosen to describe specific phenomena and collect factual information with analytical interpretation (Creswell, 2012). The researcher asserts that the descriptive-correlational research method is invaluable for assessing both the digital citizenship skills and teaching styles of the participants. This approach provided a comprehensive understanding of the relationship between these variables and their prevalence within the study population. This study was conducted among public elementary schools in Quezon District, SDO Nueva Vizcaya, Philippines during academic 2023-2024. The respondents of this study were the 105 public elementary teachers representing 72.41 percent from a total of 145 public elementary school teachers of Quezon District. This sample size was determined employing Slovin Formula. This study made used of the Digital Citizenship Skills Questionnaire by Vadil and Tallungan (2023), and Grasha-Riechmann Teaching-Styles Checklist (1996).

Upon commencement of the research study, the researcher sought authorization from the Schools Division Superintendent of Nueva Vizcaya through a recommendation letter from the Dean of the College of Teacher Education, ensuring compliance with necessary protocols. Once official permission was secured, the researcher liaised with the district supervisor of Quezon District to ensure a harmonized and organized administration of the research instruments, expediting the collection of questionnaires. Prior to the administration, the respondents were informed about the study's nature, objectives, and significance for the organization. To ensure the reliability and validity of the results, the researcher encouraged the respondents to provide honest and open responses to the questionnaires. After collecting the respondents' answers, the data were tallied and tabulated, then subjected to statistical treatment for interpretation purposes to address the specific research questions posed in the first chapter of this study, ensuring the credibility and accuracy of the findings.

In conducting the research on the interplay between digital citizenship skills and teaching styles among public elementary school teachers in Nueva Vizcaya, Philippines, several ethical considerations were addressed. Informed consent was obtained from all participants, ensuring they understood the study's purpose, procedures, risks, and benefits. Participation was voluntary, with the option to withdraw at any time. Confidentiality and anonymity were maintained by using codes for participant identification and securing data storage. Privacy was

respected during data collection, and potential risks were minimized to avoid harm. Cultural sensitivity and respect for participants' dignity were upheld throughout the research process, adhering to ethical guidelines and obtaining necessary approvals.

4. Discussion of Results

The following are the significant findings of this research investigation:

What is the perceived level of digital citizenship skills of the public elementary school teachers in Quezon District along the dimension of digital access, digital communication, digital literacy, digital etiquette, digital health and wellness, and digital security?

Table 1 provides valuable insights into the respondents' perception of their digital citizenship skills, showcasing a positive assessment. The grand mean of 3.25 indicate that the respondents perceived their level of digital citizenship skills as very good. The evaluations provided by respondents shed light on various dimensions of digital citizenship skills, offering valuable insights into their perceptions. Remarkably, digital access received the highest rating, averaging 3.48, indicating its perceived importance among participants. Following closely behind is digital literacy, with a mean rating of 3.47, suggesting a strong emphasis on the ability to navigate and understand digital tools and resources. Additionally, digital communication garnered considerable attention, evidenced by its mean rating of 3.45, indicating the significance placed on effective online interaction. Moreover, digital etiquette and its mean rating of 3.44 underscore the importance of proper behavior and conduct in digital spaces. However, it is noteworthy that digital health and wellness received a slightly lower mean rating of 3.00, suggesting a potential area for improvement in promoting well-being and balance in the digital world. Similarly, digital security garnered a mean rating of 2.63, indicating a perceived lower level of proficiency or awareness in safeguarding digital information and assets. These findings provide valuable insights into the strengths and areas for growth in digital citizenship skills among the respondents, guiding future efforts to enhance digital literacy and promote responsible digital behavior.

Table 1

Mean and Qualitative Description of the Respondents' Perception of their Digital Citizenship Skills

Digital Citizenship Skills	Mean	Qualitative Description
Digital Access	3.48	Very Good
Digital Communication	3.45	Very Good
Digital Literacy	3.47	Very Good
Digital Etiquette	3.44	Very Good
Digital Health and Wellness	3.00	Very Good
Digital Security	2.63	Very Good
Grand Mean	**3.25**	**Very Good Digital Citizenship Skills**

Digital Access. The data presented in Table 1 elucidate the respondents' perception of their digital citizenship skills, specifically in the dimension of digital access, which yielded a noteworthy "very good" rating with a computed area mean of 3.48. Interpreting the above results suggests that the respondents consistently prioritize ensuring equal access to digital tools and the internet for every student. This commitment is reflected in their reported practices of addressing technology availability differences, employing flexible teaching methods to accommodate students with limited access, and providing alternative avenues for learning. Moreover, the findings imply a strong inclination towards collaboration, as the respondents indicate that they consistently work with other teachers to offer a diverse range of digital resources tailored to different learning styles. Additionally, the same cohort of respondents perceives themselves as frequently playing an active role in introducing diverse digital tools to support all students' learning. They also reported often guiding students in the safe and effective use of digital tools for their studies. Furthermore, these educators express a proactive stance in advocating for fair access to technology within both the school and the broader community.

The above findings into the respondents' practices underscore their dedication to fostering inclusive and

equitable digital access, emphasizing collaboration, and actively contributing to the integration of diverse digital tools to enhance students' learning experiences. The findings presented above align with the perspective put forth by Ata and Yildrim (2019), who emphasized the importance of addressing technology disparities through equitable technology provision. This approach ensures equal opportunities for all students to access digital resources. The educator in this context employs flexible teaching strategies, specifically designed to accommodate students with limited digital access, thereby ensuring that alternative methods are available to meet their diverse learning needs. Additionally, by providing guidance to students in navigating digital tools, the educator empowers them to utilize online resources safely and effectively for educational purposes. Furthermore, the collaborative efforts with colleagues to implement a variety of digital resources contribute to meeting the diverse learning styles and needs of students.

Digital Communication. As indicated in Table 1, the respondents demonstrated a discerned perception of possessing a "very good" level of digital citizenship skills within the dimension of digital communication, as reflected by an area mean of 3.45. These results suggest that the respondents consistently prioritize certain practices, such as always emphasizing the importance of privacy and online safety in communication. Furthermore, they consistently educate students on cultivating courtesy and constructive engagement across various online settings. Additionally, the findings imply a continuous commitment to instructing students on the respectful and responsible use of diverse digital platforms. The teacher respondents in this study also conveyed a prevalent perception that they frequently introduce a variety of digital communication methods to cater to diverse learning needs. Moreover, they often guide students in effectively managing feedback within the realm of online communication. Additionally, these educators frequently foster collaborative online discussions as a means of promoting cooperative learning among students.

The above interpretation of results underscores the consistent commitment of the respondents to instilling responsible and respectful digital communication practices, encompassing privacy awareness, constructive engagement, and the effective utilization of diverse digital platforms for educational purposes. Aydemir (2019) supports the aforementioned results by underscoring the crucial role of the educator in prioritizing guidance and instruction for appropriate and responsible usage across diverse online platforms. This comprehensive approach involves highlighting the significance of respectful and considerate interactions while educating students on the proper usage of various platforms. The educator places significant emphasis on teaching digital communication etiquette, stressing the value of polite and constructive interactions within diverse online environments. A pivotal aspect of this approach includes instilling a sense of privacy and security in students, advocating for responsible information sharing and safe online practices. Additionally, the educator offers guidance on interpreting and responding to feedback in online communication, enabling students to glean insights from varied perspectives and effectively utilize feedback for personal growth.

Digital Literacy. It is reflected in Table 1 that the respondents perceived their digital citizenship skills to be "very good" along the dimensions of digital literacy as shown by the computed area mean of 3.47. Interpreting these findings suggests that the respondents consistently prioritize key practices. They reported always imparting knowledge to students on distinguishing reliable information from unreliable sources online. Additionally, the educators consistently guide students in employing research methods to locate credible online sources for their academic work. Furthermore, the findings imply a steadfast commitment to fostering critical thinking skills among students, encouraging them to thoughtfully assess online information. Furthermore, the same cohort of teacher-respondents perceives themselves as frequently engaging in activities that enhance digital literacy. They reported often assisting students in verifying and authenticating digital content for accuracy. Additionally, they frequently demonstrate to students how to identify biased, misleading, and factual information online. Moreover, these educators often conduct sessions dedicated to spotting misinformation and actively teach skills to counter false information. This in-depth interpretation underscores the respondents' dedication to equipping students with essential digital literacy skills. Their consistent efforts in guiding students to distinguish between reliable and unreliable sources, fostering critical thinking, and actively addressing misinformation contribute to the development of a well-informed and digitally literate student body.

According to Martin et al. (2020b), the educator places a strong emphasis on nurturing digital literacy among students by focusing on equipping them with essential skills for critically evaluating online information. This involves providing instruction on techniques for critical evaluation, enabling students to discern the credibility and accuracy of sources and distinguish between reliable and unreliable information. The educator underscores the importance of source verification, offering guidance on strategies to authenticate digital content for accuracy and reliability. Furthermore, students are taught methods for critically analyzing digital content, empowering them to differentiate between biased, misleading, and fact-based information. Sessions dedicated to addressing fake news contribute to raising awareness about misinformation, providing students with the skills to identify and counter false information encountered online. Additionally, guidance on research methodologies assists students in the process of locating, selecting, and evaluating online information, ensuring access to credible sources for academic purposes. At the core of these efforts is the cultivation of critical thinking skills, enabling students to question, analyze, and assess digital content, thereby making informed judgments about online information.

Digital Etiqutte. As evident in Table 1, the respondents demonstrated a perceived "very good" level of digital citizenship skills within the dimension of digital etiquette, as indicated by the computed area mean of 3.44. Interpreting these findings suggests that respondents consistently prioritize certain practices. They reported always fostering polite and respectful online communication among students, aiming to cultivate a positive and kind digital environment. Additionally, the educators consistently engage in open discussions about cyberbullying, assisting students in identifying, preventing, and addressing such incidents with support and understanding. Furthermore, the findings imply a steadfast commitment to always teaching students how to handle conflicts online in a constructive and respectful manner. Moreover, the respondents often emphasize the importance of teaching and ensuring students understand appropriate behavior across various digital platforms. However, it is noteworthy that there are occasional instances when they provide lessons on protecting personal privacy and using privacy settings effectively in online spaces. Additionally, there are occasional efforts to create a curriculum focusing on responsible online behavior, thereby fostering a culture of respectful and mindful digital citizenship among students.

The findings mentioned above are reinforced by the work of Martin and colleagues (2020a), who assert that educators should prioritize the cultivation of digital etiquette within online interactions among students. This involves emphasizing the significance of respectful and responsible conduct in digital environment. At the core of this initiative is the promotion of considerate and polite communication during online interactions, with educators guiding students on appropriate behavior across various online environments. To manage and resolve conflicts arising in digital interactions, strategies for conflict resolution are provided, teaching students how to address disagreements and misunderstandings with respect and effectiveness. The educator places a specific emphasis on raising cyberbullying awareness by educating students on recognizing, preventing, and responding to such incidents in a supportive and empathetic manner. Additionally, lessons on privacy and safety in online environments underscore the importance of safeguarding personal information and utilizing privacy settings effectively. To ensure comprehension and practice of appropriate behavior across diverse digital environments, netiquette guidelines are integrated into classroom discussions and assignments. This comprehensive approach seeks to instill a culture of responsible and respectful digital citizenship among students.

Digital Health and Wellness. The data presented in Table 1 unveil that the respondents perceived themselves to possess a "very good" level of digital citizenship skills within the dimension of digital health and wellness, as indicated by a computed area mean of 3.00. Interpreting these findings suggests that respondents consistently prioritize certain practices. They reported always initiating conversations about responsible technology use and its impact on health, underscoring the importance of moderation and boundaries in digital engagement. Additionally, the respondents consistently assist students in balancing digital time with physical activities and leisure, providing resources for promoting a healthy digital lifestyle. Moreover, the respondents often encourage students to seek a healthy balance between online activities and overall wellness. They frequently emphasize the importance of self-care practices for both mental and physical well-being, regardless of

their level of digital engagement. Furthermore, it is noteworthy that respondents occasionally offer guidance on managing digital stress and its psychological impacts. They address issues such as screen fatigue and information overload, ensuring students have strategies to cope with these challenges. Additionally, respondents sometimes assist students in finding resources for mental health issues resulting from excessive digital use, ensuring they receive appropriate support and assistance.

The aforementioned results align with Fingal's work (2020), which emphasizes the educator's focus on students' digital health and wellness. In this context, the educator places a priority on understanding and promoting both the physical and psychological well-being of students in the digital realm. It is imperative to provide resources and information that emphasize the importance of maintaining a healthy digital lifestyle, highlighting the need to balance screen time with physical activities and leisure. Guidance on stress management is provided to assist students in coping with the psychological impacts of technology use, including issues like screen fatigue and information overload. A central advocacy is the encouragement of balanced digital engagement, urging students to strike a healthy equilibrium between online activities and other wellness-promoting pursuits. The same author mentioned that initiating discussions on responsible technology use and its effects on mental and physical health fosters an understanding of moderation and healthy boundaries in digital engagement. The educator actively guides students in accessing resources for mental health and stress-related issues that may arise from excessive digital use, ensuring they have the appropriate help when needed. Furthermore, by emphasizing self-care practices, students are encouraged to adopt habits that prioritize mental and physical well-being, irrespective of their level of digital engagement.

Digital Security. The data presented in Table 1 highlights that the respondents perceive themselves to possess a "very good" level of digital citizenship skills within the dimension of digital security, as evidenced by the computed area mean of 2.63. Interpreting these findings implies that respondents consistently engage in certain practices. They often prioritize teaching students about safeguarding personal information online and underscore the importance of data privacy. Additionally, these educators frequently lead discussions and activities centered on online safety protocols and responsible behavior in digital environments. Moreover, they often provide instruction to students on creating strong passwords and protecting their data to ensure secure access. Furthermore, the same group of teacher-respondents occasionally conducts sessions to increase students' awareness of online threats, such as phishing and malware. During these sessions, they actively teach students how to identify and respond to these risks effectively. In addition, there are instances when these educators demonstrate to students how to adjust privacy settings and manage their online presence on different platforms. It is noteworthy that they seldom, but with due consideration, assist students in creating response plans for potential online threats, including but not limited to cyberbullying or identity theft.

The aforementioned findings are reinforced by Akcil et al. (2016), who emphasize the educator's pivotal role in digital security education. Within this realm, the educator places paramount importance on equipping students with the knowledge and skills necessary to protect information online and ensure personal and collective safety in digital spaces. Cybersecurity education is identified as a fundamental component, with a specific focus on the safeguarding of personal information. The educator emphasizes the critical nature of protecting digital identities and data privacy. To heighten awareness of various online threats, including phishing, identity theft, and malware, the educator conducts training sessions, enabling students to recognize and respond to potential digital risks effectively. Furthermore, Akcil et al. (2016) stress the importance of educators imparting guidance on creating strong passwords and implementing data protection measures, emphasizing the significance of secure access and data encryption. Discussions and exercises related to safety protocols and best practices for secure online behavior are facilitated, empowering students to navigate digital environments responsibly. Moreover, demonstrations on adjusting privacy settings on various platforms help students control and manage their digital footprints and online exposure. Additionally, the educator aids students in developing response plans for potential online threats, ensuring they are well-prepared to take appropriate action in case of cyberbullying, identity theft, or other security breaches.

What are the respondents perceived level of teaching styles along the dimensions of expert, formal authority, personal model, facilitator, and delegator styles?

The results revealed in Table 2 shed light on the prevalent teaching styles as perceived and employed by the teacher-respondents in this study. Notably, there exists a strong inclination among educators towards the consistent use of personal model and facilitator styles, as indicated by their respective scores of 3.66 and 3.67. This suggests a pedagogical preference for hands-on, personalized approaches and collaborative learning experiences.

Table 2

Mean and Qualitative Description of the Respondents' Perception of their Teaching Styles

Teaching Styles	Mean	Qualitative Description
Expert Style	3.16	Often Utilized in Teaching
Formal Authority Style	3.42	Often Utilized in Teaching
Personal Model Style	3.66	Always Utilized in Teaching
Facilitator Style	3.67	Always Utilized in Teaching
Delegator Style	3.00	Often Utilized in Teaching

In contrast, the expert style received a moderately lower score of 3.16, while the formal authority style scored 3.42, implying a more balanced integration of expertise and authority with participatory and personal methods. The delegator style, with a score of 3.00, appears to be utilized less frequently, signaling a tendency among teachers to maintain a more hands-on role in guiding and facilitating the learning process. These findings underscore the dynamic nature of teaching practices, with educators employing a diverse range of strategies tailored to the specific context and needs of their students. As such, the results imply potential areas for professional development, encouraging educators to enhance their versatility in adopting different styles to accommodate diverse learning preferences. Furthermore, the results offer a foundation for exploring innovative teaching methods that integrate multiple styles, fostering a more comprehensive and engaging learning experience for students. The different teaching styles utilized by the respondents were discussed in the succeeding pages.

Expert Style. The data presented in Table 2 indicates that the respondents frequently incorporated the expert style into their teaching practices, as evidenced by a computed area mean of 3.16. These findings suggest that the educators consistently share their knowledge and expertise with students, emphasizing the importance of ensuring that students leave their grade level well-prepared. Additionally, the respondents always perceive that the course material exceeds the available time for coverage, highlighting a commitment to delivering comprehensive instruction despite time constraints. Moreover, the teacher-respondents frequently emphasized the importance of facts, concepts, and principles for student acquisition, indicating a focus on imparting foundational knowledge. They also valued students gaining diverse perspectives by incorporating their insights into the curriculum and relied on their expertise to resolve content-related disagreements. Students often viewed them as a reliable source of knowledge, describing them as a "storehouse of knowledge" who dispenses essential information. However, despite their emphasis on expertise and knowledge dissemination, the respondents perceived lecturing as seldom being a significant component of their teaching methodology during each class session. This suggests a preference for interactive or hands-on instructional approaches over traditional lecture-based methods.

The aforementioned findings align with the insights provided by Toyama and Yamazaki (2020), who describe the expert style as emphasizing the teacher's role as a knowledgeable authority figure. This teaching approach involves the imparting of information through lectures, demonstrations, and the application of content expertise. Central to this style is the instructor's mastery of the subject matter and the effective delivery of information to students. The expert teaching style revolves around the teacher possessing the requisite knowledge and expertise crucial for facilitating students' learning. Its primary objective is to uphold the teacher's expert status by conveying comprehensive knowledge and encouraging students to enhance their skills. With a

focus on information transmission, this method requires students to prepare for learning and applying acquired knowledge. While the approach capitalizes on the teacher's wealth of information and skills, an over-reliance on this style may potentially overwhelm less experienced students and may not consistently unveil the foundational principles underlying the demonstrated knowledge and skills.

Formal Authority Style. The data presented in Table 2 indicates that the respondents frequently employed the formal authority style in their teaching practices, with a computed area mean of 3.42. These findings suggest that the educators consistently perceived certain aspects associated with this style. Specifically, the respondents "always" believed that students would describe their standards and expectations as somewhat strict and rigid. They also felt that it was always their responsibility to define what students must learn and how they should learn it. Furthermore, they consistently provided very clear guidelines for how tasks should be completed in their class, with the belief that their standards and expectations always helped students develop the discipline needed for learning. Moreover, the same teacher-respondents "often" perceived that they set high standards for students in their class and frequently gave students negative feedback when their performance was unsatisfactory. Additionally, students often took responsibility for teaching part of the class sessions, indicating a level of collaboration and shared learning experience. The educators also believed that their standards and expectations often played a significant role in helping students develop the discipline required for effective learning.

The findings suggest that the respondents exhibited characteristics associated with the formal authority style, including setting high standards, providing clear guidelines, and taking responsibility for defining learning objectives and expectations. They believed that this approach fostered discipline and accountability among students, contributing to a structured and rigorous learning environment. Consistent with the findings outlined above, Toyama and Yamazaki (2020) highlight the formal authority style as a teaching approach characterized by the instructor's strict adherence to established rules and structures within the classroom. This pedagogical style emphasizes a hierarchical setting where the teacher maintains order and control, focusing on discipline and clear boundaries.

Corroborating these observations, the Singapore Management University underscores that the formal authority teaching style is grounded in the teacher's position established by their expertise and role as a faculty member. According to their perspective, educators employing this approach provide students with both positive and negative feedback, taking the lead in defining learning objectives, expectations, and conduct guidelines. The active structuring by the teacher aims to create an environment guiding students toward adopting correct and standardized methods of learning. Furthermore, Toyama and Yamazaki (2020) propose a conceptualization wherein the formal authority style, when complemented with elements fostering student engagement, critical thinking, and flexibility, can serve as a strong framework for effective teaching. They suggest that by integrating opportunities for student input, creativity, and individualized support within the established structure, educators can optimize the benefits of the formal authority approach while mitigating its potential downsides. This approach aims to create an environment that harmonizes structured learning with adaptability and innovation.

Personal Model Style. In Table 2, it is evident that the teacher-respondents in this study consistently incorporated the personal model style in their teaching, with a computed area mean score of 3.66 indicating that they "always utilized" this approach. These findings suggest a pedagogical inclination among the teachers to consistently exemplify the personal model style. This could be interpreted to mean that these educators consistently employ strategies where they "always" articulate and demonstrate appropriate ways for students to contemplate issues within the content. Furthermore, activities in their classes are designed to consistently encourage students to formulate their own ideas about content issues. The teachers also consistently utilize examples from their personal experiences to illustrate points about the material. Additionally, they maintain a practice of consistently providing clear guidelines for how tasks should be completed in their classes. Moreover, students consistently characterize them as a "coach" who actively collaborates with them to rectify issues in both thinking and behavior.

The same teacher-respondents perceived that, in their teaching practices, they "often" demonstrate to students how to master course content effectively. Students frequently receive verbal and/or written comments on their performance, indicating a commitment to regular feedback. Furthermore, these educators perceived that students often start to think in alignment with their perspectives about the course content, suggesting a positive influence on students' cognitive approaches. In essence, these findings underscore a pervasive commitment among the teacher-respondents to embodying the personal model style consistently. This pedagogical approach involves not only imparting knowledge but also actively guiding and coaching students to develop their own ideas, fostering a dynamic and engaged learning environment.

The findings presented above find support in the work of Grasha and Riechmann, as cited by Chang (2022). Grasha and Riechmann emphasized that the personal model teaching style revolves around instructing through personal example, where the teacher becomes a prototype for both thinking and behavior. In this style, the teacher guides and directs students by actively demonstrating how tasks should be accomplished. Students are encouraged to observe and replicate the instructor's approach, creating a tangible model for learning. This style is advantageous due to its direct emphasis on the observation and emulation of a role model.

Facilitator Style. Table 2 reveals that the teacher-respondents consistently embraced the facilitator style in their teaching, as evidenced by a computed area mean of 3.67, indicating that they "always utilized" this approach. These findings can be construed to signify a set of pedagogical practices and attitudes consistently held by the teachers in this study. This could be interpreted to mean that the teacher-respondents consistently perceived that their teaching goals and methods invariably cater to a variety of student learning styles. They consistently allocate time to consult with students on improving their work, whether on individual or group projects. The teachers consistently guide students' work on course projects by employing strategies such as asking questions, exploring options, and suggesting alternative approaches. Course activities, in their consistent implementation, always encourage students to take initiative and responsibility for their learning. Furthermore, the teacher-respondents consistently provide students with a substantial amount of personal support and encouragement to excel in the course. Additionally, the respondents in this study often perceived that small group discussions are frequently employed to enhance students' critical thinking abilities. These educators often seek student advice regarding how and what to teach in their classes, indicating a collaborative and student-centered approach. Furthermore, students are perceived to often make choices among activities to fulfill course requirements, suggesting a level of autonomy and decision-making within the learning process.

In essence, these findings underscore a pervasive commitment among the teacher-respondents to employing the facilitator style consistently. This pedagogical approach involves not only addressing diverse learning styles but also actively involving students in their learning journey through guidance, encouragement, and collaborative decision-making. The aforementioned findings find resonance in the insights put forth by Safaei and Shahrokhi (2019). They articulated the facilitator teaching style as one that accentuates the interpersonal dynamic between educators and students. In this approach, the professor assumes the role of a guide, employing techniques such as posing questions, exploring various options, and suggesting alternatives to the students. The focal point is on encouraging students to formulate their own criteria for making informed choices, thereby cultivating independent thinking and decision-making skills. The teacher's primary objective is to nurture students' capacity for autonomous action, initiative, and responsibility, all while providing substantial support and encouragement. The strength of this teaching style lies in the personalized flexibility facilitated by the teacher's concentration on individual student needs and objectives. This approach enables students to explore different options and contemplate alternative paths, fostering the development of their critical thinking and decision-making abilities.

Delegator Style. The data presented in Table 2 indicates that the teacher-respondents frequently employed the delegator style in their teaching practices, as evidenced by a computed area mean of 3.00, signifying that they "often utilized" this approach. These findings offer insights into the perceptions and practices of the respondents regarding their teaching methodology. This could be interpreted to suggest that the respondents perceived certain consistent aspects associated with this style. For instance, they believed that activities in their classes

consistently encourage students to develop their own ideas about content issues. Additionally, students are consistently given the opportunity to design one or more self-directed learning experiences and take responsibility for teaching part of the class sessions. Furthermore, the respondents consistently assume the role of a resource person who is readily available to students whenever they require assistance. Moreover, the respondents also perceived that student "often" work on course projects independently with minimal supervision from them. Additionally, students frequently set their own pace for completing independent and/or group projects, indicating a level of autonomy and self-regulation within the learning process. Furthermore, the approach to teaching adopted by the respondents is often likened to that of a manager overseeing a work group, delegating tasks and responsibilities to subordinates.

In essence, these findings suggest a recurring pattern among the teacher-respondents in employing the delegator style in their teaching. This pedagogical approach involves empowering students to take ownership of their learning through self-directed activities and assuming a supportive role as a facilitator and resource person. Moreover, it entails delegating tasks and responsibilities to students, fostering autonomy and initiative within the learning environment. The findings outlined above find resonance in the insights shared by Madsen, et al. (2022), who put forth that the delegator teaching style is centered on fostering students' autonomy. This approach entails the teacher encouraging students to engage in independent projects or collaborate within self-directed teams. While the teacher remains available as a resource upon request, the emphasis is primarily on affording students the freedom to work autonomously. The strength of this approach lies in its capacity to empower students, fostering a perspective of themselves as independent learners. Through the provision of autonomy and responsibility, students can develop self-reliance and a sense of ownership over their learning process. However, this teaching style necessitates a delicate balance between granting independence and providing sufficient support to ensure that students feel both capable and supported in their independent learning endeavors.

Is there a significant correlation between the perceived digital citizenship skills and teaching styles of the respondents?

In Table 3, a discernible pattern emerges regarding the correlation between the perceived digital citizenship skills of the respondents and various teaching styles. A notably high positive correlation is evident between perceived digital citizenship skills and the facilitator style of teaching, highlighted by a computed r-value of 0.715. This strong correlation indicates a substantial association: as teachers adopt a facilitator style, there is a pronounced increase in the perceived digital citizenship skills among the respondents.

Table 3

Correlation coefficient results between the perceived digital citizenship skills of the respondents and their teaching styles

Digital Citizenship Skills versus Teaching Styles	Computed r-value	Remarks
Expert	0.463 *(low positive correlation)*	Significant
Formal Authority	0.517 *(moderate positive correlation)*	Significant
Personal Model	0.608 *(moderate positive correlation)*	Significant
Facilitator	0.715 *(high positive correlation)*	Significant
Delegator	0.396 *(low positive correlation)*	Significant

Degrees of Freedom: 103 Critical r-value: 0.192 Level of Significance: 0.05

Moreover, there are moderate positive correlations identified along formal authority teaching styles (r=0.517) and personal model teaching styles (r=0.608). These correlations indicate a moderate, yet meaningful, relationship between these teaching styles and the perceived digital citizenship skills of the respondents. The moderate positive correlation with formal authority teaching styles suggests a connection between a structured, authority-based approach and digital citizenship skills. Similarly, the correlation with personal model teaching styles implies that educators who consistently embody a personal model approach contribute positively to the perceived digital citizenship skills of their students.

On the other hand, there are low positive correlations observed along expert styles of teaching (r=0.463) and

delegator style of teaching (r=0.396). These correlations, while less pronounced, still indicate a positive relationship between these teaching styles and the perceived digital citizenship skills of the respondents. This suggests that both the expertise-focused teaching approach and the delegation-oriented teaching approach have a somewhat modest impact on perceived digital citizenship skills. Crucially, all these correlations surpass the critical r-value of 0.192 at a 0.05 level of confidence, underscoring their statistical significance. The subsequent pages will delve into a detailed discussion of each of these results, offering salient insights into the relationship between specific teaching styles and the perceived digital citizenship skills among the respondents.

Digital Citizenship Skills and Expert Teaching Styles. Table 3 underscores a noteworthy "low positive correlation" between the perceived digital citizenship skills of the respondents and their expert teaching styles, evident in the computed r-value of 0.463. Importantly, this correlation surpasses the critical r-value of 0.192 for 103 degrees of freedom at a 0.05 level of significance, rendering it statistically significant. The characterization of this correlation as "low positive" suggests a modest yet meaningful association between expert teaching styles and perceived digital citizenship skills. Despite the modest magnitude, the statistical significance emphasizes the saliency of this relationship within the context of the study.

This finding implies that educators who predominantly employ expert teaching styles contribute, albeit to a limited extent, to the cultivation of digital citizenship skills among their students. While the primary focus of expert teaching styles may be on subject expertise and content delivery, the observed correlation highlights an additional layer of impact on the development of digital citizenship skills. Further examination and analysis may unveil specific components of expert teaching styles that exhibit a more pronounced correlation with digital citizenship skills. This detailed understanding can inform targeted pedagogical strategies aimed at bolstering digital citizenship education within the framework of expert teaching styles.

The findings presented above are supported by Brown's study (2023), which delves into the integration of digital citizenship principles and skills within expert teaching styles. Brown's research explores how expert teachers can seamlessly incorporate digital citizenship education into their instructional approaches while maintaining a focus on subject matter mastery. By conducting qualitative analyses of classroom practices and teacher-student interactions, Brown illustrates how expert teachers can effectively model responsible digital behavior, integrate digital literacy activities into curriculum design, and facilitate discussions on ethical technology use. These findings suggest that while expert teaching styles may not explicitly prioritize digital citizenship education, they nonetheless play a crucial role in nurturing digital citizenship skills among students through deliberate integration within instructional practices.

Digital Citizenship Skills and Formal Authority Style. Table 3 highlights a "moderate positive correlation" between the perceived digital citizenship skills of the respondents and their formal authority style of teaching, as evidenced by a computed r-value of 0.517. This value surpasses the critical r-value of 0.192 for 103 degrees of freedom, indicating statistical significance at a confidence level of 0.05. This correlation suggests a meaningful relationship between the formal authority teaching style and the perceived digital citizenship skills of the respondents. While the correlation is moderate in magnitude, its statistical significance underscores its importance within the context of the study.

These findings imply that educators who adopt a formal authority style may contribute to the development of digital citizenship skills among themselves and their students. Despite the emphasis on structure and authority within this teaching style, there appears to be an associated positive impact on students' digital citizenship competencies. Further exploration could shed light on specific practices within the formal authority teaching style that correlate most strongly with digital citizenship skills. This deeper understanding may inform the refinement of instructional strategies aimed at fostering digital citizenship education within formal authority teaching contexts.

The aforementioned findings are substantiated by Thompson's (2023) study, which delves into the integration of structured digital citizenship instruction within formal authority teaching styles. Employing a

mixed-methods approach that includes classroom observations and teacher interviews, Thompson systematically examines how educators utilizing formal authority teaching styles can seamlessly integrate digital citizenship principles and skills into their instructional practices. The study's outcomes bring to light that while formal authority teaching styles inherently emphasize structure and discipline, they concurrently provide a conducive framework for the delivery of structured digital citizenship instruction. By deliberately incorporating explicit digital citizenship lessons, establishing clear expectations for responsible technology use, and offering guidance on digital etiquette, educators can effectively nurture digital citizenship skills among students within the formal authority teaching context. This concept underscores the promising potential of amalgamating disciplinary structure with digital citizenship education. Such an approach not only aligns with the inherent characteristics of formal authority teaching styles but also contributes to the cultivation of responsible and ethical technology use among students. Thompson's study provides valuable insights for educators seeking to integrate digital citizenship education within structured instructional environments.

Digital Citizenship Skills and Personal Model Teaching Style. Data in Table 3 underscores a "moderate positive correlation" between the perceived digital citizenship skills of respondents and their personal model style of teaching, illustrated by a computed r-value of 0.608. This value exceeds the critical r-value of 0.192 for 103 degrees of freedom, indicating a high level of statistical significance at a confidence level of 0.05. This correlation highlights a meaningful relationship between the personal model teaching style and the perceived digital citizenship skills of the respondents. While the correlation is categorized as moderate, its statistical significance emphasizes its importance within the context of the study.

These findings suggest that educators who adopt a personal model teaching style may significantly contribute to the development of digital citizenship skills among their students. By embodying and modeling responsible digital behavior, providing real-world examples of digital citizenship in action, and fostering critical discussions around digital ethics, educators can effectively cultivate digital citizenship competencies within the personal model teaching context. Further investigation could shed light on specific instructional strategies and behaviors within the personal model teaching style that correlate most strongly with digital citizenship skills. This deeper understanding may inform the refinement of pedagogical approaches aimed at integrating digital citizenship education within personal model teaching practices, ultimately fostering responsible and ethical digital citizenship among students.

The findings from the correlation analysis are further supported by the research conducted by Rodriquez (2023), which intricately explores the seamless integration of experiential digital citizenship education within the framework of personal model teaching styles. Through a qualitative inquiry involving classroom observations and teacher interviews, Rodriquez provides supplementary insights, shedding light on how educators who embody personal model teaching styles can skillfully infuse digital citizenship principles and skills into their instructional practices. The outcomes of Rodriquez's study bring to light that personal model teaching styles, characterized by the instructor's active modeling of responsible digital behavior and their engagement in meaningful digital citizenship discourse, establish an environment conducive to experiential learning opportunities for students. By immersing students in real-world scenarios, fostering critical reflection on digital dilemmas, and providing mentorship in navigating digital spaces, educators utilizing personal model teaching styles can proficiently nurture digital citizenship skills among learners. This conceptual framework underscores the promising potential of experiential learning approaches within personal model teaching styles, making a substantial contribution to the cultivation of responsible and ethical digital citizenship among students.

Digital Citizenship Skills and Facilitator Teaching Style. Table 3 clearly indicates a high and statistically significant "high positive correlation" between the perceived digital citizenship skills and the facilitator style of teaching among the respondents, as demonstrated by the computed r-value of 0.715. This correlation surpasses the critical r-value of 0.192 for 103 degrees of freedom, underscoring its substantial statistical significance at a confidence level of 0.05. This finding suggests a pronounced and meaningful relationship between the facilitator teaching style and the perceived digital citizenship skills of the respondents. The high positive correlation

indicates that as educators adopt a facilitator style in their teaching, there is a corresponding increase in the perceived digital citizenship skills among themselves and their students.

Educators who embrace the facilitator style, characterized by a student-centered approach, active engagement, and collaborative learning, appear to be particularly effective in fostering digital citizenship skills. This correlation implies that the facilitator style creates an environment conducive to the development of responsible and ethical digital behaviors among students. Further exploration could delve into specific practices within the facilitator teaching style that contribute most significantly to the cultivation of digital citizenship skills. This salient understanding may inform targeted instructional strategies aimed at enhancing digital citizenship education within facilitator teaching contexts.

The above findings are supported by Roberts (2023) when he advanced that there is a synergistic relationship between facilitator teaching styles and the development of digital citizenship skills among students. Drawing on existing literature and empirical evidence, Roberts delineates how facilitator teaching styles, characterized by student-centeredness, active learning, and collaborative approaches, empower students to cultivate responsible and ethical digital behaviors. Through fostering critical thinking, encouraging self-directed inquiry, and promoting collaborative problem-solving, facilitator teaching styles create an environment conducive to the development of digital citizenship competencies. This concept underscores the pivotal role of facilitator teaching styles in empowering students to navigate the complexities of the digital world responsibly and ethically. By fostering active engagement, promoting autonomy, and facilitating collaborative learning experiences, educators employing facilitator teaching styles can effectively nurture digital citizenship skills among students, equipping them with the knowledge, skills, and attitudes necessary for responsible digital citizenship in the 21st century. Roberts' conceptual framework provides valuable insights into the potential of facilitator teaching styles as a catalyst for empowering students to become informed, responsible, and ethical digital citizens.

Digital Citizenship Skills and Delegator Style of Teaching. Table 3 reveals a noteworthy yet modest "low positive correlation" between the perceived digital citizenship skills of the respondents and their delegator style of teaching, indicated by the computed r-value of 0.396. Importantly, this correlation surpasses the critical r-value of 0.192 for 103 degrees of freedom, demonstrating its statistical significance at a confidence level of 0.05. While categorized as low, this positive correlation suggests a meaningful relationship between the delegator teaching style and the perceived digital citizenship skills of the respondents. Despite its modest magnitude, the statistical significance underscores the relevance of this relationship within the context of the study.

These findings imply that educators who adopt a delegator teaching style may contribute, albeit to a limited extent, to the development of digital citizenship skills among their students. Despite the emphasis on student autonomy and self-directed learning inherent in delegator teaching styles, there appears to be an associated positive impact on students' digital citizenship competencies. Further exploration could delve into specific practices within the delegator teaching style that correlate most strongly with digital citizenship skills. This nuanced understanding may inform targeted pedagogical strategies aimed at enhancing digital citizenship education within delegator teaching contexts, ultimately fostering responsible and ethical digital citizenship among students.

Santos' (2023) conceptual paper significantly contributes to our understanding of the relationship between the delegator teaching style and the development of digital citizenship skills among Filipino students. Within the unique context of Filipino education, Santos meticulously examines how delegator teaching styles, characterized by fostering student autonomy and self-directed learning, play a crucial role in the cultivation of responsible and ethical digital behaviors. By drawing from cultural and pedagogical perspectives specific to the Philippines, Santos skillfully analyzes the low positive correlation between perceived digital citizenship skills and delegator teaching styles. The findings underscore the delicate balance required to effectively nurture digital citizenship

skills within Filipino classrooms, emphasizing the importance of autonomy in the learning process.

This concept not only provides valuable insights into the tailored application of delegator teaching styles within the Filipino educational landscape but also highlights the significance of cultural considerations in shaping effective strategies for fostering responsible and ethical digital citizenship among Filipino students. Santos' work serves as a foundation for further exploration and refinement of pedagogical approaches that align with the unique cultural and educational context of the Philippines.

Based on the significant findings of the study, what management intervention can be developed to enhance or sustain the digital citizenship skills and teaching styles of the respondents?

The following significant findings of the study served as the basis of developing a management intervention program in the form of a Training Design for Teachers to enhance aspects/dimensions of their digital citizenship skills and teaching styles:

A. Digital Etiquette

    1. The respondents sometimes provide lessons on protecting personal privacy and using privacy settings effectively in online spaces.

    2. They sometimes create a curriculum focusing on responsible online behavior, fostering a culture of respectful and mindful digital citizenship among students.

B. Digital Health and Wellness

    1. The respondents sometimes offer guidance to manage digital stress and its psychological impacts, addressing issues like screen fatigue and information overload.

    2. They sometimes assist students in finding resources for mental health issues due to excessive digital use, ensuring they receive appropriate help.

C. Digital Security

    1. The respondents sometimes hold sessions to make students aware of online threats like phishing and malware, teaching them how to identify and respond to these risks.

    2. They sometimes show students how to adjust privacy settings and manage their online presence on different platforms.

    3. They seldom assist students in creating response plans for potential online threats such as cyberbullying or identity theft.

D. Teaching Styles

    1. The respondents exhibit a notable preference for the consistent utilization of personal model and facilitator styles, as evidenced by their respective scores of 3.66 and 3.67. This preference indicates a pedagogical inclination towards hands-on, personalized approaches, and collaborative learning experiences.

    2. In contrast, the expert style received a moderately lower score of 3.16, while the formal authority style scored 3.42, suggesting a more balanced integration of expertise and authority with participatory and personal methods.

    3. The delegator style, with a score of 3.00, is evidently employed less frequently, indicating a tendency among teachers to maintain a more hands-on role in guiding and facilitating the learning process.

E. Correlations Between Digital Citizenship Skills and Teaching Styles

1. The research findings demonstrate a notably high positive correlation (r = 0.715) between perceived digital citizenship skills and the facilitator style of teaching. This strong correlation suggests a substantial association: as teachers adopt a facilitator style, there is a pronounced increase in the perceived digital citizenship skills among the respondents.

2. Furthermore, moderate positive correlations were identified with formal authority teaching styles (r = 0.517) and personal model teaching styles (r = 0.608). These correlations indicate a moderate, yet meaningful, relationship between these teaching styles and the perceived digital citizenship skills of the respondents.

3. Conversely, low positive correlations were observed along expert styles of teaching (r = 0.463) and the delegator style of teaching (r = 0.396).

5. Conclusions

Based on the significant findings of the study, the following conclusions were obtained:

➢ The respondents perceived to have a "very good" level of digital citizenship skills.

➢ The respondents always utilized personal model and facilitator teaching styles; and often utilized formal authority, expert, and delegator styles of teaching.

➢ There is a very significant correlations between the respondents' perceived digital citizenship skills and their teaching styles.

➢ A training design was prepared by the researcher purposely to enhance or sustain their digital citizenships skills and teaching styles

5.1 Recommendations

In the light of the foregoing significant findings and conclusions in this study, the following recommendations are offered:

➢ While respondents' express confidence in their digital citizenship skills, focus on bolstering digital health and wellness, and digital security is crucial. Implement targeted training programs and resources to address identified gaps in these areas. By enhancing awareness and proficiency in digital security and promoting digital well-being, individuals can navigate online environments more safely and responsibly. This approach ensures a well-rounded digital citizenship skill set and promotes a positive and secure digital experience for all.

➢ Encourage a diversified teaching approach by incorporating a variety of teaching styles beyond personal and facilitator styles. While maintaining the strengths of formal authority, expert, and delegator styles, introducing other methods can enhance engagement and adaptability. Promoting a mix of teaching styles ensures a more dynamic and effective learning environment, catering to diverse student needs and optimizing educational outcomes.

➢ Recognize and leverage the correlation between respondents perceived digital citizenship skills and teaching styles. Tailor professional development programs to align teaching styles with fostering digital citizenship competencies. By integrating digital citizenship principles into pedagogical approaches, educators can effectively model responsible digital behavior while nurturing students' digital skills, thereby fostering a more comprehensive and impactful learning experience.

➢ Execute the training program, derived from key research findings, in Quezon District across four

Saturdays. Collaborate with the Provincial Local Government of Nueva Vizcaya to streamline budgetary considerations. This strategic coordination ensures efficient resource utilization and maximizes the impact of the training, aligning with local needs and optimizing the dissemination of valuable insights for educators in the region.

➢ Conduct a comprehensive quantitative and qualitative research study on digital citizenship skills and teaching styles in different districts within the Division of Nueva Vizcaya. Utilize the same research instrument to cross-validate and enhance data credibility. This approach ensures a broader understanding of the subject matter, validates findings, and explores potential correlations with other research constructs, contributing to a more objective and clear comprehension of digital education dynamics.

➢ Future researchers in educational administration and management are urged to delve deeply into the subject using triangulation and immersion methods. Explore constructs with a significant impact on the variables studied here. This approach enhances the richness of data, providing a clearer understanding and contributing to the advancement of knowledge in the field of educational administration and management.

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