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Digital Citizenship Practices and Implementation of Learning Modalities in the Higher Education Institutions under the New Normal in General Santos City

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ABSTRACT

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While the shift to technology-mediated learning in higher education has been widely documented, less is known about the interplay between digital citizenship practices within institutions, particularly in Mindanao. One of the means to address this gap is by investigating the relationship between these two factors within higher education institutions in General Santos City. While some argue that technological infrastructure and pedagogical innovation are sufficient for effective online and blended learning, this study posits that a strong foundation of digital citizenship is essential for maximizing the benefits of these modalities. Specifically, the research examined four key elements of digital citizenship: digital identity, digital netiquette, digital footprint, and digital privacy, alongside the implementation of learning modalities across curriculum development, supervision of instruction,

faculty development, and research and extension services. Data were collected through a structural survey questionnaire. Findings revealed a high level of digital citizenship practices and a very satisfactory implementation of learning modalities. The data indicate that students and teachers alike are well-versed in digital ethics, demonstrating awareness of online safety protocols and responsible internet behaviors. This strong foundation in digital citizenship can be leveraged to develop further the critical thinking and information literacy skills required for navigating the digital landscape of the 21st century. Furthermore, a significant positive relationship was observed between these two factors across all domains. This suggests that strong digital citizenship within HEIs contributes to a more effective adaptation to a technology-driven educational environment.

INTRODUCTION

Technological developments are the heart of the globalizing world, where people in the information age are moving to a digital era. This globalization necessitates redefining existing definitions of concepts concerning this change. The use of digital gadgets has become a necessity, particularly in this period when people are in an epidemic. Subsequently, these devices' extensive use is palpable in their lessons and homes (Ranchordás, 2020). With this, there is a need to equip learners regarding safety and reliable communication and collaboration in online environments (Parent and Community Impact, Technology, 2018; Tan, 2011). Safety and reliable living in a digital era have brought the concept of digital citizenship to the fore (Ribble et al., 2004; Ribble, 2008; Shelley et al., 2014).

Furthermore, studies have claimed that teachers must still be ready to offer lessons or be models for digital citizenship (Pusey & Sadera, 2012). Hollandsworth et al. (2017) firmly claimed that teachers, parents, and technology professionals should play a significant role in digital citizenship education. It is also essential to have a triangulated communication of technology rules among students at school and at home (Mark & Nguyen, 2017). Teachers should know the risks and benefits of the digital era, given that they are the mentors or consultants of digital citizenship (Kim & Choi, 2018). Thus, there is a need to inquire about teachers' perceptions and practices when examining digital citizenship.

Various studies were conducted on the ICT competencies of the students. However, few studies focused on digital citizenship practices. As a result, scholars have looked at this issue from a variety of perspectives, including the terms used and definition in major international newspapers (Dill, 2013), its emergence in academic discourse (Byram & Parmenter, 2012), and the development of typologies for the term's various conceptualizations (Oxley & Morris, 2013).

As it was introduced to different people to the vast amounts of study on the definition and application of this complicated notion, it was discovered that,

despite its abundance, most of those conducting the inspection were connected to Western institutions. Global perspectives are required to comprehend this notion as it is defined and applied in the 21st century. I am responsible for providing new views to the conversation and debate around digital citizenship principles. This first gives a rundown of recent reviews of relevant literature.

Currently, limited studies have been conducted that model the digital citizenship of higher education. Given the changing educational landscape, the researcher surveyed to determine the level of digital citizenship practices of the Higher education institution in terms of digital identity, digital Netiquette, Digital footprint, and digital privacy. Moreover, the country's educational development may reach the world's global competence standard by producing more quality graduates among higher education institutions in General Santos City. This study will also investigate seven higher education institutions and 100 faculty and administrators in their practices regarding learning modalities during this pandemic.

FRAMEWORK

The paradigm of digital citizenship in schools developed by Ribble et al. (2004) is the foundation for this study. Users of digital technology can better comprehend the challenges relating to digital identity, digital netiquette, digital footprint, and digital privacy by using this model of digital citizenship, which uses a framework of four interrelated parts. These components offer a foundation for comprehending the technological concerns that concern educators. These components should be utilized to pinpoint present gaps in a technology program for a school or district and emerging challenges that could become significant over the next few years. In the Philippines, educating the public about online privacy and security is only beginning. The newly-initiated Department of Information and Communication Technology (DICT) has started putting up computer centers with ICT literacy programs and activities in selected barangays with the help of local government units (DICT). The DICT conducts Cybersecurity Awareness Seminars on how to safeguard one's identity online. Prior to this year, on the eighth of February, Globe Telecom, Facebook, and the Department of Education (DepEd) again held hands to keep advancing dependable computerized citizenship among instructors and understudies. Philippine instruction specialists have since quite a while ago understood that state-funded schools would prefer only not to show understudies how to utilize mechanical apparatuses, yet additionally the moral conduct in utilizing these innovations. Furthermore, the advancement of innovation is soaring and it requires suitable activity or better approaches to create mindful nationals (DepEd Handbook, 2018).

The independent variables identified in this study were the four essential elements of digital citizenship: digital identity, digital netiquette, digital footprint,

and digital privacy. Meanwhile, the dependent variables were curriculum development, supervision of instruction, faculty development, research, and extension services. Data were gathered from various schools. Based on the elements and results, a test of a significant relationship between those two stated variables was done.

OBJECTIVES OF THE STUDY

This study determined the level of digital citizenship practices and implementation of learning modalities in the Higher Education Institutions under the new normal in General Santos City. Specifically, this research seeks to (1) assess the level of digital citizenship practices of the HEIs; (2) evaluate the extent of implementation of learning modalities among Higher Education Institutions; (3) investigate the significant relationship between digital citizenship practices and the implementation of learning modalities; (4) determine the significant difference in the digital citizenship practices of the HEIs across schools; (5) examine the significant difference in implementing the learning modalities across schools.

METHODOLOGY

Research Design

In this research, the researcher employed the descriptive-correlation method analysis. This includes digital citizenship practices and implementing learning competence modalities in Higher Education Institutions. This study consists of digital citizenship practices such as Digital Identity, Digital Netiquette, Digital Footprint, and Digital Privacy, and the implementation of learning modalities such as Curriculum Development, Supervision of instruction, Faculty Development, Research, and Extension Services. A significant relationship between the digital citizenship practices and the implementation of learning competence modalities and a significant difference between the digital citizenship practices of the respondents across schools was tested.

Participants

The study involved 100 faculty and administrators from seven higher education institutions in General Santos City. They were selected based on predetermined criteria, such as respondents must be college students, faculty currently teaching in the respondents' school, and the school administrators in the higher education institutions in General Santos City. The researcher used a pre-sample size from the total population of higher education institutions in General Santos City.

Instrumentation

In this study, the researcher used an adapted and modified questionnaire from the different research works of Ribble on elements of communications (2012). This quantitative method used a 5-point Likert scale to measure the level of digital citizenship Practices of HEIs. The sets of questionnaires were adapted and modified from the study by Alqahtani (2020), Öztürk (2021), and Martin (2016).

Respondents

The researcher selected the respondents based on the predetermined criteria. Respondents must be a college student, faculty who are currently teaching in the school respondents, and the school administrators in the higher education institutions in General Santos City. The researcher used a pre-sample size from the total population of higher education institutions in General Santos City. The actual sample sizes are shown in Table 1, with a 0.025 margin error.

Table 1
Respondents of the Study

School	Student		Faculty		Admin	
	Pop	Sample	Pop	Sample	Pop	Sample
MSU	9870	23	471	28	47	23
NDDU	9901	23	384	23	37	18
GFI	2470	6	189	11	23	11
STRATFORD	3220	8	181	11	18	9
HTC	6249	15	241	15	23	11
RMMC	8004	19	110	7	37	18
STI	2891	7	78	5	18	9
Total	42575	100	1654	100	203	100

Instrumentation

In this study, the researcher used an adapted and modified questionnaire from the different research works of Ribble (2008) on elements of communications. This study on the quantitative method used a 5-point Likert scale and interpretation below to measure the level of digital citizenship Practices of HEIs.

The quantitative method used 5 point Likert scale and interpretation below:

Scale	Description/Interpretation
5	Very Highly Observed
4	Highly Observed
3	Moderately Highly Observed
2	Slightly Observed
1	Not Observed

The sets of questionnaires were Adapted and modified from the study of ztürk (2021), Martin (2019), and adapted from the Quality Management Assurance Services of Mindanao State University-General Santos City.

Data Gathering Procedure

The researcher sent a letter of request to the school administrators in higher education institutions in General Santos City, asking permission to conduct a study on the issues and challenges encountered in implementing learning modalities. After all the procedures with merit, the researcher coordinated with the concerned person to administer the questionnaires. Upon the approval of the request, the researcher administered the survey questionnaire to the sampled participants in the different institutions. The researcher personally retrieved the completed form to ensure the confidentiality of the data.

Statistical Analysis

Before processing the responses, the structural questionnaires were edited for completeness and consistency. The questionnaires were then coded to enable the responses to be grouped into various categories. The researchers used appropriate statistical tools to treat the data gathered from the respondents. Mean was used to determine the digital citizenship practices and level of implementation of learning modalities. Spearman rank correlation was used to determine the significant relationship between school administrators' administrative practices. The Kruskal-Wallis test was used to determine the significant differences across schools.

RESULTS AND DISCUSSION

The Digital identity, as per evaluation by the respondents. It was rated *Highly Observed ($\bar{x}$=4.80)* among Higher Education Institutions. They know that everyone has basic digital rights, such as privacy and the freedom of expression and speech *($\bar{x}$=4.81)*; they think that basic digital requests must be addressed,

discussed, and understood by digital technology users *($\bar{x}$=4.86)*; they need to be taught about the inherent dangers of overuse of digital technologies *($\bar{x}$=4.82)*; they know that creating destructive worms or viruses, creating Trojan Horses, and sending spam are digital crimes *($\bar{x}$=4.77)*; and they understand the health and well-being risks surrounding the overuse of digital technologies, such as The result implies that students lack rules for correct and responsible technology usage that guide the students on how to direct the online world in their personal and academic called digital citizenship.

Students at all levels must receive training based on their technical needs that enables them to use these technologies effectively and with awareness or whether they are to become digital citizens. Students, teachers, and administrators must be made more aware of the importance of digital citizenship in this regard (Çubukcu & Bayzan, 2013). Therefore, digital citizenship guidelines must be used in schools, particularly for teachers and administrators (Education, 2012).

With the advancement of technology in recent years, digital tools have infiltrated people's lives, enabling them to collaborate on projects with others across the world and share their images, videos, drawings, and opinions in online spaces like social media (Öztürk, 2020).

Digital citizenship refers to the guidelines for appropriate and responsible technology use that instruct students on how to govern the online world in their personal and academic lives rather than merely being a citizen of a country (Parent and Community Impact, Technology, 2018; Ranchordás, 2020; Tan, 2012). Digital citizenship is the online demonstration of behaviors that assure the legal, safe, ethical, and responsible use of information and communication technologies, according to Mike and Gerald (2007). Practices of digital citizenship are multifaceted and encompass knowledge, attitude, and behavior; they are essential to highlighting all elements of digital citizenship education (Kim & Choi, 2018).

Beyond duty or responsibility, digital citizenship education aims to instill in students qualities such as self-identity belief, protection, and healthy digital use (Kim & Choi, 2018). A variety of variables influences teachers' judgments about integrating technology. The principal attitude toward technological leadership influences teachers' decisions to incorporate technology in the classroom. Also, a significant correlation between teachers' internet self-efficacy and digital citizenship was discovered by Cristol and Gimbert (2018). Their study made suggestions for educators regarding the competencies and practices required to be digital citizens.

The Digital Footprint on Digital Citizenship, as evaluated by the respondents. It was rated *Very Highly Observed ($\bar{x}$=4.87).* They comprehend all information encountered in using social media on their accounts *($\bar{x}$=4.89)*; they analyze all posts on social media before making comments and suggestions *($\bar{x}$=4.85)*; they use Facebook, IG, and Twitter accounts responsibly and appropriately

($\bar{x}$=4.87). They constantly seek assistance from the right person if they encounter possible issues while navigating the technology *($\bar{x}$=4.87* and observe the rules and conditions implemented by the sites *($\bar{x}$=4.87)*. This generally implies the student's videos and images "accidentally" posted have appeared in regional and national newscasts. Additionally, information that has been posted cannot ever be removed. Any post from any date may typically be found in the Internet archives.

However, understanding a life where technology is a part of the everyday routine at school gives teachers a chance to teach children about Internet responsibility (Ohler, 2011). Due to their false sense of anonymity, students publish harmful content and act irresponsibly online. Many people do not consider the reality that anything put online can go viral in a matter of hours, making personal information and data accessible to thousands of people (Oxley, 2011).

To reduce the likelihood that anything they post will be abused in any way, students need to be taught to tighten their privacy settings on all social media platforms. Recently, a news item about an Oklahoma sixth-grade teacher who was troubled by her kids' postings was discussed on the Today Show. She made a sign claiming that her kids believed it was acceptable to post indecent photos of them online. She then requested that the Facebook community repost her post and identify their home state in the comments. Within hours, the article went viral. It spread throughout many nations and all fifty states. She later removed the post, but it was still shared. She used the opportunity to explain to her students how their digital footprints are permanent (Pawlowski et al., 2014).

Since then, there have been many posts on Facebook that are comparable. The fact that students leave behind digital footprints every day, and many of them are unaware of what that entails, is another crucial reason to teach digital citizenship. PSWDOptimist (2012) video demonstrates how a person's digital imprint starts at birth and continues throughout life. In a blog post, managing partner of Gen Y research and consultancy company Millennial Branding, Schawbel (2013) explains why a person's online presence speaks more about them than a résumé. Potential employers acknowledge that they "goggle" job applicants before contacting them for an interview (Oxley, 2011).

However, anybody other than prospective employers may look for personal information. Criminals, con artists, and dishonest companies actively scour social media for new victims. Teaching children how to leave behind positive digital footprints responsibly is necessary due to the legalities of the stuff placed online. When publishing embarrassing and exposing images, videos, and other content, students fail to think about the consequences. If the 16 content becomes popular, lawsuits are launched, and what was once considered innocent becomes unsightly and expensive. Teenagers have also died as a result of cyberbullying. One such instance involved Megan Meier, 13, and a mother who pretended to be someone else. When she thought she was speaking to a boy, he suddenly turned on her and

crushed her heart. Afraid of something Megan had done, the mother's daughter was being vindicated by the mother. Megan hanged herself due to depression.

Protecting children's privacy is the most apparent reason for educating them about digital citizenship. While kids may feel comfortable playing games and interacting online at home, they must exercise caution when using the internet. It is essential to realize that being online is equivalent to being out in public. While web surfing at home may seem safe and secure, privacy concerns are accurate. Websites that use cookies may target advertising to children, alerting potential predators online (Broughton, 2015). Teachers should incorporate lessons on digital citizenship into courses on citizenship, just as they have done for ages. The Digital Netiquette, as evaluated by the respondents. It was rated *Very Highly Observed* ($\bar{x}$= *4.85).* They observe the privileges and freedom given to all digital technology users and the expectations from them *(*$\bar{x}$*=4.83)*; they understand digital communication methods and when they are correct *(*$\bar{x}$*= 4.87)*; they handle and use when and how to use digital technology *(*$\bar{x}$*=4.88)*; they take the time to learn about digital technologies *(*$\bar{x}$*=4.85)*; and they have knowledge and protection to shop in the digital world *(*$\bar{x}$*=4.81).* These results elucidate that the respondents practice digital Netiquette when they are at school doing related activities.

A study corroborates this: "*Just as it is crucial for students to research how to be great while online, they need to research how to behave appropriately in the classroom, on the playground, and during the school day*." Students need to be taught the value of respecting their online peers and conducting themselves correctly, which goes beyond simply setting up standards for acceptable behavior. When disagreeing with something online, thoughtful internet users will likely explain why they disagree. They also avoid instigating online battles when they see them and respect restrictions on mobile devices and smartphones. Cultured digital citizens behave properly when online. They adequately follow the general unwritten rules, standards, and expectations of the digital world (Hollandsworth et al., 2017; Madden et al., 2017).

The Digital Privacy, as evaluated by the respondents. It was rated *Very Highly Observed (*$\bar{x}$*=4. 84);* they always observe the limitations on the practice of all digital technology users and the expectations from them *(*$\bar{x}$*=4.84)*; they are ready to protect other people's rights in order to protect their digital rights *(*$\bar{x}$*=4.79)*; they protect the personal security of all technology users and the security of their networks *(*$\bar{x}$*=4.87)*; they take the time to protect their information and also take precautions to protect other people's data *(*$\bar{x}$*=4.87)*; and they understand the physical and psychological health aspects related to the use of digital technology *(*$\bar{x}$*=4.81).* Therefore, it implies that it is safe to assume that students' observations are very high because of their knowledge and skills about Digital Privacy. Students learn how to behave themselves in the classroom and on the playground correctly, and in the course of school, they need research to be fabulous while online.

A current study corroborates this, and the author also recommends that

teachers obtain written permission from parents whenever kids under the age of 13 are required to register accounts to access websites. Teachers must be aware of digital privacy to support their pupils, considering their students' digital privacy. Students may receive a link to a class account their teachers created. Teachers should study the privacy regulations and steer clear of websites that ask for their kids' names and email addresses (Miller, 2016).

CONCLUSIONS

The children need to know the proper means or ways to interact online. The students will be able to know what is appropriate to write or not online. Soon, these students will be able to get an education for this type of interaction. The implementation of the learning modalities of the HEis in General Santos City was excellent for students, as they were provided with the best services and assistance appropriate for their department. This study concluded further that the school's responsiveness to digital citizenship and its learning modalities is significantly influenced by the level of implementation of its program.

Furthermore, the higher the level of implementation, the higher the extent of the HEl's responsiveness to the program. The implementation of supervision of instructions as learning modalities in teaching effectively increases the students' learning performances during the new normal. Extension services among students in higher education institutions are effective in the new normal.

TRANSLATIONAL RESEARCH

The result of the study could be translated through a journal article for international publications, newsletters, radio, social media, and other media for information dissemination and to revisit institutional policies. The students, faculty, and school administrators of Higher Education Institutions in General Santos City may give utmost value and importance to digital identity practice when using technology-based social media. The health and well-being risks surrounding the overuse of digital technology, such as addiction and stress, may be minimized. Higher education institutions in General Santos City may focus on community engagement and student activities, as school extension services are part of their corporate social responsibility. The higher education institutions in the city may maintain the best practices of every student, school, and administrator in increasing awareness of digital citizenship utilization. More training on digital citizenship best practices will be conducted to ensure the continuity of every citizen's awareness. Schools may develop task force groups to monitor whether their students are responsible for technology use.

CONFLICTS OF INTEREST AND FUNDING

The authors declare that they have no conflicts of interest, financial or otherwise, that could influence or bias the content of this article. This study was conducted independently without any external funding from organizations or individuals that could have a vested interest in the findings.

The data supporting the findings of this study are available upon request to ensure transparency and facilitate independent verification of the results. AI was utilized ethically solely to enhance readability, with due diligence and mindfulness applied to ensure that it did not contribute to the analysis or interpretation of the content.

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