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DIGITAL READINESS AND WRITING PERFORMANCE OF FRESHMEN COLLEGE STUDENTS

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Abstract

This study was conducted to determine the relationship between digital readiness and the writing performance of university students. Four hundred students were selected through stratified random sampling. A Goolge Form survey questionnaire was used to obtain data from the students. The mean, Pearson r, and regression were used to interpret the received data. Results showed that digital readiness was highly correlated with students' writing performance. The data also revealed that digital readiness was significantly linked to students' writing motivation. The result of the exogenous variable had a considerable influence as a predictor of writing performance.

Keywords: Digital Readiness, Writing Performance, Philippines.

INTRODUCTION

In today's increasingly digital world, the readiness of students to effectively use digital tools and resources is crucial for their academic success (Udeogalanya, 2022). Digital readiness involves a range of competencies, including technical proficiency, access to digital technologies, and the ability to critically evaluate and use digital information (Falloon, 2020). As educational institutions continue integrating digital literacy into their curricula, understanding how these skills affect students' writing performance is essential (Pokhrel & Chhetri, 2021).

The higher education system, which shifted to digital emergency remote instruction, has been impacted by efforts to stop the COVID-19 virus from spreading globally throughout all spheres of society (Hodges et al. (2020). Although well-established digital learning platforms exist and students typically have decent technological equipment, it would be inaccurate to assume that all so-called "digital natives" are proficient in using technology in academic settings (Richter, 2015). San Jose et al. (2023) mentioned that tertiary students used devices during the COVID-19 pandemic but faced technology-related challenges due to their differing learning preferences.

Digital readiness, which includes technical proficiency, access to digital tools, and the ability to engage with online content critically, has become vital for academic success in the virtual learning environment (Küsel et al., 2020). Digital readiness involves technical skills and cognitive and social competencies necessary for thriving in a digital environment (Rafiah et al., (2022). It includes the capacity to use digital tools effectively, critically assess online information, and engage in digital communication and collaboration (Pinto & Leite, 2020).

In 2020, students in higher education dealt with digital learning in addition to the pandemic and the limitations and uncertainty that accompany it (Rasli et al., 2022). Students needed help acquiring digital technology skills, mostly due to their inexperience with computer programs,

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online applications, and related resources (Rahiem, 2020). English as a Second Language scholars, educators, and instructors consistently stressed that writing is a fundamental language competence (Ansarimoghaddam & Tan, 2014). Students who struggled with writing also experienced a decline in motivation, self-efficacy, and confidence, which impeded their learning and impacted their writing performance (Ahmed et al., 2021). Digital readiness is closely connected to students' writing performance, equipping them with essential skills for effective writing in a digital context. Peláez et al. (2022) mentioned that digital readiness enhances students' ability to use digital tools for drafting, editing, and publishing their work. Coiro (2011) also highlights that digital literacy skills directly impact writing performance by enabling students to produce more informed and well-supported texts. Given the preceding, this study would fill the gap by determining the link between digital readiness and writing performance. The results of this investigation may become a cornerstone in making digital skills one factor in enriching students' writing competence.

Research Questions

The study aimed to determine the relationship between digital readiness and the writing performance of first-year college students. It specifically aimed to determine the level of the digital readiness of first-year students in terms of digital tool application, use of the digital application, digital media awareness, information-seeking skills, and information-sharing behavior; to determine the level of writing performance of first-year students in terms of challenge, real-life significance, curiosity, autonomy, recognition, and evaluation; to determine the significant relationship between digital readiness and writing performance of first-year college students.

METHODOLOGY

This study used a quantitative causal method using the appropriate Structural Equation Model (SEM). It gathered various types of quantitative data on digital readiness and writing performance. Ercan and Marsh (2016) point to causal research as explicatory research that investigates the causes and effects of relationships. In determining the cause, it is important to observe the difference in the variables that are supposed to cause changes in other variants, and the changes were measured in other variables. Similarly, the method measures and describes the statistical associations of different levels.

The study's respondents were 400 selected first-year students from different universities in Region 12, Philippines. The research employed a modified and contextualized survey form to collect information. In collecting the data, the researcher asked permission from the authorities. A pilot test was conducted to measure the reliability of the instrument. It obtained a Cronbach alpha coefficient of 0.851 for digital readiness and 0.807 for writing performance.

The preparation of Google Forms to serve as a survey questionnaire was facilitated. Data gathering, collecting, and tabulating were done continuously, and information was screened to find outliers for analysis. Finally, data analysis and interpretation of the results were conducted to give significance to the study. The Mean and Pearson Product Moment Correlation were also

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used to tally and analyze the data collected from the surveys. Pearson Product Moment Correlation was used to determine the importance of the relationship between digital readiness and writing performance.

RESULTS AND DISCUSSION

Table 1: Level of the digital readiness of college students through digital tool application

Item	SD	Mean	Descriptive Level
1. I can fix a computer virus or malware on my laptop or desktop computer.	1.13	3.37	Moderate
2. I can upload and download media, including online photos, files, video files, and sound files.	0.87	4.44	Very high
3. I can manage software or apps from a computer or mobile device.	0.96	3.83	High
4. I can set up and change security options in a web browser.	1.11	3.53	Moderate
Total	**0.72**	**3.79**	**High**

Table 1 shows the level of digital readiness for digital tool applications. It revealed that item 2 got the highest mean rating of 4.44 with an SD of 0.87, described as "Very High". The lowest mean rating was received by item 1 with an SD of 1.13, described as "Moderate". The total mean was 3.79 with an SD of 0.72, described as "High". Factors influencing digital readiness include access to technology, familiarity with digital tools, digital literacy skills, and the ability to adapt to new technological environments. High digital readiness enables students to engage more effectively in digital learning, leading to better academic outcomes and enhanced learning experiences. García-Martínez et al. (2020) said that the preparedness and ability of students to use digital technologies for their educational activities was of utmost importance. Students' digital readiness (Deng & Yang, 2021) is used in navigating online learning platforms, accessing and utilizing digital resources, and engaging with various educational software. Participants' high levels of digital readiness were essential for them to maximize their learning potential and achieve better academic results in a digitally-driven educational environment.

Table 2: Level of the digital readiness of college students through the use of the digital application

Item	SD	Mean	Descriptive Level
1. I can use the fundamental functions of a presentation program (e.g., Microsoft PowerPoint) for class presentations.	0.84	4.41	Very high
2. I can use the fundamental functions of word-processing programs to create and edit documents for class assignments.	0.87	4.31	Very high
3. I can use spreadsheet programs (e.g., Microsoft Excel) to handle and analyze data for class assignments.	0.93	4.07	High
Total	**0.74**	**4.26**	Very high

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Table 2 shows the level of digital readiness for the use of digital applications. The data show that item 1 received the highest rating of 4.41 with an SD of 0.84, described as "Very High". The lowest mean rating was received by item 3 with an SD of 0.31, described as "High". The total mean was 4.26 with an SD of 0.87, described as "Very High." The results imply that teachers provided more advanced and interactive learning experiences. The proficiency allowed students to engage deeply with digital tools, facilitating better collaboration, access to a wider range of resources, and enhanced learning outcomes. Hence, teachers can leverage this readiness to introduce innovative teaching methods and support students in maximizing the benefits of digital education. Moreover, students are highly proficient in using digital tools and platforms, demonstrating strong digital literacy and the ability to engage with various technological resources for their learning activities effectively. Haleem et al. (2022) mentioned that students' high digital proficiency effectively helps them to manipulate digital tools and platforms for their learning activities.

Table 3: Level of the digital readiness of college students through digital media awareness

Item	SD	Mean	Descriptive Level
1. I can recognize bias or rumors in digital media content.	0.93	3.84	High
2. I can critically interpret digital media content.	0.88	3.72	High
3. I know how to protect intellectual property rights when I use digital media content.	0.87	3.94	High
Total	**0.73**	**3.83**	High

Table 3 shows the digital readiness level regarding digital media awareness. The data showed that item 3 received the highest rating of 3.94 with an SD of 0.87, described as "High". The lowest mean rating was received by item 2 with an SD of 0.88, described as "High". The total mean was 3.83 with an SD of 0.73, described as "High".

This means that the teacher provides more targeted and effective support. With students being well-prepared to use digital media, teachers introduce more advanced digital tools and resources, foster collaborative learning environments, and employ innovative teaching strategies.

This readiness helps students maximize the benefits of digital education, leading to improved engagement and academic outcomes. Lazonder et al. (2020) pointed out that college students today are often referred to as "digital natives," inherently equipped with the skills to navigate and utilize digital media effectively for learning.

Furthermore, Parkes et al. (2015) indicate that students exhibit high levels of comfort and proficiency with digital tools, which enhances their ability to engage with digital learning materials and platforms. This readiness supports their academic endeavors and prepares them for the evolving demands of the digital workforce.

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Table 4: Level of Digital readiness of college students through information-seeking skills

Item	SD	Mean	Descriptive Level
1. I can use various available options to search for information that my colleagues need to be made aware of.	0.95	3.78	High
2. I can inform my classmates of different ways to effectively search for information.	0.89	4.03	High
3. I can generate keywords to search for information for academic work.	0.99	3.94	High
Total	**0.77**	**3.92**	High

Table 4 presents the level of digital readiness in terms of information-seeking skills. The highest mean rating was received by item 2, with a mean rating of 4.03 and an SD of 0.89, described as "High." The lowest mean rating of 3.78 was received by item 1 with an SD of 0.95, described as "High". The total mean was 3.92 with an SD of 0.77, described as “High”. The results reflected college students' proficiency in finding, evaluating, and utilizing digital information for academic purposes. Smith et al. (2020) highlighted that today's students possess advanced information-seeking skills that enable them to navigate online databases and academic journals efficiently. This competence allows them to integrate high-quality information into their studies. Basch (2018) also observed that students are adept at using search engines and digital libraries, showcasing their ability to filter and discern credible sources essential for academic success.

Table 5: Level of the digital readiness of college students through information sharing behavior

Item	SD	Mean	Descriptive Level
1. I can interact with classmates using real-time communication tools, for example, video conferencing tools or messengers	0.85	4.37	Very high
2. I can share my opinions online, with blogs, social networking services, or web pages.	0.94	4.08	High
3. I can share my files with classmates using online software.	0.89	4.18	High
4. I can collaborate with classmates using online software.	0.88	4.26	Very high
Total	**0.72**	**4.22**	Very high

Table 5 shows that item 1 got the highest mean rating of 4.37 with a standard deviation of 0.85, described as "Very High". The lowest mean rating was received by item 2 with 4.08 and a standard deviation of 0.94, described as "High". The total mean was 4.22 with a standard deviation of 0.72, described as "Very High". This implies that students are well-prepared and can leverage digital tools for collaborative and interactive learning. This readiness is evidenced by their frequent use of social media, collaborative platforms, and cloud-based services to share information and resources. Judd (2018) pointed out that student's active participation in online communities and forums significantly enhances their learning experiences by facilitating immediate access to diverse perspectives and resources. College students can use various digital platforms to share information, collaborate on projects, and engage in academic discussions. This behavior is facilitated by their familiarity with social media, cloud storage, and other digital tools, making them efficient at disseminating and receiving information quickly.

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Table 6: Significance of the Relationship between Digital Readiness and Writing Performance of College Students

Digital Readiness	Writing Performance						
	PGS	KTB	KUR	PAI	REL	PYA	Total
DTA	.350** .000	.405** .000	.405** .000	.382** .000	.390** .000	.431** .000	.451** .000
PDA	.445** .000	.489** .000	.485** .000	.421** .000	.474** .000	.433** .000	.523** .000
KOM	.434** .000	.459** .000	.443** .000	.462** .000	.485** .000	.494** .000	.531** .000
KPI	.497** .000	.499** .000	.499** .000	.491** .000	.537** .000	.533** .000	.583** .000
PPI	.557** .000	.575** .000	.559** .000	.537** .000	.574** .000	.516** .000	.632** .000
Total	.556** .000	.590** .000	.582** .000	.558** .000	.599** .000	.586** .000	.662** .000

Legend:

DTA- digital tool application	PGS- evaluation	PYA- evaluation
PDA- use of digital application	KTB- real-life significance	
KOM- digital Media Awareness	KUR- curiosity	
KPI- information-seeking skills	PAI- Autonomy	
PPI- Information-sharing behavior	REC- recognition	

The significant relationship between digital readiness and students' writing performance can be seen in Table 6, with a total r-value of .662 and a corresponding probability value of .000, significantly lower than the .05 significance level set in this study. Therefore, the hypothesis is rejected, and the alternative hypothesis is supported, which is that there is a significant relationship between digital readiness and knowledge in students' writing performance. This means that when digital readiness is high, knowledge in writing performance is also high.

CONCLUSION

The study underscores the high level of digital readiness among college students across various dimensions, including digital tool application, use of digital applications, digital media awareness, information-seeking skills, and information-sharing behaviors. Students demonstrated exceptional proficiency in managing and utilizing digital tools, particularly in presentation and word-processing software applications. However, there is room for improvement in technical troubleshooting skills. Their strong digital media awareness and information-seeking skills highlight their ability to critically navigate and evaluate digital content. Furthermore, their adeptness in information-sharing behaviors facilitates efficient communication and collaboration, which is essential for both academic and professional success. The significant positive relationship between digital readiness and writing performance indicates that higher digital proficiency contributes to better academic outcomes, highlighting the crucial role of digital literacy in enhancing students' educational experiences.

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Implications

The results of this study implicate that educational institutions may integrate more comprehensive digital literacy components into their curricula, emphasizing not only basic digital tool usage but also advanced troubleshooting and security skills. Also, teachers may receive ongoing training to stay updated with the latest digital tools and teaching methods. It may enable them to support better and leverage students' digital readiness to enhance learning experiences. Likewise, the administration may ensure that students have access to the necessary technology and resources, including software and hardware, to develop their digital competencies fully. Implementing support systems such as digital literacy workshops, peer mentoring programs, and readily available technical support may help students improve their digital skills, particularly when they need more confidence. Policymakers may also consider creating frameworks that promote digital literacy as a fundamental component of education, ensuring that students are well-prepared for the demands of a digitally-driven world. Lastly, continuous research may be conducted to keep track of the evolving digital skills required in both academic and professional settings, ensuring that educational programs remain relevant and effective.

Compliance with Ethical Standards

The author(s) have disclosed that there are no potential conflicts of interest related to this article's research, authorship, or publication.

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