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Strengthening Digital Competence and Digital Media Engagement through A Community-Based Educational Approach

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ABSTRACT

This educational study examined the role of digital competence and attitudes in strengthening students' engagement with digital media in higher education. A quantitative correlational design was used involving 100 Bachelor of Science in Office Management students from a higher education institution in Bulacan, Philippines. Data were collected using a validated questionnaire measuring digital competence, attitudes toward digital media, and digital media engagement. Descriptive statistics and Pearson correlation were used for data analysis. Students had high digital competence, positive attitudes toward digital media, and high digital media engagement. Digital competence had a strong positive relationship with digital media engagement, while attitude had a moderate positive relationship with engagement. Community-based educational strategies may support digital skills development, positive attitudes, and meaningful student engagement in technology-mediated learning environments.

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1. INTRODUCTION

Digital media has become an important part of higher education because it supports access to information, communication, collaboration, and technology-mediated learning. The rapid development of digital technologies has changed teaching and learning practices, making digital platforms, online resources, multimedia materials, and learning management systems increasingly relevant in academic environments (Akbar, 2016). In this context, students are expected not only to access digital media but also to use it meaningfully for learning, communication, information processing, and academic task completion.

In higher education, digital media engagement is especially important because students regularly interact with online materials, videos, articles, social media, digital discussions, and other technology-based learning resources. Digital media can help students participate more actively in learning when they are able to access, evaluate, organize, and apply information from digital sources. Digital media is relevant to university learning because it influences how students use information, interact with academic content, and perceive the usefulness of digital technologies (Klein, 2023; Pradana, 2023). However, students' engagement with digital media may differ depending on their skills, attitudes, access, and learning environment.

Digital media engagement in this study refers to students' active interaction with digital content and their use of digital information for knowledge development. It includes content engagement, such as viewing, sharing, commenting, and exploring digital materials, and knowledge engagement, such as understanding, analyzing, applying, and integrating information from digital sources into academic tasks. This perspective is consistent with studies showing that student engagement in digital learning involves both behavioral participation and meaningful use of digital resources for learning (Henderson *et al.*, 2015; Sabri *et al.*, 2025).

Although access to technology and institutional support are important, the availability of digital tools does not automatically lead to meaningful engagement. Students may have access to online platforms but still show limited participation if they lack confidence, competence, interest, or positive attitudes toward digital learning. Technological access, institutional infrastructure, and online learning conditions can influence engagement, but internal factors also play a major role in how students use digital media (Khan *et al.*, 2023; Werang and Leba, 2022). Therefore, strengthening students' digital engagement requires attention not only to technology access but also to digital competence and attitudes.

Digital competence refers to students' ability to navigate digital platforms, use digital tools, search and evaluate information, manage digital resources, solve basic technical problems, and apply digital media for academic purposes. Students with stronger digital competence are more likely to participate effectively in technology-enhanced learning environments because they have the skills needed to use digital platforms confidently and productively (Kim *et al.*, 2018; Porat *et al.*, 2018). Digital competence also supports students' ability to manage academic tasks, communicate information, and adapt to technology-mediated learning situations (Zhao *et al.*, 2021).

Attitude toward digital media is another important factor affecting engagement. Students who view digital media positively are more likely to use digital tools regularly, explore online resources, participate in learning activities, and recognize the relevance of digital media to academic and career development. Positive attitudes toward digital technologies can influence students' willingness to adopt and sustain the use of digital tools in learning

(Novikova *et al.*, 2023). In contrast, less favorable attitudes may reduce participation even when digital tools are available.

From a community-based educational perspective, strengthening digital competence and digital media engagement is important because higher education institutions serve not only as places for academic instruction but also as communities for developing practical skills, digital responsibility, and lifelong learning habits. A community-based educational approach emphasizes shared learning, student support, capacity building, and the development of skills that are useful in academic, social, and professional contexts. In programs such as Office Management, digital competence is particularly relevant because students are expected to use digital tools for communication, documentation, information management, and workplace readiness.

Despite the growing use of digital media in education, more attention is needed to understand how students' internal capacities shape their engagement with digital media. Many discussions focus on access, frequency of technology use, and institutional readiness, but student engagement also depends on whether learners are competent and positively oriented toward digital tools. Understanding the relationship between digital competence, attitude, and digital media engagement can help educators design better digital skills development activities, attitude-enhancing strategies, and community-based educational support.

This study examines the relationship between students' digital competence, attitudes toward digital media, and digital media engagement among Bachelor of Science in Office Management students in Bulacan, Philippines. Specifically, it aims to determine the level of students' digital competence, their attitudes toward digital media, their level of engagement with digital media, and the relationships between competence, attitude, and engagement. The study provides practical insights for strengthening digital competence and student engagement through a community-based educational approach.

2. METHODS

This study used a quantitative correlational research design to examine the relationship between students' digital competence, attitudes toward digital media, and digital media engagement. The study was conducted among Bachelor of Science in Office Management students in a higher education institution in Bulacan, Philippines. A total of 100 students were selected as respondents using simple random sampling. Data were collected using a structured self-administered questionnaire. The instrument consisted of three main parts: digital competence, attitude toward digital media, and digital media engagement. Digital competence measured students' ability to navigate, evaluate, manage, and use digital tools for academic tasks. Attitude toward digital media measured students' favorability, interest, perceived relevance, and commitment. Digital media engagement measured content engagement and knowledge engagement in using digital platforms for learning. All items were rated using a four-point Likert scale ranging from 1 = Strongly Disagree to 4 = Strongly Agree. The questionnaire was validated by experts in Office Management, language, and statistics. A pilot test was also conducted, and the instrument showed excellent reliability with a Cronbach's alpha value of 0.963. Before data collection, institutional approval and informed consent were obtained. Respondents were informed about the purpose of the study, their voluntary participation, and their right to withdraw. Confidentiality and anonymity were maintained, and the data were used only for academic purposes. The

collected data were organized, coded, and analyzed using descriptive and inferential statistics. Weighted mean and standard deviation were used to determine the levels of digital competence, attitude, and digital media engagement. Pearson product-moment correlation was used to examine the relationships between digital competence and digital media engagement, and between attitude and digital media engagement. The level of significance was set at 0.05.

3. RESULTS AND DISCUSSION

The results present the students' digital competence, attitudes toward digital media, digital media engagement, and the relationships among these variables. The analysis was based on responses from 100 Bachelor of Science in Office Management students. The findings are discussed in relation to digital skills development, student engagement, and the relevance of a community-based educational approach in strengthening students' meaningful use of digital media.

Students' digital competence is presented in **Table 1**. Students had a high level of digital competence, with a grand mean of 3.59. The respondents were generally capable of navigating digital platforms, using digital tools for academic tasks, organizing digital resources, searching for information, and using digital media to communicate ideas.

Table 1. Participants' competence in digital media.

ITEMS	MEAN	SD	VERBAL INTERPRETATION
I can easily navigate different digital platforms and applications without assistance.	3.70	0.482	Strongly Agree
I am confident in using various digital tools for academic tasks.	3.66	0.497	Strongly Agree
I can quickly learn how to use new digital applications or technologies.	3.49	0.541	Strongly Agree
I am able to evaluate whether digital information is reliable and credible.	3.45	0.539	Strongly Agree
I can effectively search for relevant information using digital platforms.	3.57	0.498	Strongly Agree
I can organize and manage digital files and resources efficiently.	3.65	0.500	Strongly Agree
I can use digital tools to complete academic tasks accurately and on time.	3.59	0.514	Strongly Agree
I can troubleshoot basic technical problems when using digital devices or platforms.	3.57	0.517	Strongly Agree
I can select the most appropriate digital tools for specific academic tasks.	3.60	0.492	Strongly Agree
I can use digital media creatively to present or communicate information.	3.64	0.482	Strongly Agree
Grand Mean	**3.59**		**Strongly Agree**

The highest-rated item was students' ability to navigate different digital platforms and applications without assistance. Students were operationally familiar with digital environments and could use common digital tools independently. High scores were also observed in confidence in using digital tools, managing digital resources, and creatively using digital media to present information. Students already possess important functional digital skills that can support academic learning and professional preparation. However, the

relatively lower mean scores for evaluating the credibility of digital information and learning new digital applications suggest that students may still need support in higher-order digital competencies. This is important because digital competence is not limited to technical operation; it also includes critical evaluation, responsible information use, and adaptability to new technologies. Digital competence includes technical, cognitive, and evaluative dimensions that influence students' ability to participate effectively in digital learning environments (Kim *et al.*, 2018; Porat *et al.*, 2018; Zhao *et al.*, 2021). From a community-based educational perspective, these findings suggest the need for digital skills activities that strengthen not only tool use but also information evaluation and adaptability.

Students' attitudes toward digital media are presented in **Table 2**. Students had a positive attitude toward digital media, with a grand mean of 3.60. Students generally viewed digital media as useful, relevant, interesting, and important for learning.

Table 2. Participants' attitudes on digital media.

DIMENSION / ITEMS	MEAN	SD	VERBAL INTERPRETATION
Favorability			
I have a positive overall impression of using digital media for learning.	3.67	0.473	Strongly Agree
Digital media enhances my academic experience.	3.75	0.479	Strongly Agree
I feel comfortable using digital media in my studies.	3.56	0.519	Strongly Agree
I view digital media as a helpful tool for learning.	3.46	0.521	Strongly Agree
I generally have a favorable opinion about using digital platforms in education.	3.65	0.500	Strongly Agree
Interest			
I am interested in exploring new digital tools and platforms for learning.	3.54	0.540	Strongly Agree
I enjoy using digital media for academic activities.	3.49	0.541	Strongly Agree
I feel motivated to use digital media in my studies.	3.64	0.482	Strongly Agree
I find digital learning activities engaging and stimulating.	3.50	0.522	Strongly Agree
I actively seek opportunities to use digital media in my coursework.	3.55	0.500	Strongly Agree
Relevance			
I believe digital media is relevant to my academic needs.	3.65	0.479	Strongly Agree
I see digital media as important for my future career.	3.61	0.510	Strongly Agree
I think digital media helps me achieve my learning goals.	3.59	0.494	Strongly Agree
Digital media improves my academic performance.	3.68	0.469	Strongly Agree
I consider digital media essential in today's educational environment.	3.60	0.492	Strongly Agree
Commitment			
I make an effort to use digital media regularly in my studies.	3.64	0.542	Strongly Agree
I am willing to invest time in learning how to use digital tools effectively.	3.63	0.506	Strongly Agree
I consistently use digital media to support my academic tasks.	3.60	0.512	Strongly Agree
I am committed to improving my digital skills for learning purposes.	3.60	0.492	Strongly Agree
I prioritize the use of digital media when completing academic requirements.	3.58	0.496	Strongly Agree
Grand Mean	**3.60**		**Strongly Agree**

The highest-rated item was the belief that digital media enhances academic experience. Students recognize the value of digital media in supporting learning activities. High ratings were also observed in students' perception that digital media improves academic performance, supports academic needs, and is important for future careers. Students do not view digital media only as a communication tool, but also as a learning resource and preparation for professional tasks.

The results also show a strong commitment to using digital media regularly and improving digital skills. This is important because attitude can influence whether students sustain digital engagement over time. Students with positive attitudes are more likely to explore, adopt, and use digital technologies in meaningful ways (Novikova *et al.*, 2023). In a community-based educational approach, positive student attitudes can be strengthened through peer support, guided digital activities, practical workshops, and learning tasks that show the relevance of digital media to academic and workplace contexts.

Students' digital media engagement is presented in **Table 3**. Students had a high level of digital media engagement, with a grand mean of 3.58. Students frequently interacted with digital materials and used digital information for academic learning.

Table 3. Participants' digital media engagement.

DIMENSION / ITEMS	MEAN	SD	VERBAL INTERPRETATION
Content Engagement			
I actively view and interact with digital materials such as videos, articles, and online posts for my studies.	3.73	0.510	Always
I regularly participate in digital platforms related to my academic work.	3.56	0.592	Always
I engage with digital content by liking, sharing, or commenting on educational materials.	3.56	0.574	Always
I spend time exploring various digital resources to support my learning.	3.71	0.478	Always
I frequently access digital platforms to stay updated on academic content and information.	3.59	0.534	Always
Knowledge Engagement			
I use information from digital sources to improve my understanding of lessons.	3.47	0.540	Always
I apply what I learn from digital media to complete academic tasks.	3.51	0.559	Always
I analyze and reflect on information obtained from digital platforms.	3.55	0.520	Always
I integrate digital information into my assignments, projects, or discussions.	3.48	0.522	Always
I use digital media to deepen my knowledge beyond what is taught in class.	3.61	0.490	Always
Grand Mean	**3.58**		**Always**

Students were highly engaged in viewing and interacting with digital materials, exploring digital resources, and accessing platforms for academic information. Digital media is already embedded in students' learning routines. Also, students used digital media to deepen knowledge beyond classroom instruction, analyze information, and apply digital sources to academic tasks. Student engagement in digital learning involves both behavioral participation

and meaningful use of digital resources for learning (Henderson *et al.*, 2015; Sabri *et al.*, 2025). However, the slightly lower scores for improving understanding and integrating digital information into assignments suggest that students may still need guidance in transforming digital exposure into deeper academic output. This finding is important for community-based education because students are active users of digital media, but structured support is still needed to help them use digital content more critically and productively. Learning activities such as guided digital research, collaborative content evaluation, digital portfolio preparation, and peer-based digital mentoring may help improve the depth of digital engagement.

The relationships between digital competence, attitude, and digital media engagement are presented in **Table 4**. Pearson correlation analysis was used to determine the strength, direction, and significance of the relationships among the variables.

Table 4. Relationship between digital competence, attitude, and digital media engagement.

VARIABLES	PEARSON R VALUE	INTERPRETATION	P-VALUE	DECISION
Digital competence and digital media engagement	0.630	Strong positive relationship	< 0.001	Significant
Attitude and digital media engagement	0.569	Moderate positive relationship	< 0.001	Significant

Digital competence had a strong positive and statistically significant relationship with digital media engagement. Students with higher levels of digital competence tended to show higher levels of engagement with digital media. Competence is an important factor in shaping how students use digital platforms for learning. Students who can navigate platforms, manage digital resources, evaluate information, and use tools confidently are more likely to engage actively and meaningfully with digital content.

This finding is consistent with studies showing that digital skills support student engagement in technology-enhanced learning environments. Stronger digital competence can improve confidence, participation, and academic productivity in digital settings (Bergdahl *et al.*, 2020; van Laar *et al.*, 2017; Zhao *et al.*, 2021). From a community-based educational perspective, this result supports the need for digital literacy workshops, guided practice sessions, peer mentoring, and classroom-community projects that require students to use digital tools for communication, documentation, and problem-solving.

Table 4 also shows that attitude had a moderate positive and statistically significant relationship with digital media engagement. Students with more positive attitudes toward digital media tended to be more engaged in digital media use. Students who consider digital media useful, relevant, enjoyable, and important for academic success are more likely to participate in digital learning activities and use digital resources for academic purposes.

This result supports previous studies showing that positive attitudes toward digital technologies influence students' willingness to adopt and use digital tools in learning (Kim *et al.*, 2018; Novikova *et al.*, 2023). However, the moderate strength of the relationship suggests that attitude alone is not enough to explain engagement. Digital competence, access, institutional support, and learning design may also affect how students participate in digital environments. This supports the idea that digital media engagement is multidimensional and shaped by cognitive, affective, behavioral, and contextual factors (Jan, 2018).

Both digital competence and attitude are important in strengthening students' digital media engagement. Competence provides the skills needed for effective digital participation, while attitude supports motivation, willingness, and sustained use. From a community-based educational perspective, higher education institutions should not only provide access to digital technologies but also create structured programs that develop digital competence and promote positive attitudes. These may include digital skills training, collaborative digital projects, responsible media use discussions, peer learning groups, and applied activities connected to students' academic and professional needs. These findings are consistent with broader studies showing that digital platforms, digital learning tools, and technology-based instruction can support literacy, engagement, competence development, and learning innovation in educational settings (Risnandar and Sakti, 2022; Zuyyinasyam *et al.*, 2023; Kelana *et al.*, 2025; Rahim and Mustafar, 2026; Ahmed *et al.*, 2026; Pardayeva, 2027; Sayaf *et al.*, 2022).

4. CONCLUSION

Students demonstrated high digital competence, positive attitudes toward digital media, and high engagement in digital media. Students were generally capable of navigating digital platforms, using digital tools for academic tasks, managing digital resources, and engaging with digital content for learning purposes. The results also revealed significant relationships between the main variables. Digital competence had a strong positive relationship with digital media engagement, while attitude had a moderate positive relationship with engagement. Students who are more digitally competent and who hold more positive attitudes toward digital media are more likely to engage actively and meaningfully in digital learning activities. These findings highlight the importance of strengthening both digital skills and positive digital attitudes in higher education. From a community-based educational perspective, institutions should provide digital literacy training, guided practice, peer mentoring, and collaborative digital learning activities to help students use digital media more critically, confidently, and productively. Future studies may include larger groups of students from different programs and institutions. Further research may also examine other factors such as digital access, learning environment, teacher support, digital responsibility, and students' actual digital performance.

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6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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