



THE IMPACT OF DIGITAL MEDIA CONSUMPTION ON LEARNING OUTCOMES AND ONLINE BEHAVIOR OF STUDENTS AND TEACHERS IN CAN-AVID PUBLIC ELEMENTARY SCHOOLS

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ABSTRACT

This quantitative-descriptive study examined the impact of digital media consumption on learning outcomes and online behavior among students and teachers in public elementary schools in Can-avid. The research focused on the patterns of digital media use – including educational apps, social media, and entertainment websites – alongside students' self-reported online behaviors and learning outcomes, as well as teachers' perceptions of digital media integration in the classroom. Results revealed that both students and teachers recognized educational apps as effective learning tools (mean = 3.8), and social media was seen as a helpful communication medium (mean = 3.5). However, entertainment websites were perceived as having limited educational value (mean = 2.9). Students reported high engagement with social media (mean = 4.1), while engagement in online gaming and exposure to inappropriate content varied. Teachers expressed a neutral stance on risk management (mean = 3.2) but agreed that digital media supports academic challenges (mean = 3.9). Students reported improved understanding (mean = 4.5) and increased motivation to learn (mean = 3.7), culminating in a positive aggregate learning outcome (mean = 4.1). The findings underscore the importance of integrating digital media in education to enhance learning, while also highlighting the need for teacher training and responsible digital behavior guidelines. The study recommends targeted professional development, strategic digital media integration, and further research into its differentiated impact across student groups.

KEYWORDS: Digital Media Consumption, Learning Outcomes, Online Behavior

INTRODUCTION

Background of the Study

The impact of digital media on both students and teachers have many different parts or aspects, presenting a complex interplay of opportunities and risks (Haleem et al., 2022). For students, the readily accessible and engaging nature of digital platforms can lead to addiction and excessive use, negatively affecting sleep, academic performance, and social interactions. This over-consumption can contribute to mental health issues such as anxiety and depression, particularly as students compare themselves to idealized online presentations of others. The anonymity of the internet increases vulnerability to cyberbullying and exposure to inappropriate content or online predators. Furthermore, constant digital distractions hinder focus and critical thinking, resulting in passive information consumption and reduced capacity for deep, analytical learning. The illusion of multitasking often decreases overall productivity and academic achievement.

Teachers, too, face a complex relationship with digital media. While it offers opportunities for innovative teaching methods and access to vast resources, the constant connectivity can lead to burnout and blurring of professional and personal boundaries. The pressure to integrate technology effectively into their teaching practices can be overwhelming, requiring significant

time and effort for professional development. Furthermore, teachers must navigate the challenges of managing students' digital behavior in the classroom and address the potential for digital distractions to disrupt learning. They also face the responsibility of educating students about responsible digital citizenship and online safety, adding another layer to their already demanding roles. The potential for misinformation and the need for critical evaluation of online sources present further challenges for both teachers and students in effectively utilizing digital media for learning. Therefore, a balanced approach is crucial, emphasizing responsible use and digital literacy for both educators and students to harness the benefits of digital media while mitigating its potential harms.

The rapid proliferation of digital media has fundamentally reshaped the educational landscape, impacting how students learn and teachers teach. Can-Avid public elementary schools, like many educational institutions globally, are navigating this transformation. Students are increasingly exposed to diverse digital media – from educational apps and online learning platforms to social media and entertainment websites – influencing their learning experiences and online behavior. Teachers, too, are integrating digital tools into their classrooms, yet the effectiveness and potential drawbacks of this integration remain areas of ongoing investigation. This context highlights the need



to understand the multifaceted effects of digital media consumption within the specific environment of Can-avid public elementary schools.

While the impact of digital media on education is widely discussed, a nuanced understanding of its effects within specific contexts is crucial. This research aims to fill a critical knowledge gap by focusing on Can-avid public elementary schools. The influence of digital media varies depending on factors like access, resources, and pedagogical approaches. This study will provide valuable insights into the specific impact within Can-avid schools, informing tailored interventions and policies.

Understanding how digital media consumption affects student learning outcomes – academic achievement, critical thinking skills, and information literacy – is essential for optimizing educational strategies. This research will investigate both positive and negative correlations.

OBJECTIVES OF THE STUDY

The researchers conducted a study on the impact of digital media consumption on the learning outcomes and online behavior of students and teachers in Can-avid public elementary schools. Specifically, the study aimed to achieve the following objectives:

1. Determine the overall patterns of digital media consumption among students and teachers in Can-avid public elementary schools from the following platforms?
 - 1.1 educational apps
 - 1.2 social media
 - 1.3 entertainment websites
2. Find out the levels of self-reported online behaviors among students in Can-avid public elementary schools in terms of the following:
 - 2.1 social media engagement
 - 2.2 online gaming,
 - 2.3 exposure to inappropriate content
3. Find out the levels of self-reported teachers' attitudes toward students' use of digital media in the classroom as it relate to their strategies in the following:
 - 3.1 managing potential risks to the decline of learning outcomes
 - 3.2 addressing challenges in improving academic performance
4. describe the students' self-reported learning outcomes in Can-Avid public elementary schools in terms of the following:

- 4.1 improved understanding of concepts
- 4.2 increased motivation to learn

METHODOLOGY

Research Design

This research employed a quantitative-descriptive design to investigate the impact of digital media consumption on the learning outcomes and online behaviors of students and teachers in Can-avid public elementary schools. The study determined overall patterns of digital media use among students and teachers across various platforms, including educational apps, social media, and entertainment websites. Data was collected to ascertain the levels of self-reported online behaviors among students, focusing on social media engagement, online gaming, and exposure to inappropriate content. Furthermore, the research explored teachers' self reported attitudes toward students' digital media use in the classroom, examining their strategies for managing potential risks to learning outcomes and addressing challenges in improving academic performance. Finally, the study described students' self reported learning outcomes, specifically improvements in understanding concepts and increased motivation to learn. The quantitative nature of this design, utilizing surveys and descriptive statistics, allowed for the efficient collection and analysis of data to describe the current state of digital media use and its perceived effects within the school system.

Research Locale

This study will take place in public elementary schools of Can-avid, Eastern Samar. The schools are as follows: (1) Camantang National High School, (2) Can-avid National High School, (3) Can-avid Central Elementary School, (4) Balagon Elementary School, (5) Baruk Elementary School, (6) Boco Elementary School, (7) Caghalong Elementary School, (8) Camantang Elementary School, (9) Can-ilay Elementary School, (10) Cansangaya Elementary School, (11) Canteros Elementary School (12) Carolina Elementary School, (13) Guibuangan Elementary School (14) Jepaco Elementary School, (15) Mabuhay Elementary School, (16) Malogo Elementary School, (17) Obong Elementary School, (18) Pandol Elementary School, (19) Rawis Elementary School, (20) Salvacion Elementary School and (21) Solong Elementary School.

Figure 2 on the next page shows the geographical location of the schools covered by the study. The numbers indicate the aforementioned schools.

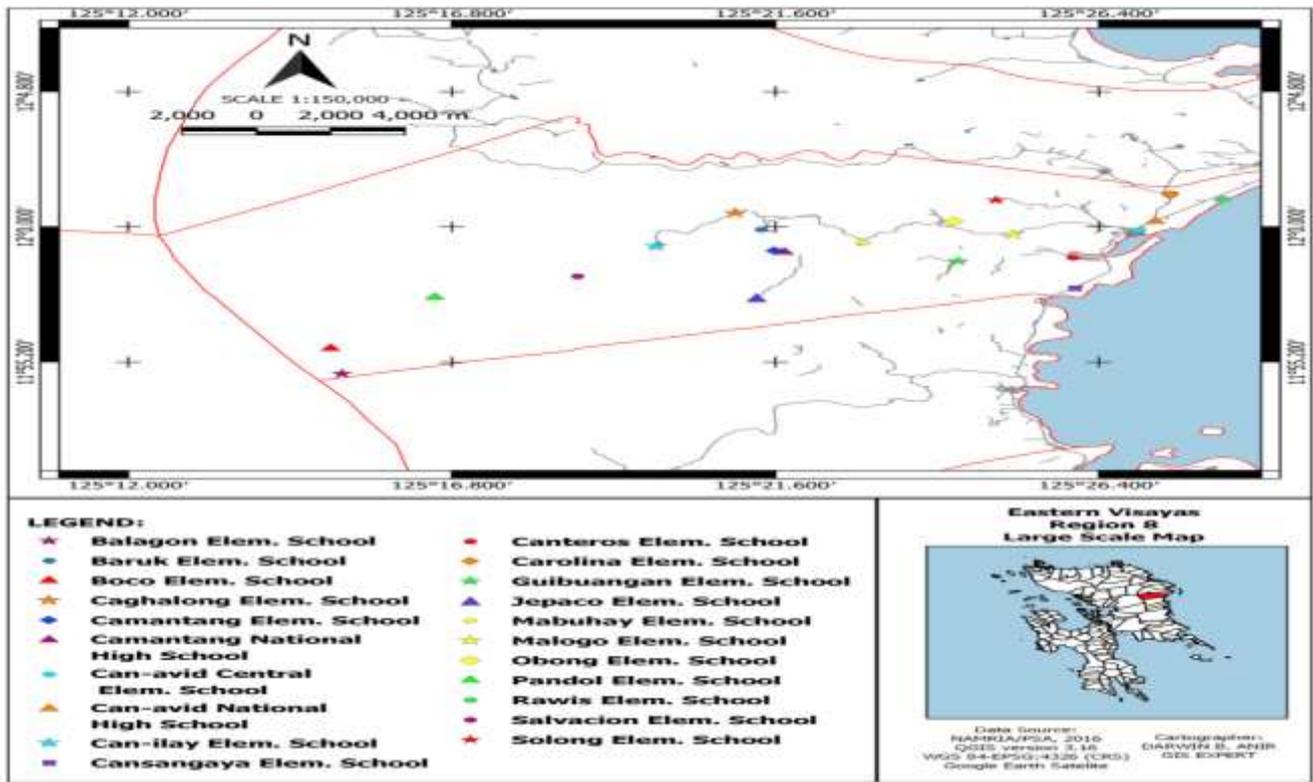


Figure 2. The Locale of the Study

Respondents of the Study: The respondents of the study consisted of and Grade 5 and Grade 6 students and selected

teachers from selected public elementary schools in Can-avid, Eastern Samar.

Table 1. The Respondents of the Study

| School | Number of Teachers | Sample/ Respondents | Number of Grade 5 & 6 Students | Sample/ Respondents |
|------------------------------------|--------------------|---------------------|--------------------------------|---------------------|
| Can-avid Central Elementary School | 45 | 21 | 230 | 58 |
| Balagon Elementary School | 4 | 2 | 15 | 4 |
| Baruk Elementary School | 8 | 3 | 28 | 7 |
| Boco Elementary School | 5 | 3 | 22 | 6 |
| Caghalong Elementary School | 4 | 3 | 26 | 7 |
| Camantang Elementary School | 4 | 3 | 38 | 10 |
| Can-ilay Elementary School | 9 | 3 | 43 | 11 |
| Cansangaya Elementary School | 11 | 6 | 62 | 16 |
| Canteros Elementary School | 9 | 4 | 63 | 16 |
| Carolina Elementary School | 13 | 5 | 66 | 17 |
| Guibuangan Elementary School | 4 | 3 | 43 | 11 |
| Jepaco Elementary School | 4 | 3 | 20 | 5 |
| Mabuhay Elementary School | 8 | 4 | 37 | 9 |
| Malogo Elementary School | 9 | 5 | 22 | 6 |
| Obong Elementary School | 5 | 3 | 19 | 5 |
| Pandol Elementary School | 4 | 3 | 14 | 4 |
| Rawis Elementary School | 9 | 5 | 22 | 6 |
| Salvacion Elementary School | 6 | 2 | 18 | 5 |
| Solong Elementary School | 9 | 5 | 24 | 6 |
| Total | 155 | 57 | 624 | 155 |



Research Instrument

The researchers developed a comprehensive survey questionnaire designed to address the research questions.

Part I measured the frequency of digital media use among students and teachers across educational apps, social media, and entertainment websites using a five-point Likert scale. This section of the survey questionnaire assessed the frequency of digital media use among students and teachers across three platforms: educational apps, social media, and entertainment websites. Respondents utilized a five-point Likert scale (never, rarely, sometimes, often, always) to rate their frequency of use for each platform. This provided a quantitative measure of the overall patterns of digital media consumption within the study population. This part was intended for both teacher and student respondents.

Part II assessed students' self-reported online behaviors regarding social media engagement, online gaming, and exposure to inappropriate content, also using a five-point Likert scale. Focusing on students, this part of the questionnaire measured self-reported online behaviors related to social media engagement, online gaming, and exposure to inappropriate content. A five-point Likert scale was used to gauge the level of engagement in social media activities, frequency of online gaming, and the extent of exposure to inappropriate online material. This provided insights into the students' online experiences and potential risks associated with digital media use.

Part II for teacher respondent survey questionnaire gauged teachers' perceptions of risks, confidence in managing those risks, and the effectiveness of their strategies related to students' digital media use via a five-point Likert scale. This section targeted teachers' perspectives and practices related to students' digital media use. Teachers used a five-point Likert scale to rate their perceived risks of digital media use on learning outcomes, their confidence in managing those risks, and the perceived effectiveness of their strategies for leveraging digital media to improve academic performance. This provided valuable data on teachers' attitudes and approaches to integrating digital media into the classroom.

Part III for student respondent survey questionnaire evaluated students' self-reported improvements in understanding concepts and motivation to learn as a result of digital media use, again employing a five-point Likert scale. This final section focused on students' self-perceptions of their learning outcomes as a result of digital media use. Utilizing a five-point Likert scale, students rated the extent to which their understanding of concepts and their motivation to learn have improved through the use of digital media. This offered valuable insights into the potential impact of digital media on students' learning experiences.

Data Collection Procedure

The data gathering procedure for this study involved a systematic and structured approach to ensure the accurate and reliable collection of data from the targeted population of teachers and students in Can-avid public elementary schools. The researchers first obtained necessary permissions from the school district and individual schools to conduct the study.

Ethical approval was sought from the ethics committee to ensure the study adhered to ethical research guidelines, particularly regarding data privacy and informed consent. Prior to participating, all participants were provided with comprehensive information about the study's purpose, procedures, potential risks and benefits, and data confidentiality. Informed consent was obtained from all participating teachers and, for students, from both parents/guardians and the students themselves (if they are old enough to understand). The questionnaire was distributed and completed electronically through a secure online platform. This method offered convenience and potentially faster data collection. The questionnaire was printed and distributed to participants who do not have access to online platforms. The researchers ensured a comfortable and private environment for completing the questionnaire, minimizing distractions and promoting honest responses. Completed questionnaires were collected securely, either electronically through the online platform or physically by the researchers. Data was meticulously entered into a spreadsheet or database, ensuring accuracy and consistency. Once the data was collected, it underwent a thorough cleaning and verification process to identify and correct any errors, inconsistencies, or missing data.

Data Analysis

The data analysis for this study will focus exclusively on descriptive statistics to summarize the quantitative data collected through the survey questionnaire. The analysis did not involve inferential statistics or tests of relationships among variables. Instead, the focus was on providing a clear and comprehensive description of the data related to digital media consumption, online behaviors, teachers' attitudes, and students' perceived learning outcomes.

Frequencies and percentages were calculated to illustrate the distribution of responses for each variable. This revealed the prevalence of different levels of digital media use across various platforms (educational apps, social media, entertainment websites) for both students and teachers. Similarly, the levels of students' self-reported online behaviors (social media engagement, online gaming, exposure to inappropriate content) was described using frequencies and percentages. Teachers' attitudes toward students' digital media use, including their strategies for managing risks and improving academic performance, was also summarized using these descriptive statistics. Finally, students' self-reported learning outcomes (improved understanding of concepts and increased motivation to learn) was described using frequencies and percentages.

Means and standard deviations were calculated to provide additional descriptive information about the central tendency and variability of each variable. This offered a more nuanced understanding of the average levels of digital media consumption, online behaviors, teachers' attitudes, and students' perceived learning outcomes. The results were presented using tables, charts, and graphs to enhance clarity and facilitate interpretation. The researchers used clear and concise language to explain the findings, avoiding overly technical terminology whenever possible. The analysis strictly adhered to a descriptive approach, focusing solely on summarizing and



presenting the data without making inferences or testing hypotheses about relationships between variables.

Ethical Considerations

This study adhered to strict ethical standards to ensure the rights, safety, and dignity of all participants. Prior to data collection, formal approval was obtained from the Department of Education Division Office and school administrators within Schools of Can-avid District. Participants were informed about the purpose and procedures of the study, and written informed consent was obtained from all teacher respondents. For student participants, assent was secured along with parental or guardian consent. Participation was entirely voluntary, and respondents were assured of the confidentiality and anonymity of their responses. Data were used solely for research purposes and stored securely to prevent unauthorized access, in compliance with institutional and professional ethical guidelines.

RESULTS

The findings of this study provide meaningful insights into the patterns of digital media consumption and its impact on learning outcomes and online behavior among students and teachers in Can-avid public elementary schools. The results highlight how various forms of digital media—such as educational apps, social media, and entertainment websites—are utilized within the learning environment, and how they influence both academic performance and behavioral tendencies.

Digital Media Consumption Patterns Among Students and Teachers

The study revealed a strong appreciation for the use of educational apps, which were perceived by both students and teachers as effective tools for enhancing understanding and engagement. Social media was identified as a valuable medium for communication, although its excessive use raised concerns regarding distractions and potential exposure to inappropriate content. Meanwhile, entertainment websites were regarded with neutrality, indicating their limited perceived relevance to academic learning.

The findings presented in Table 1 highlight the digital media consumption patterns among students and teachers in Can-avid public elementary schools. The mean score for educational apps is 3.8, indicating a general agreement among respondents that these platforms are utilized effectively for learning purposes. This suggests that both students and teachers recognize the value of educational apps in enhancing the learning experience.

Social media usage received a mean score of 3.5, also reflecting agreement. This points to the acceptance of social media as a tool for communication and engagement, although it may also raise concerns regarding distractions or inappropriate content.

Conversely, entertainment websites scored a mean of 2.9, indicating a neutral stance among respondents. This suggests that while entertainment websites may be accessed, their perceived educational value is limited, leading to ambivalence regarding their impact on learning.

Table 1: Digital Media Consumption Patterns Among Students and Teachers

| Platform | Mean Score | Interpretation |
|------------------------|------------|----------------|
| Educational Apps | 3.8 | Agree |
| Social Media | 3.5 | Agree |
| Entertainment Websites | 2.9 | Neutral |
| Aggregate Mean | 3.4 | Agree |

The aggregate mean of 3.4 further supports the notion that digital media consumption among students and teachers leans towards positive engagement, particularly with educational apps and social media. However, the neutral response towards entertainment websites suggests a need for further investigation into how these platforms influence learning outcomes and behaviors in the educational context. These insights provide a foundation for understanding digital media's role in the learning environment and highlight the areas where targeted interventions may be necessary.

Self-Reported Online Behaviors of Students

Table 2 presents the self-reported online behaviors of students, revealing a mixed picture of their digital engagement. Students strongly agree (mean = 4.1) that they engage significantly with

social media. This high level of engagement highlights the pervasive role social media plays in their lives, potentially impacting their learning, social interactions, and overall well-being. Further investigation into the type of social media engagement and its correlation with academic performance would be beneficial.

In contrast, students express disagreement (mean = 2.7) regarding their involvement in online gaming. This suggests that while gaming might be present, it doesn't represent a dominant online activity for this student population. However, the relatively low mean score doesn't necessarily indicate a complete absence of gaming; further probing might reveal the extent and nature of gaming habits.

Table 2: Self-Reported Online Behaviors of Students

| Online Behavior | Mean Score | Interpretation |
|-----------------------------------|------------|-------------------|
| Social Media Engagement | 4.1 | Strongly Agree |
| Online Gaming | 2.7 | Disagree |
| Exposure to Inappropriate Content | 1.8 | Strongly Disagree |
| Aggregate Mean | 2.9 | Neutral |



Importantly, students strongly disagree (mean = 1.8) with experiencing exposure to inappropriate content online. This suggests that, at least according to self-reporting, the students are largely protected from harmful online materials. However, it's crucial to acknowledge the limitations of self-reporting in this area; underreporting due to embarrassment or lack of awareness is a possibility. Additional methods for assessing exposure to inappropriate content, such as teacher observation or parental surveys, may provide a more complete picture.

The aggregate mean of 2.9, indicating a neutral overall response, underscores the diversity of online behaviors among students. While social media engagement is high, other online activities show less engagement or even negative sentiment. Further research should explore the factors contributing to these

varying levels of engagement and their impact on the students' academic and personal development.

Teachers' Attitudes Toward Students' Use of Digital Media in the Classroom

Table 3 details teachers' attitudes toward students' use of digital media in the classroom, revealing insights into their perceptions and strategies. The mean score of 3.2 for managing risks to learning outcomes indicates a neutral stance among teachers. This neutrality suggests that while teachers may recognize potential risks associated with digital media, their attitudes do not lean strongly in favor of or against its use. It highlights the complexity of integrating digital media into the classroom, where concerns about distractions and negative impacts on learning outcomes exist but may not be fully addressed or articulated.

Table 3: Teachers' Attitudes Toward Students' Use of Digital Media in the Classroom

| Aspect | Mean Score | Interpretation |
|---|------------|----------------|
| Managing Risks to Learning Outcomes | 3.2 | Neutral |
| Addressing Challenges in Academic Performance | 3.9 | Agree |
| Aggregate Mean | 3.55 | Agree |

In contrast, the aspect of addressing challenges in academic performance scored a mean of 3.9, reflecting agreement among teachers. This suggests that educators see digital media as a valuable tool for overcoming obstacles to student learning and enhancing academic performance. It points to a recognition of the potential benefits of digital resources in improving student engagement, understanding, and performance in various subjects.

The aggregate mean of 3.55 indicates an overall positive attitude toward the use of digital media in the classroom, leaning slightly toward agreement. This finding suggests that teachers are generally open to leveraging digital tools but may still grapple with concerns regarding their risks.

These insights signal the need for professional development that equips teachers with effective strategies to integrate digital media in ways that maximize learning while minimizing risks.

Furthermore, ongoing dialogue among educators about best practices and experiences with digital media can contribute to more informed approaches to teaching in a digital age. Overall, while the attitudes are encouraging, they also reveal areas for professional growth and support as schools navigate the evolving landscape of digital education.

Students' Self-Reported Learning Outcomes

Table 4 presents students' self-reported learning outcomes related to their use of digital media, revealing largely positive perceptions. Students strongly agree (mean = 4.5) that their understanding of concepts has improved through the use of digital media. This suggests that digital tools and resources are effectively facilitating comprehension and knowledge acquisition. The high mean score indicates a significant positive impact on learning outcomes, potentially through interactive learning platforms, multimedia resources, or personalized learning experiences.

Table 4: Students' Self-Reported Learning Outcomes

| Learning Outcome | Mean Score | Interpretation |
|------------------------------------|------------|----------------|
| Improved Understanding of Concepts | 4.5 | Strongly Agree |
| Increased Motivation to Learn | 3.7 | Agree |
| Aggregate Mean | 4.1 | Strongly Agree |

Students also agree (mean = 3.7) that their motivation to learn has increased as a result of digital media integration. This finding points to the potential of digital media to enhance engagement and foster a more positive learning environment. The factors contributing to this increased motivation could include the interactive nature of digital learning tools, the accessibility of information, or the opportunity for personalized learning experiences.

The aggregate mean of 4.1, indicating strong agreement, strongly supports the notion that digital media has a positive impact on student learning outcomes. Both improved

understanding and increased motivation suggest that the integration of digital media is not only effective but also enhances students' overall educational experience. However, further research should explore the specific types of digital media and pedagogical approaches that contribute most significantly to these positive outcomes, ensuring that the observed benefits are sustained and maximized. It's also important to consider potential confounding factors and investigate whether these positive outcomes are consistent across different student demographics and learning styles.



CONCLUSIONS

The conclusions drawn from these findings lead to several important implications for stakeholders in the education system. The study found that educational apps are highly valued by both students and teachers, highlighting the need for schools to further integrate these tools into the learning process to enhance educational experiences. Additionally, the high level of social media engagement among students suggests that educators must address both the advantages and potential risks associated with its use, creating an environment where social media serves as a constructive tool for communication and learning. The mixed attitudes of teachers toward managing the risks linked to digital media use emphasize the necessity for targeted professional development, equipping educators with the skills needed to integrate digital resources effectively while protecting students' educational experiences. Furthermore, the positive self-reported learning outcomes from students—such as improved understanding and increased motivation—underscore the effectiveness of digital media in fostering academic success and stress the importance of continued investment in these resources to sustain and improve educational performance.

RECOMMENDATIONS

Based on the findings of the study, several recommendations are proposed to enhance the effective use of digital media in education. Schools are encouraged to prioritize the integration of educational apps into the curriculum by providing appropriate training for teachers, ensuring that these tools are used to maximize student engagement and improve learning outcomes. It is also recommended that educators and parents work collaboratively to establish clear guidelines for responsible social media use, promoting its role as a positive communication tool while minimizing distractions and the risk of exposure to inappropriate content. Furthermore, continuous professional development should be made available to teachers, with a focus on equipping them with strategies to manage the potential risks of digital media while leveraging its benefits to address academic challenges. Lastly, further research is recommended to identify which specific types of digital media most significantly contribute to student learning, as well as to understand their varying effects across different student demographics and learning styles.

Conflict of Interest

The authors declare that there is no conflict of interest in the conduct of this study. This research was carried out independently and received no financial support or sponsorship from any external organization that could influence the outcomes. All data were collected and analyzed objectively, and the interpretations and conclusions presented are solely based on the findings of the study.

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