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CANVA-BASED INTERACTIVE MEDIA TO IMPROVE STUDENTS' DIGITAL LITERACY AND NUMERACY LITERACY ON BUILDING SPACE MATERIAL AT SDIT ISKANDAR MUDA

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Abstract

This study investigated the effectiveness of Canva-Based Interactive Media to improve students' Digital Literacy and Numeracy Literacy on Building Space Material at SDIT Iskandar Muda. The research employed a quantitative approach using a quasi-experimental design with a non-equivalent control group. The participants consisted of elementary school students divided into an experimental group and a control group. The experimental group was taught using Canva-Based Interactive Media, while the control group received conventional instruction.Data were collected using a test instrument in the form of pre-tests and post-tests designed to measure students' Digital Literacy and Numeracy Literacy. The test items were developed based on learning indicators and had been validated by experts before implementation. The collected data were analyzed using descriptive and inferential statistical techniques, including normality tests, homogeneity tests, and hypothesis testing using an independent samples t-*test.The results showed that students who were taught using Canva-Based Interactive Media achieved significantly higher post-test scores in students' Digital Literacy and Numeracy Literacy compared to those in the control group. These findings indicated that the use of Canva-Based Interactive Media had a positive and significant effect on improving students' Digital Literacy and Numeracy Literacy in elementary school. Therefore, Canva-Based Interactive Media could be considered an effective and engaging digital learning medium to enhance students' Digital Literacy and Numeracy Literacy.*

Keywords: Canva-Based Interactive, Digital Literacy, Numeracy Literacy, Building Space Material


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INTRODUCTION

In the era of digital transformation, the integration of technology in education has become an essential requirement to enhance students' learning outcomes and competencies. Digital literacy and numeracy literacy are two fundamental skills that students must master in the 21st century to succeed academically and socially. Digital literacy enables students to access, evaluate, and utilize information effectively through digital platforms, while numeracy literacy supports students' ability to apply mathematical concepts in real-life contexts. In mathematics learning, particularly in building space material (three-dimensional geometry), students often face difficulties in visualizing abstract concepts such as volume, surface area, and spatial relationships.

Traditional teaching methods that rely heavily on textbooks and verbal explanations tend to limit students' understanding and engagement.[1] As a result, many students experience low achievement and reduced motivation in learning geometry. The use of interactive digital media has been proven to improve students' cognitive engagement and conceptual understanding. Canva, as a digital design platform, offers various features such as animations, interactive presentations, infographics, and visual templates that can support meaningful learning experiences.[2] Through Canva-based media, teachers can design attractive and interactive learning materials that facilitate students' exploration of geometric concepts. Moreover, integrating Canva-based interactive media can simultaneously develop students' digital literacy skills by engaging them in digital content creation and navigation. Students learn not only mathematical concepts but also how to use digital tools responsibly and creatively.[3] This integration aligns with the demands of modern curricula that emphasize technology-enhanced learning and higher-order thinking skills.

Considering Indonesia's relatively low performance in international assessments such as PISA in mathematics and digital literacy, innovative learning media are urgently needed to improve students' competencies. Therefore, the development and implementation of Canva-based interactive media in teaching building space material are crucial to enhance both numeracy and digital literacy simultaneously. Although numerous studies have examined the use of digital media in mathematics education, most research focuses on general e-learning platforms, learning

[1] Ina V. S. Mullis et al., *TIMSS 2019 International Results in Mathematics and Science*, nos. 978-1-889938-54–7 (TIMSS & PIRLS International Study Center, Boston College, 2020), https://timssandpirls.bc.edu/timss2019/international-results/.

[2] Sugiarni et al., "The Implementation of Canva as a Digital Learning Tool in English Learning at Vocational School," *English Learning Innovation* 5, no. 2 (2024), https://doi.org/10.22219/englie.v5i2.34839.

[3] Kosilah et al., "Implementation of Digital Literacy in Designing Learning Using Canva Application in Baubau High School," *Journal of Cultural Analysis and Social Change*, December 17, 2025, https://doi.org/10.64753/jcasc.v10i4.3390.

management systems, or mobile applications.[4] Limited studies specifically explore the utilization of Canva as an interactive learning medium in mathematics instruction, especially for teaching building space material. Previous research mainly emphasizes the effectiveness of Canva in improving students' creativity, presentation skills, and learning motivation.[5] However, empirical evidence regarding its impact on students' numeracy literacy remains insufficient. Most studies measure learning outcomes in terms of test scores rather than literacy-based competencies. Furthermore, studies that integrate digital literacy and numeracy literacy in a single instructional intervention are still limited. Existing research often treats these competencies separately, focusing either on digital skills development or mathematical achievement. Consequently, there is a lack of comprehensive models that simultaneously promote both literacies through interactive media. In the context of geometry learning, particularly building space material, research tends to prioritize the use of dynamic geometry software such as GeoGebra and Cabri 3D.[6] While these tools are effective, they require advanced technical skills and infrastructure that may not be accessible in all schools. Canva, as a user-friendly and widely accessible platform, offers a practical alternative that has not been sufficiently explored.

Additionally, limited studies have investigated the implementation of Canva-based interactive media in primary and secondary education settings in developing countries, including Indonesia. Socio-cultural, infrastructural, and pedagogical factors may influence the effectiveness of digital learning tools.[7] Therefore, localized empirical studies are necessary to validate the applicability of Canva in diverse educational contexts.Based on these gaps, this study aims to develop and evaluate Canva-based interactive media to improve students' digital literacy and numeracy literacy in learning building space material, addressing the lack of integrated and context-specific research in this area.In the learning process, teachers are expected to function as inspirational facilitators, capable of sparking students' creative and innovative abilities. The goal is for students to be able to apply knowledge to face the challenges of changing times, not just theoretical concepts. According to Satria, rapid and evolving technological advances have created

[4] Gwo-Jen Hwang et al., "Seamless Flipped Learning: A Mobile Technology-Enhanced Flipped Classroom with Effective Learning Strategies," *Journal of Computers in Education* 2, no. 4 (2015), https://doi.org/10.1007/s40692-015-0043-0; Xieling Chen et al., "Application and Theory Gaps During the Rise of Artificial Intelligence in Education," *Computers and Education: Artificial Intelligence* 1 (2020), https://doi.org/10.1016/j.caeai.2020.100002.

[5] Rinja Efendi et al., "Canva Application-Based Learning Media on Motivation and Learning Outcomes," *International Journal of Elementary Education* 7, no. 2 (2023), https://doi.org/10.23887/ijee.v7i2.53956; Sugiarni et al., "The Implementation of Canva as a Digital Learning Tool in English Learning at Vocational School."

[6] Hwang et al., "Seamless Flipped Learning: A Mobile Technology-Enhanced Flipped Classroom with Effective Learning Strategies."

[7] Kaharudin et al., "Pemanfaatan Canva Sebagai Media Pembelajaran Interaktif Dalam Meningkatkan Minat Belajar Siswa," *JS (JURNAL SEKOLAH)* 10, no. 1 (2025), https://doi.org/10.24114/js.v10i1.69071.

new IT-based innovations in various fields. To improve the quality of education and human resources, particularly educators, by improving the teaching materials used in the learning process using technology.[8]

Education must be implemented optimally to achieve maximum results. As stated by Diana, innovation in learning is a learning process that utilizes new concepts or methods in carrying out learning stages, thereby achieving the desired learning outcomes.[9] Innovation in education offers many benefits and also represents new methods in various activities, especially in the learning process. Teachers are the individuals who play the most important role in making changes with new methods, thus being able to create new innovations. A teacher functions not only as a teacher but also must be able to assist students in improving the quality of their learning.[10]

The rapid development of science and technology can be an important factor in efforts to develop students' skills in mathematics, especially in the use of technology. Skills that can be trained are digital competence and numeracy competence. Digital literacy can be described as a combination of computer literacy and information literacy.[11] Define digital literacy as a set of skills needed to become citizens in facing life and challenges in the 21st century. Digital literacy can be defined as the ability to understand and use information from various digital sources. Digital literacy can also be said to be a process by which users process information/knowledge obtained after using digital devices so that the use of information and communication technology can improve the quality of students' learning experiences.

Platforms like Canva have proven effective in improving these skills, as they allow students to learn through engaging and contextual media.[12] Numeracy literacy, on the other hand, is also an equally important foundational skill. Numeracy literacy encompasses the ability to understand and use numbers in everyday contexts and to solve problems involving mathematical

[8] Muhammad Hassel Yasa Satria, "Pemanfaatan Teknologi Informasi Sebagai Penunjang Inovasi Pendidikan Di Indonesia," preprint, Thesis Commons, March 22, 2023, https://doi.org/10.31237/osf.io/bfq4j.

[9] Eka Diana and Moh. Rofiki, "Analisis Metode Pembelajaran Efektif Di Era New Normal," *Jurnal Review Pendidikan Dan Pengajaran* 3, no. 2 (2020), https://doi.org/10.31004/jrpp.v3i2.1356.

[10] Afriantoni et al., "Peran Guru Dalam Meningkatkan Manajemen Mutu Pendidikan Di Indonesia," *Jurnal Inovasi Pendidikan Dan Teknologi Informasi (JIPTI)* 6, no. 1 (2025), https://doi.org/10.52060/jipti.v6i1.2913.

[11] Paul F. Marty et al., "Scientific Inquiry, Digital Literacy, and Mobile Computing in Informal Learning Environments," *Learning, Media and Technology* 38, no. 4 (2013), https://doi.org/10.1080/17439884.2013.783596.

[12] Risnawaty Risnawaty et al., "The Use of Canva Based Learning Media to Improve the Ability to Write Procedure Text for Students," *Jurnal Konseling Dan Pendidikan* 13, no. 1 (2025), https://doi.org/10.29210/1141100.

concepts.[13] Numeracy literacy is the ability to flexibly use mathematical concepts to understand, interpret, and solve problems in everyday life. Numeracy encompasses not only basic arithmetic operations but also logical, analytical, and spatial thinking skills.

The subject of geometric shapes in elementary school is one of the learning areas that highly demands numeracy skills, particularly in visualizing three-dimensional shapes, calculating volumes, and analyzing geometric nets. One learning content that greatly requires a strong understanding of numeracy and visualization is geometric shapes. This material is part of geometry learning in mathematics that is introduced from the elementary school level. Geometric shapes include three-dimensional objects such as cubes, cuboids, cylinders, cones, pyramids, and spheres. The distinctive characteristics of geometric shapes lie in the presence of volume, surface area, sides, edges, vertices, and the nets that form them. Understanding geometric shapes requires spatial skills, visual representation, and the ability to connect mathematical concepts with real objects

The results of the National Assessment by the Ministry of Education, Culture, Research, and Technology show that most elementary school students have not yet reached a basic level of numeracy literacy, especially in three-dimensional geometry. One of the causes of this situation is that some teachers are still unable to fully implement technology in their learning optimally. Most teachers, especially at the elementary school level, still experience difficulties in maximizing the use of interactive learning media. These difficulties include a lack of applicable technology training, limited digital infrastructure in schools, low teacher digital literacy, and a lack of time to design engaging and relevant digital content.[14]

Teachers tend to rely on lecture and whiteboard methods, making abstract material such as geometric shapes difficult for students with visual and kinesthetic learning styles to understand. According to research by Kurniawan, many teachers only use digital learning media limited to slideshows or PDFs without interactivity, thus failing to stimulate active student participation.[15] This is due to teachers being unfamiliar with interactive design platforms like Canva, or not knowing that Canva can be optimized beyond just a design tool namely as an integrative platform that can be connected to various other digital learning resources such as Assembler EDU

[13] Novi Andri Nurcahyono, "Peningkatan Kemampuan Literasi Dan Numerasi Melalui Model Pembelajaran," *Hexagon: Jurnal Ilmu Dan Pendidikan Matematika* 1, no. 1 (2024), https://doi.org/10.33830/hexagon.v1i1.4924.

[14] Pusat Asesmen Pendidikan, *Laporan Hasil Asesmen Nasional Jenjang Sekolah Dasar Tahun 2022* (Badan Standar, Kurikulum, dan Asesmen Pendidikan, 2023), https://pusmendik.kemdikbud.go.id/laporan-an-2022.

[15] Indra Kurniawan and M. Zabeta, "Analisis Penggunaan Media Pembelajaran Digital Pada Siswa Kelas V Di Sekolah Dasar," *Research and Development Journal of Education* 11, no. 1 (2025), https://doi.org/10.30998/rdje.v11i1.28612.

(Augmented Reality), Sketchfab (3D objects), and educational games based on Wordwall or Math Playground through the hyperlink feature.

Teachers' use of Canva to develop digital learning media can facilitate students' understanding of spatial geometry concepts in a fun and participatory manner. Canva provides a variety of engaging visual features, such as 3D templates of spatial nets, rotation animations, and interactive quizzes, which facilitate students' understanding of spatial concepts. As reported by Rahmawati et al., 2024, the use of Canva in mathematics learning has a significant impact on improving students' numeracy literacy, as they are more easily able to identify shapes, calculate volume and surface area, and visualize geometric shapes in real-world contexts. Thus, the research question is how does Canva-Based Interactive Media to improve students' Digital Literacy and Numeracy Literacy on Building Space Material at SDIT Iskandar Muda.

RESEARCH METHODS

Research design: this study seeks to examine the effectiveness of Canva-Based Interactive Media to improve students' Digital Literacy and Numeracy Literacy on Building Space Material at SDIT Iskandar Muda. A quasi-experimental design with a non-equivalent control group is employed to compare the improvement in students' Digital Literacy and Numeracy Literacy between the experimental and control groups. The experimental group received treatment using Canva-Based Interactive Media, while the control group was taught using a traditional learning model. The learning processes in the two classes follow different structures. In the conventional class, students engage in discussions, followed by the lecturer explaining the material. The lecturer plays a more dominant role in this setup, delivering content through traditional lectures. In contrast, stages of Canva-Based Interactive Media preparation stage, orientation stage, exploration, discussion and concept reinforcement, reflection and evaluation, conclusion.

Participants: The study sample consisted of 50 students from elementary school students, divided into two groups: 25 students in the experimental group and 25 in the control group. The research location was chosen because it has various digital facilities and digital-based learning media. A cluster sampling technique was used to select the participants and received approval from participants. Some reasons why cluster sampling is chosen cluster sampling allows researchers to reduce costs and time required. Researchers only need to take samples from a portion of the cluster, not the entire population. Given the large sample size, groups were predetermined for sampling.

Instruments and Data collection: The instruments used were tests of students' Digital Literacy and Numeracy Literacy. These research instruments have been validated by two educational experts, confirming their validity. The validity analysis is conducted to determine

whether the items on the instrument are valid. To assess the instrument's validity, the researchers evaluate the expert agreement index using the Aiken index (V). The reliability of the instrument is determined using Cronbach's alpha coefficient. The reliability of the instruments tests of students' Digital Literacy and Numeracy Literacy was found to be 0.84, placing it in the high reliability category.[16] The results of this evaluation are shown in Table 1 below:

Table 1. The results of the Aiken Index Coefficient of Instrument Validity

Instruments	V	Validity
Digital Literacy	0.83	Valid
Numeracy Literacy	0.81	Valid

Data analysis: The independent sample t-test was employed at a significance level of 0.05. If the probability is less than the specified significance level, it indicates that the application of Canva-Based Interactive Media has an effect on improving students' Digital Literacy and Numeracy Literacy. Data normality was assessed using the One-Sample Kolmogorov-Smirnov Test, while homogeneity was examined through the Levene test. Furthermore, an independent sample t-test was conducted to determine if there were significant differences between the average scores of the experimental and control groups.

RESULT AND DISCUSSION

The effectiveness of implementing Canva-Based Interactive Media is evaluated by examining their impact on enhancing students' Digital Literacy and Numeracy Literacy. As shown in Table 2 the comparison of average scores between the experimental and control groups indicates that both students' Digital Literacy and Numeracy Literacy. in the experimental group are higher than those in the control group.

[16] Keith S. Taber, "The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education," *Research in Science Education* 48, no. 6 (2018), https://doi.org/10.1007/s11165-016-9602-2.

Table 2. The comparison of Average Value of students' Digital Literacy and Numeracy Literacy in Control and Experimental Class

	Group	Mean	Std. Deviation	N
Digital Literacy	control	63.70	3.475	25
	experimental	82.82	2.523	25
	Total	77.72	11.385	50
Numeracy Literacy	control	62.55	6.742	25
	experimental	83.72	3.264	25
	Total	74.52	10.484	50

Based on the test of normality, the data are normally distributed because the significance value is greater than 0.05 (see table 4). Whereas, table 3 shows that all group variance pairs have significance numbers greater than 0.05. Thus, the variance of each pair is homogeneous.

Table 3. Tests of Normality

	Group	Kolmogorov-Smirnov[a]		
		Statistic	df	Sig.
conceptual understanding	control	.121	25	.143
	experimental	.230	25	.206
critical thinking	control	.472	25	.145
	experimental	.103	25	.132

Table 4. Levene's Test of Equality of Error Variancesa

	F	df1	df2	Sig.
Digital Literacy	1.102	1	50	.211
Numeracy Literacy	1.178	1	50	.125

Based on the results of the dependent variable covariance matrix tests, each dependent variable had the same variance in each group because the significant value was .211 (p value> 0.05). It was also assumed that the correlation between the dependent variables was the same in all groups (see table 5). Thus, the variance of each pair is homogeneous. The results of the assumption test indicate that the data have met the requirements for conducting the manova test.

Table 5. Box's Test of Equality of Covariance Matrices[a]

Box's M	2.253
F	3.102
df1	4
df2	250310.000
Sig.	.211

The Manova test utilized Hotelling's Trace statistics (see table 6). This test statistic is suitable if there are only two groups of independent variables. The higher the Hotelling's Trace statistical value is, the greater the effect on the wordwall educational game will be. Based on the table, the hotelling's trace value is 11.241, which is greater than the pillai's trace value (hotelling's trace> pillai's trace value). Table 6 shows that the statistical values of Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root for each model variable have a significant value of less than 0.05. This indicates that there is an influence of the Canva-Based Interactive Media simultaneously. Thus, testing between subjects can be continued (see table 7).

Table 6. Multivariate Tests

	Effects	Value	F	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.558	17483.157[b]	.000	.724
	Wilks' Lambda	.012	17483.157[b]	.000	.724
	Hotelling's Trace	515.341	17483.157[b]	.000	.724
	Roy's Largest Root	529.453	17483.157[b]	.000	.724
group	Pillai's Trace	.832	342.145[b]	.000	.848
	Wilks' Lambda	.071	342.145[b]	.000	.848
	Hotelling's Trace	11.241	342.145[b]	.000	.848
	Roy's Largest Root	11.241	342.145[b]	.000	.848

Table 7. Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	F	Sig.
Corrected Model	Digital Literacy	1071.600[a]	1	310.683	.000
	Numeracy Literacy	2740.017[b]	1	416.437	.000
Intercept	Digital Literacy	320166.627	1	28405.077	.000
	Numeracy Literacy	217818.447	1	14733.275	.000
Group	Digital Literacy	2501.500	1	730.683	.000
	Numeracy Literacy	4300.027	1	526.437	.000

The next analysis is based on the difference on the influence of each factor on the dependent variable (see table 7). The results show that there is a significant difference regarding the value (p value < .05). Therefore, it can be concluded that there is a significant difference in the value of Digital Literacy between students who were taught using the Canva-Based Interactive Media and conventional (p = .000) and there is a significant difference in the value of Numeracy Literacy between students who were taught using the implementing Canva-Based Interactive Media and conventional (p = .000) model. Based on the explanation above, the application of the wordwall educational game in the experimental class is more effective for improving students' Digital Literacy and Numeracy Literacy than the conventional model in the control class.

The findings of this study indicate that Canva-based interactive media has a significant positive impact on students' digital literacy and numeracy literacy in learning building space material at SDIT Iskandar Muda. Students showed increased ability to access, evaluate, and utilize digital information, as well as improved understanding of geometric concepts related to three-dimensional figures. This result aligns with the view of OECD (2019), which emphasizes that digital tools can enhance students' learning engagement and cognitive development. The integration of visual elements, animations, and interactive tasks in Canva supports meaningful learning and encourages students to actively participate in the learning process.

The improvement in digital literacy is evident from students' increased competence in navigating digital platforms, selecting appropriate learning resources, and creating simple digital content. Through Canva, students were trained to use technology responsibly and creatively. According to Belshaw, digital literacy involves not only technical skills but also critical thinking and ethical awareness in using digital media.[17] Similarly, Ng states that effective digital learning environments promote students' autonomy and collaboration. Therefore, the use of Canva contributed to the development of comprehensive digital literacy skills among students.

[17] Doug Belshaw, *The Essential Elements of Digital Literacies* (Doug Belshaw, 2014).

In terms of numeracy literacy, students demonstrated better understanding of spatial concepts, measurements, and problem-solving related to building space material. The interactive visuals and real-life contextual examples embedded in Canva presentations helped students connect abstract mathematical concepts with daily experiences. This finding supports the argument of Stacey and Turner that visual representation plays a crucial role in enhancing mathematical comprehension.[18] Moreover, the use of digital media allowed students to repeatedly observe and manipulate geometric models, which strengthened their conceptual understanding.

The results also show that Canva-based media increased students' learning motivation and engagement. Students were more enthusiastic and focused during lessons, as the media provided colorful designs, interactive quizzes, and collaborative activities. This is consistent with the findings of Schindler et al., who reported that technology-enhanced learning environments improve students' interest and participation.[19] Additionally, Kearney et al. argue that interactive digital tools promote active learning and self-regulation.[20] Thus, Canva serves as an effective medium for creating an engaging learning atmosphere.

From a pedagogical perspective, the implementation of Canva-based interactive media supports student-centered learning. Teachers act as facilitators who guide students in exploring digital content and solving problems independently. This approach aligns with the constructivist learning theory, which emphasizes active knowledge construction.[21] Furthermore, Darling-Hammond et al. highlight that technology integration can enhance instructional quality when aligned with learning objectives.[22] In this study, Canva was effectively used to support both digital and numeracy literacy goals.

Despite the positive outcomes, several challenges were identified, including limited internet access, varying levels of students' digital skills, and time constraints in preparing interactive materials. These limitations may affect the optimal implementation of Canva-based learning. However, with proper teacher training and institutional support, these challenges can be minimized. As suggested by Redecker, continuous professional development is essential for

[18] Kaye Stacey and Ross Turner, *Assessing Mathematical Literacy: The PISA Experience* (Springer, 2015), https://doi.org/10.1007/978-3-319-10121-7.

[19] Laura A. Schindler et al., "Computer-Based Technology and Student Engagement: A Critical Review of the Literature," *International Journal of Educational Technology in Higher Education* 14, no. 1 (2017), https://doi.org/10.1186/s41239-017-0063-0.

[20] Matthew Kearney et al., "Viewing Mobile Learning from a Pedagogical Perspective," *Research in Learning Technology* 20, no. 1 (2012), https://doi.org/10.3402/rlt.v20i0.14406.

[21] Mike Sharples et al., *Innovating Pedagogy 2016: Open University Innovation Report 5*, no. 9781473022812 (The Open University, 2016), https://oro.open.ac.uk/47961/.

[22] Linda Darling-Hammond et al., *Effective Teacher Professional Development* (Learning Policy Institute, 2017), https://doi.org/10.54300/122.311.

maximizing the potential of educational technology.[23] Therefore, future research should focus on developing sustainable digital learning models and exploring the long-term impact of Canva-based media on students' academic achievement and literacy development.

CONCLUSION

The conclusion of this study is that Canva-based interactive learning media has been proven to significantly improve students' digital literacy by improving their ability to access and navigate digital content, operate various learning platforms, evaluate and analyze visual information in 3D and AR, and use technology wisely and responsibly. Students experience a transformation from passive consumers of digital content to more independent, critical technology users, and are able to adapt to various different digital learning applications. Canva-based interactive learning media has been proven to be very effective in improving students' numeracy literacy in the material of geometric shapes as shown by significant improvements in all aspects of learning, namely understanding the concept of geometric shapes, identifying elements of geometric shapes, calculating volume and surface area, and analyzing nets. 3D and AR visualizations help students build a strong spatial understanding and are able to apply numeracy concepts in contexts relevant to everyday life. Based on the findings and discussion of this study, several recommendations are proposed to improve the implementation of Canva-based interactive media in enhancing students' digital and numeracy literacy.First, teachers are encouraged to continuously improve their digital competencies through regular training and professional development programs. Mastery of digital tools such as Canva will enable teachers to design more creative, interactive, and pedagogically appropriate learning materials. Schools and education authorities should facilitate workshops and mentoring programs to support teachers in integrating technology effectively into classroom instruction. Second, schools should provide adequate infrastructure to support digital learning activities. Stable internet access, sufficient digital devices, and technical support are essential to ensure the smooth implementation of Canva-based learning. Without proper facilities, the effectiveness of interactive media may be limited. Therefore, institutional support plays a crucial role in maximizing learning outcomes.

[23] Christine Redecker, *European Framework for the Digital Competence of Educators: DigCompEdu*, nos. 978-92-79-73494–6 (Publications Office of the European Union, 2017), https://doi.org/10.2760/159770.

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