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Teachers' Views on Canva-Assisted Flashcards as Learning Media on Multiplication Material For Elementary School Students

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Abstract: The low creative thinking skills of students in Indonesia, as reflected in the low scores on the Programme for International Student Assessment (PISA), indicate significant challenges in the education system. Conventional learning media that are less interactive are one of the factors that hinder student engagement and the development of their creativity. This study aims to explore teachers' views on the development of Canva-assisted flashcards as interactive learning media for multiplication material in elementary schools. This study uses a descriptive qualitative method, with the subjects of the study being teachers at SD Negeri 2 Pondok, Wonogiri Regency, who were selected purposively. Data collection techniques include semi-structured interviews, non-participatory observation, and document analysis. Data were analyzed using the Miles & Huberman interactive analysis model which includes data reduction, data presentation, and drawing conclusions. The results of the study show that teachers are aware of the limitations of conventional learning media and consider Canva-assisted flashcards as an innovative solution. This media is considered capable of increasing student engagement, facilitating the understanding of multiplication concepts, and supporting creative thinking skills. These findings emphasize the importance of developing technology-based learning media to support 21st-century education.

Keywords: Learning Media, Flashcards, Canva, Creative Thinking, Multiplication

Abstrak: *Rendahnya keterampilan berpikir kreatif siswa di Indonesia, sebagaimana tercermin dalam skor rendah pada Programme for International Student Assessment (PISA), menunjukkan adanya tantangan signifikan dalam sistem pendidikan. Media pembelajaran konvensional yang kurang interaktif menjadi salah satu faktor yang menghambat keterlibatan siswa dan pengembangan kreativitas mereka. Penelitian ini bertujuan untuk mengeksplorasi pandangan guru terhadap pengembangan flashcard berbantuan Canva sebagai media pembelajaran interaktif untuk materi perkalian di sekolah dasar. Penelitian ini menggunakan metode kualitatif deskriptif, dengan subjek penelitian adalah beberapa guru di SD Negeri 2 Pondok, Kabupaten Wonogiri, yang dipilih secara purposif. Teknik pengumpulan data meliputi wawancara semi-terstruktur, observasi non-partisipatoris, dan analisis dokumen. Data dianalisis menggunakan model analisis interaktif Miles & Huberman yang mencakup reduksi data, penyajian data, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa guru menyadari keterbatasan media pembelajaran konvensional dan menilai flashcard berbantuan Canva sebagai solusi inovatif. Media ini dinilai mampu meningkatkan keterlibatan siswa, mempermudah pemahaman konsep perkalian, serta mendukung keterampilan berpikir kreatif. Temuan ini menegaskan pentingnya pengembangan media pembelajaran berbasis teknologi untuk mendukung pendidikan abad ke-21.*

Kata Kunci: *Media Pembelajaran, Flashcard, Canva, Berpikir Kreatif, Perkalian*

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INTRODUCTION

The low level of creative thinking skills among students in Indonesia, as reflected in the Programme for International Student Assessment (PISA) report, indicates significant challenges within the national education system. According to PISA data, only 5 percent of Indonesian students demonstrate advanced creative thinking abilities, which is considerably below the OECD (Organisation for Economic Co-operation and Development) average, where 50 percent of students exhibit high-level creative thinking (Nandang Mustafa, 2023). This outcome suggests fundamental issues across various educational aspects, including teaching quality, infrastructure, and curriculum. Other countries also face similar challenges. For instance, Spain struggles with public funding for education and a high dropout rate, adversely affecting its PISA scores (Akramjon Mukhtarovich Matkarimov, 2022). In Indonesia, frequent curriculum changes and uneven distribution of educational quality pose significant barriers to progress (Ismawati et al., 2023). Meanwhile, in the United Kingdom, the representation of PISA data often attracts criticism due to high non-participation rates, which can lead to bias (Jerrim, 2021). This situation underscores the urgent need for comprehensive reforms in teacher training, curriculum development, and assessment systems to enhance student learning outcomes and performance in PISA (Bilad et al., 2024).

In Indonesia, the disparity in the quality of education is also attributed to inadequate infrastructure and a monotonous teaching approach. Many teachers still rely heavily on lecture-based methods and problem-solving exercises as their primary instructional strategies. This conventional approach often fails to provide students with opportunities to explore new ideas or engage actively in the learning process. Consequently, students tend to be passive and are not adequately trained to develop the creative thinking skills that are essential in this era of globalization. This highlights the necessity for innovation in teaching strategies and the development of learning media that can stimulate more active student engagement and support creative thinking skills.

Initial observations conducted at SD Negeri 2 Pondok reveal that mathematics instruction, particularly in multiplication, remains dominated by traditional approaches. Teachers tend to employ the standard algorithm for multiplication without incorporating other more interactive or contextual methods. As a result, student learning outcomes indicate that the majority of students have not met the Minimum Competency Criteria (KKM), with only 29.42 percent achieving scores above this threshold. This lack of proficiency contributes to students' limited ability to think creatively, both in the context of learning and in applying mathematical concepts to everyday life. This situation underscores the urgent need for innovation in teaching approaches, encompassing both methods and learning media.

Creative thinking skills are one of the core competencies that are very important to develop in the 21st century. In the context of mathematics learning, particularly in multiplication, this skill is necessary to help students understand abstract concepts, solve problems, and connect learning with real-life situations (Siregar et al., 2023). Creative thinking skills enable students to adapt to technological advancements and tackle increasingly complex problems in the era of globalization (Yu, 2024). Learning methods such as mind mapping, project-based learning, and the introduction of programming concepts have proven effective in enhancing students' creative thinking abilities (Smith et al., 2023)(Ardilansari et al., 2023).

Many educational institutions continue to emphasize theoretical learning, which hinders the development of students' creative thinking skills (Pangestu et al., 2023). Research indicates that integrative and project-based learning approaches can significantly enhance students' creative thinking abilities (Smith et al., 2023). Unfortunately, in certain regions such as the Maluku Islands in Indonesia, students' creative thinking skills remain low due to limited school resources, insufficient teacher training,

and a curriculum that does not adequately support creativity (Leasa et al., 2021). To address this issue, efforts are needed, including improved teacher training, the development of a curriculum that fosters creativity, and the provision of more interactive learning materials (Fazal et al., 2023).

Furthermore, research shows that creative thinking skills not only enhance students' cognitive abilities but also help them become more prepared to face future challenges (Jannah & Atmojo, 2022). However, the success of developing these skills highly depends on the support of engaging, innovative, and student-centered learning media. Teachers play a strategic role in selecting, adapting, and developing relevant learning media. Therefore, interactive and technology-based learning media, such as Canva-assisted flashcards, can be a potential solution to effectively support the development of students' creative thinking skills.

Canva, an easily accessible online graphic design platform, has become an effective tool for creating engaging mathematics learning media for elementary school students (Vindo Feladi et al., 2023)(Sihombing et al., 2024). This platform provides various templates, features, and design elements that enable teachers to develop innovative and visually appealing educational materials (Saputra et al., 2022)(Hidayati et al., 2023). Studies show that Canva-based learning media can enhance students' interest in learning, facilitate independent learning, and aid in understanding abstract mathematical concepts (Vindo Feladi et al., 2023). One of the main advantages of Canva is its accessibility through smartphones, allowing usage anytime and anywhere, thus supporting a more flexible learning process (Saputra et al., 2022). Additionally, Canva also supports teachers in creating multimedia-based learning materials that can help address the challenges of declining education quality at the elementary school level (Buulolo et al., 2023). Other research shows that mathematics teachers in inclusive schools can also effectively utilize Canva to develop inclusive and engaging learning media (Kurniasari et al., 2022).

Meanwhile, flashcards are a simple yet highly effective learning medium that helps students remember information visually. Flashcards are known to be very beneficial for teaching basic concepts, such as multiplication, which require deep understanding and repetition (Sari et al., 2023). However, the conventional use of flashcards is often limited to memorization functions and does not provide an interactive learning experience. With technological advancements, flashcards can be integrated with platforms like Canva to create more dynamic learning media. Canva allows teachers to design flashcards that are engaging, relevant, and easily accessible to students (Jannah & Atmojo, 2022). Research shows that Canva-based flashcards can enhance student engagement in learning, while also supporting the development of creative thinking skills that are very important for elementary school students (Susantini & Kristiantari, 2021). Thus, the combination of flashcards as a learning medium and Canva as a design tool can be an innovative solution in creating more interactive, effective, and relevant mathematics learning that meets the needs of students.

This research aims to explore teachers' perspectives on the use of Canva-assisted flashcards as an interactive learning medium for multiplication concepts. A descriptive qualitative approach is employed to understand teachers' needs for innovative media, the challenges they face with conventional tools, and their expectations regarding the effectiveness of Canva-assisted flashcards. The study is anticipated to offer practical recommendations for educators and learning media developers, while also serving as a foundation for further research in the context of primary education.

The novelty of this research lies in the development of Canva-assisted flashcards designed to enhance students' creative thinking skills. Unlike previous studies that focused on traditional flashcards, this research presents an innovative approach that integrates digital technology to create engaging and effective learning materials. The use of Canva facilitates the design of more creative, interactive flashcards that align with modern curricula, thereby providing a more relevant learning experience for

students. Consequently, this research not only addresses the need for effective learning media but also makes a significant contribution to the efforts aimed at improving the quality of education in Indonesia.

RESEARCH METHODS

This study employs a descriptive qualitative method aimed at exploring teachers' needs and perceptions regarding the development of Canva-assisted flashcard learning media for multiplication content, with the objective of enhancing students' creative thinking skills (Moleong, 2018). The choice of a descriptive qualitative approach is justified as it allows the researcher to gain an in-depth understanding of the phenomenon through direct interaction with the research subjects. As noted by (Rahardjo, 2017), qualitative methods are well-suited for exploring individuals' perceptions of specific experiences or needs.

This research was conducted at State Elementary Schhol of 2 Pondok, Wonogiri Regency, which was selected using purposive sampling technique. This technique was used because the researcher focused on teachers as the main subjects of the study to explore their views on Canva-assisted flashcard learning media for multiplication material (Moleong, 2018). The selection of the location was based on criteria such as accessibility, relevance to the research context, and the suitability of the teachers as representatives of the need for the development of learning media. This research was conducted in January 2025, with the main focus on analyzing teachers' views on the learning media used so far and their need for innovative media to enhance students' creative thinking skills.

The research data consists of interview results with teachers, non-participatory observations of the learning process, and analysis of previously used learning media documents (Sugiyono, 2016). Technique Data collection in this research was conducted using three main techniques. Observation is used to observe how teachers use learning media during the teaching process, focusing on the effectiveness of the media in supporting multiplication material. The observation grid was prepared to guide the observation and ensure that the data obtained aligns with the research objectives. Semi-structured interviews were conducted to explore teachers' perceptions regarding the learning media they currently use and their needs for the development of Canva-assisted flashcards. This interview provides deeper insights into the challenges faced by teachers in using conventional learning media and the opportunities offered by innovative media. In addition, document analysis was conducted to evaluate the learning media that had been used previously. This document analysis provides additional information about the characteristics of the learning media used by teachers, which serves as the basis for designing the flashcard media prototype. In general, the instrument grid used in this research can be seen in the following table 1.

Tabel 1. Instrument Grid

Data collection technique	Indicator	Number of Items
Observation	Media used in the learning process	2
	Effectiveness of media in supporting multiplication material	3
	Teacher activities in utilizing learning media	2
	Interaction between teachers and students during learning	2
Interview	Teachers' perceptions of the learning media currently used	3
	Teachers' needs for the development of Canva-assisted flashcard media	3

	Teachers' challenges in using conventional learning media	2
	Teachers' views on the potential of Canva-assisted flashcard media in supporting learning	3
Document Analysis	Types of learning media previously used by teachers	2
	Suitability of media to multiplication material	2
	Availability of interactive features in learning media	2
	Advantages and disadvantages of the media used	2

Adaptation from research (Dewantara et al., 2020)(Hidayati et al., 2023)

Meanwhile, the validity of the data in this study was obtained through triangulation techniques, which involve combining data from interviews, observations, and document analysis to ensure the validity and consistency of the data. Technique triangulation is a way to verify data by comparing information from various sources and methods, thereby ensuring the accuracy of research results (Sugiyono, 2016). In this study, technique triangulation is used to ensure that the data obtained accurately reflects the needs and views of the teachers. This validation process is illustrated in Figure 1, which shows the relationship between data from interviews, observations, and document analysis.

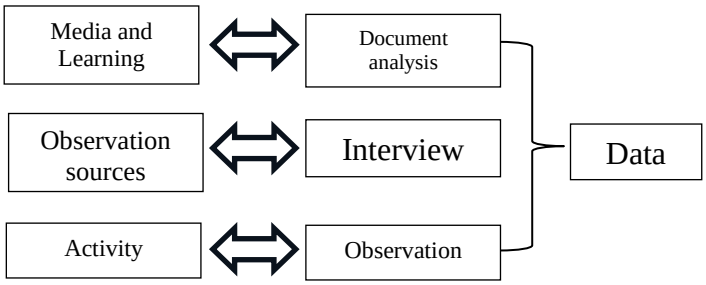

Figure 1. Research Triangulation Techniques

Data analysis is conducted using the interactive analysis model developed by (Miles & Huberman, 2012). This model comprises three primary steps: data reduction, data presentation, and conclusion drawing/verification. Data reduction involves filtering and categorizing relevant data in alignment with the research focus. The reduced data is then presented in the form of tables, graphs, or charts to facilitate interpretation. The final step entails drawing conclusions based on the presented data, accompanied by verification to ensure the consistency and accuracy of the conclusions. This process is iterative, with data reduction, presentation, and verification being repeated until valid and reliable conclusions are reached. Figure 2 illustrates the steps of the interactive analysis employed in this research.

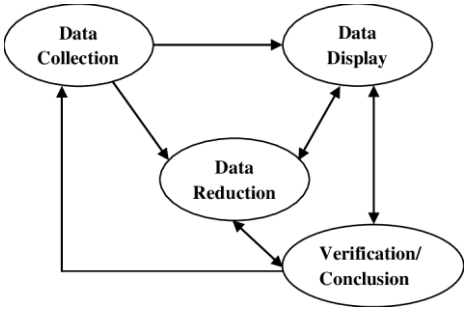

Figure 2. Interactive Data Analysis Techniques

RESULTS AND DISCUSSION

Exploring Classroom Dynamics and Learning Media: Observational Insights

The results of the observation show that the teaching media used by the teacher in the multiplication material lessons are still conventional. The teacher uses textbooks, blackboards, and Student Worksheets (LKS) as the main tools in delivering the material. This media is considered adequate to meet the basic needs of learning, but it is not capable of capturing students' attention maximally or supporting the visualization of multiplication concepts. Moreover, the effectiveness of this media is limited in providing an interactive learning experience. Teachers rarely utilize technology or digital media that are more contextual with the current needs of students.

Observation of teacher and student activities during the learning process shows fairly good interaction, but it tends to be one-sided. The teacher dominates the learning activities through the lecture method, while student involvement appears minimal, with the main activities being note-taking and completing exercises from the student worksheets. Although some students appear to be actively asking questions or discussing, this involvement is not evenly distributed throughout the class. Teaching and learning activities show potential to become more dynamic if supported by interactive learning media, such as Canva-assisted flashcards. From the observation results, it was found that the learning media used by the teacher had several shortcomings, such as the lack of visual and interactive elements that could help students better understand the concept of multiplication. The teacher expressed the need for more engaging and innovative learning media to enhance student interest and involvement. One potential solution is the development of Canva-assisted flashcard media, which not only visualizes the concept of multiplication concretely but also encourages students to be more active and creative in their learning. The analysis of the observational findings can be seen in the following table 2.

Table 2. Observational Analysis

Aspect	Observation Results	Analysis of Findings
Instructional Media	Teachers use conventional media such as textbooks, whiteboards, and worksheets.	Teachers are less varied in using learning media, so that students' learning experiences are limited to monotonous and less interesting methods.
Teacher-Student Interaction	Interaction is dominated by the teacher, with students acting as listeners. Discussions between students are rare.	Teaching and learning activities are quite interactive but can still be improved with media that encourage collaboration and active student participation.
Media Effectiveness	Conventional media help students understand the material, but do not facilitate effective visualization of abstract concepts such as multiplication.	More interactive media, such as Canva-assisted flashcards, can make it easier for students to understand multiplication concepts in a more interesting and contextual way.
Development Potential	Teachers show interest in trying new media, especially technology-based media such as Canva, to improve the quality of learning.	Teachers have the potential to develop Canva-assisted flashcards as an innovative solution to meet students' needs in understanding multiplication material.

Referring to the analysis results contained in the table above, it can be seen that teachers have limitations in using varied and innovative learning media. Teaching and learning activities tend to be one-way, although teacher-student interaction is quite good. In addition, the analysis shows that teachers have the potential and desire to develop technology-based media such as Canva to create more interesting learning media, one of which is flashcards for multiplication material.

Teachers' Perspectives: Challenges and Opportunities in Learning Media

Interviews with teachers show that conventional learning media, such as textbooks and worksheets, are still the main tools in mathematics education, including multiplication material. The teacher stated that these media are easy to use and already familiar to the students. However, they also expressed challenges in its use. One teacher said, "Students often get bored with learning media that is only text-based. They need something more visually engaging to be more enthusiastic about learning." Additionally, teachers face limitations in terms of time and skills to develop more innovative learning media. A teacher added, "We actually want to try new, more interactive media, but we are hindered by time constraints and lack of training related to technology." This challenge highlights the need for more practical and accessible solutions to support the development of engaging and relevant learning media.

The teachers' views on the development of Canva-assisted flashcards are very positive. The teacher mentioned that flashcards have the potential to make multiplication learning more engaging and interactive. One of the teachers stated, "Flashcards can help students understand the concept of multiplication because they are more visual and easier to remember, especially if designed attractively using Canva." Teachers also have the expectation that this media can enhance students' creative thinking skills. They believe that Canva-assisted flashcards not only facilitate students' understanding but also encourage them to be active and creative during learning. A teacher said, "If students are involved in creating or using flashcards, it also trains them to think creatively, because they can relate the material to the images or designs they see." In general, the findings from this interview were successfully analyzed in the form of a coding table and images of keywords that frequently appeared during the interview activities.

Table 3. Interview Coding Analysis

Theme	Code	Teacher Quotes
Conventional learning media	Advantages of simple media	"Media such as textbooks are sufficient for basic needs, but students get bored quickly."
Challenges in using media	Lack of technology training	"We need training to create digital media such as Canva, but time is limited."
Flashcards assisted by Canva	Potential of visual-based flashcards	"Flashcards can help students understand the material because they are more visually appealing."
Increasing student creativity	Flashcards encourage student engagement	"Students can be more creative if they are also involved in creating or using flashcards in learning."

Figure 3. Keyword Analysis of Interview Findings

Referring to the successful analysis developed above, the interview results indicate that teachers possess a critical perspective on conventional learning media and recognize the necessity for innovation. Canva-assisted flashcards are viewed as a potential solution that is not only engaging for students but also fosters their creative thinking skills. The integration of this media is anticipated to assist teachers in addressing challenges in mathematics education, particularly concerning multiplication concepts.

Results of Document Analysis: A Closer Look at Learning Materials

The analysis of the documents indicates that the instructional media employed by teachers for multiplication consists of textbooks, student worksheets (LKS), and simple presentation slides. These resources are utilized regularly during the teaching process and are regarded as quite practical by educators. However, further analysis reveals that these media possess both advantages and disadvantages. On the positive side, textbooks and LKS provide a clear structure for the material, making it easy for students to follow. Additionally, these resources are readily accessible and available within the school environment. Conversely, a notable drawback is the lack of interactive visual elements, which diminishes their appeal to students, particularly when grasping abstract concepts such as multiplication. The presentation slides used are also largely static, lacking engaging animations or appealing visual designs.

Based on the analysis of the media's alignment with the learning content, it was found that conventional media merely presents multiplication concepts in textual and numerical formats, without offering visual or interactive context. This limitation hinders the understanding of students who have a visual learning style. Interactive features, such as dynamic illustrations or project-based activities, are almost nonexistent in the available media. Consequently, there is a significant need to develop digital learning media, such as Canva-assisted flashcards, which can visualize multiplication content in an engaging manner and enhance student involvement. The following Table 4 summarizes the findings from the document analysis conducted.

Table 4. Document Analysis Results

Aspects Analyzed	Findings	Analysis of Findings
Types of Learning Media	Textbooks, worksheets, and presentation slides are simple.	The media used are conventional and do not have interactive visual elements.
Advantages of Media	- Textbooks and worksheets provide a clear structure of the	This advantage supports the use of media as a basic learning aid.

	material.	
Disadvantages of Media	- Media is easily accessible and available at school.	This disadvantage indicates the need for more interactive and engaging media.
Suitability of Media to Material	- Does not attract students' attention because of the lack of visual elements.	The media does not support students with visual and kinesthetic learning styles, requiring visualization-based innovations such as flashcards assisted by Canva.
Interactive Features	- Does not support understanding of abstract concepts such as multiplication visually or concretely.	The absence of this feature limits student engagement and their ability to understand multiplication material in depth.

The table above shows that the learning media currently used by teachers has advantages in terms of ease of access and material structure. However, the shortcomings in visualization and interactivity aspects are the main obstacles in supporting effective multiplication learning. Therefore, the development of innovative media, such as Canva-assisted flashcards, is essential to address this shortcoming. Overall, the research results show data consistency from observations, interviews, and document analysis, which were verified through triangulation techniques. Observations revealed that conventional learning media are less engaging and lack interactive elements, while interviews highlighted teachers' need for learning media that can enhance student engagement and creative thinking skills. Document analysis supports these findings by showing that existing media are not fully relevant to students' needs, especially in visualizing the concept of multiplication. The main findings indicate that the development of Canva-assisted flashcards as an innovative learning medium can be a relevant solution to address the shortcomings of current learning media and support more effective and engaging learning.

Research findings indicate that conventional learning media, such as textbooks and student worksheets, are less effective in capturing students' attention and facilitating interactive learning. Observations, interviews, and document analyses reveal the limitations of these media in visualizing abstract concepts and actively engaging students. These findings underscore the necessity for the development of more interactive learning media, such as Canva-assisted flashcards, to enhance student engagement and creative thinking skills, in alignment with the research objectives.

Conventional learning media, including textbooks, blackboards, and student worksheets, while providing a clear structure for content, fall short in attracting students' attention and promoting active participation. Observations indicate that students tend to be passive during lessons, and teachers acknowledge that these media are inadequate for visualizing abstract concepts such as multiplication. The research supports this conclusion, demonstrating that traditional media often fail to meet the needs of students with visual or kinesthetic learning styles, particularly in grasping abstract concepts (Mayer, 2009). Additionally, the lack of technological training for teachers and time constraints pose challenges in integrating more innovative learning media (Pratama & Lestari, 2020). This highlights the need for an interactive, technology-based approach to complement conventional media.

The development of Canva-assisted flashcards received positive feedback from teachers because they offer visual and interactive advantages that can help students understand multiplication concepts in an engaging way. Research shows that technology-based media, such as Canva, supports visual learning, enhances student engagement, and encourages their creativity (Pilegard & Mayer, 2016; Fanani et al., 2022). These flashcards also enable teachers to facilitate discussions and collaborations relevant to 21st-century skills (Susantini & Kristiantari, 2021). Thus, Canva-assisted

flashcards not only address the shortcomings of conventional media but also provide a more effective, creative, and enjoyable learning experience for students.

The results of this study are relevant for teachers in developing and using technology-based learning media to support more effective and interesting learning. The use of technology in education allows teachers to increase student engagement and present more visual materials, especially for abstract topics such as multiplication (ROY, 2019). Teachers often face challenges in motivating students using conventional learning media, which tend to be less interesting and do not support students' visual learning styles (Chudzaifah & Nailil Hikmah, 2024). Canva-assisted flashcards provide flexibility for teachers to adjust learning materials according to students' needs, which is in line with the findings (Sert & Boynueğri, 2016) that technology-based media can facilitate individual and collaborative learning. In addition, this study supports the view Ratheeswari (2018) that the use of technology can improve 21st-century skills, such as creative thinking and collaboration.

The use of Canva-assisted flashcards offers significant advantages in fostering interactive and effective learning experiences. These flashcards provide engaging visualizations that enhance students' understanding of abstract concepts, as noted by Anugraha & Padmadewi (2023), who assert that visualization can clarify complex ideas. Canva empowers educators to create designs tailored to students' needs, promoting creativity, collaborative learning, and improving students' retention through visual media (Siregar et al., 2023; Saputra et al., 2022). Furthermore, these flashcards facilitate the development of communication and teamwork skills through a project-based approach (Admelia et al., 2022). This research makes a significant contribution by addressing the limitations of conventional media through the development of innovative technology-based resources. Canva-assisted flashcards are not only relevant to teaching practices but are also designed with educators' needs in mind to ensure their effectiveness in the classroom (Miftahul Jannah et al., 2023). By supporting technology-based learning theories, this study provides a practical foundation for the development of innovative educational media that can enhance student engagement and support 21st-century skills.

Meanwhile, this research is limited to teachers at Sekolah Dasar Negeri 2 Pondok, Wonogiri Regency, making the results difficult to generalize to a broader context. The limited research location reduces data diversity, while the focus on multiplication material makes the findings less relevant to other topics. However, this research remains an initial foundation for the development of innovative learning media and a reference for further studies with a broader scope.

CONCLUSIONS AND RECOMMENDATIONS

This research indicates that traditional teaching media, such as textbooks and worksheets, continue to play a significant role in basic mathematics education, particularly in the instruction of multiplication. Although these conventional methods are widely available, they often fall short in fully engaging students and fostering the development of creative thinking skills. Educators recognize the necessity for innovative tools, such as Canva-assisted flashcards, to enhance interactivity and visual engagement within educational materials. The findings emphasize the importance of integrating digital technology into teaching methodologies to cultivate essential 21st-century skills, including creative thinking, collaboration, and problem-solving. To address these challenges, professional development programs should be implemented to equip educators with the skills needed to effectively design and utilize technology-enhanced media. Furthermore, future researchers are encouraged to expand this study by involving a larger and more diverse group of educators and assessing the effectiveness of

Canva-assisted flashcards in various educational contexts, thereby validating and enriching the findings presented here.

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