



The development of E-BISA media to improve students' creativity in learning dance in grade VI

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Abstract: This study aims to develop E-BISA media (interactive audiovisual-based ebook) and test its feasibility and effectiveness in increasing student creativity in dance learning for grade VI elementary school. The type of research applied is R&D (Research and Development) with the Borg & Gall development model with seven stages, namely potential and problems, data collection, product design, product validation, revision, trial, and final product. The subjects in this study consisted of grade VI students of Sadeng 02 Public Elementary School, class teachers, as well as material experts and media experts. Data collection techniques used observation, interviews, questionnaires, and documentation. The results of the development of this E-BISA media include interactive audiovisual-based ebook learning media in digital form equipped with images, audio, mystery cards and containing stories with traditional game themes to help students understand the material in dance learning. The results of the feasibility measurement show that the developed E-BISA media has a very high level of feasibility, indicated by the percentage of validation from material experts of 95.7% and media experts of 96%. Furthermore, the trial results showed an increase in student creativity, as demonstrated by a significant difference between pretest and posttest scores. The effectiveness test results indicated that the media used was categorized as quite effective with an N-Gain of 68.22%. Therefore, the E-BISA (audiovisual-based interactive ebook) media is deemed feasible and effective for use in dance learning to enhance student creativity. This media can also be an innovative alternative for teachers in creating engaging, interactive, and technologically advanced learning.

Keywords: audiovisual, ebook, interactive, learning media, dance arts

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Introduction

Dance learning is an important part of arts and culture subjects in elementary schools because it not only serves as a means of aesthetic development but also plays a role in training students' creativity, motor skills, self-expression, and cultural appreciation. Indonesia has a diverse culture that is a national identity, so arts education plays a crucial role in introducing and preserving culture to the younger generation (Tanaya et al., 2024). In the elementary school context, dance learning needs to be designed in an interesting, interactive, and developmentally appropriate manner to build meaningful learning experiences. According to Guilford, creativity is the ability to generate new ideas that are unique, useful, and contextually appropriate. In dance learning, creativity can be realized through students' ability to explore movements, create dance patterns, and express ideas and emotions through body movement.

However, dance learning in elementary schools still faces various obstacles. Based on preliminary research at Sadeng 02 Public Elementary School in Semarang City, dance learning has not been optimal. Learning components such as teachers, media, methods, and student involvement do not fully support the learning process. Classroom teachers generally have a general education background, not dance education, thus experiencing limitations in teaching dance techniques and creatively. This condition

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causes dance learning to tend to be monotonous, less interactive, and unable to optimally enhance student creativity. In fact, in the implementation of the Independent Curriculum, teachers are required to provide flexible, creative, and student-centered learning that is tailored to their characteristics and learning needs (Ahmadi & Ary, 2022). Furthermore, the role of teachers as learning agents is also a crucial factor in creating quality learning, as outlined in Law Number 14 of 2005 concerning Teachers and Lecturers. However, the results of the Teacher Competency Test (UKG in the Indonesian context) indicate that teacher competency in Indonesia is still suboptimal, impacting the quality of learning provided.

One factor contributing to the suboptimal implementation of dance education is the limited availability and use of appropriate learning media. To date, dance instruction has generally relied on textbooks, basic teacher demonstrations, or instructional videos that are not integrated with interactive learning activities. These media have limitations because they do not fully accommodate the characteristics and learning needs of elementary school students, who tend to learn more effectively through concrete and visual experiences, as well as engaging activities. Moreover, in some schools, dance education has not been implemented optimally because arts instruction tends to focus more heavily on visual arts. Consequently, students have limited opportunities to explore and develop their creativity through movement. Nevertheless, dance education can be delivered in an engaging and meaningful manner through play-based learning activities. According to Vygotsky, play has a crucial role in children's social, emotional, and cognitive development, thereby supporting a more effective learning process.

On the other hand, technological developments provide opportunities to create more innovative learning that is tailored to students' needs. The use of technology in education can help teachers develop creative, engaging, and easily accessible learning media in the digital age (Luisandrih & Yanuartuti, 2020). UNESCO also emphasized that technology-based arts education can improve students' critical thinking, communication, and creativity skills, particularly through media rich in audiovisual elements. Audiovisual-based media is considered effective in helping elementary school students understand material because it combines more concrete visual and audio elements that are appropriate to the students' operational developmental stage.

Previous research has shown that the use of audiovisual media has a positive impact on student participation and learning outcomes in arts learning (Selfia & Aqil, 2026). In addition, the use of digital technology in learning has also been shown to increase student creativity because it provides a more interesting, collaborative, and interactive learning experience (Tang et al., 2022). However, previous research generally still focuses on the use of learning videos or audiovisual media separately and has not integrated elements of stories, games, images, audio, and interactive activities in a single dance learning medium that can be flexibly accessed by teachers and students. This condition indicates a research gap, namely the limited development of audiovisual-based dance learning media specifically designed to enhance the creativity of elementary school students.

Based on these problems, this study developed E-BISA media (interactive audiovisual-based ebook) as a solution to the limitations of dance learning media in elementary schools. This media was developed in the form of an interactive digital ebook that integrates story text, images, audio, mystery cards, and narratives with traditional game themes in one learning medium. The novelty of this research lies in the development of audiovisual-based ebook media that not only presents dance material, but also combines elements of traditional games and interactive activities to help students understand the material while increasing their creativity. Therefore, this study aims to develop E-BISA media (interactive audiovisual-based ebooks) that is feasible and effective for use in increasing student creativity in dance learning in grade VI of elementary school.

Methods

This study employed a Research and Development (R&D) method modified from the Borg and Gall model, as presented in Figure 1. The study aimed to develop E-BISA (Audiovisual-Based Interactive Ebook) learning media and to examine its feasibility and effectiveness in enhancing student creativity. The development process was carried out through seven simplified stages: identifying potential and problems, collecting data, designing the product, validating the product, revising the

product, conducting product trials, and producing the final product. This research was conducted at Sadeng 02 Public Elementary School, Semarang City, in the even semester of the 2024/2025 academic year. The sampling technique used was purposive sampling, based on the research needs. Sixth-grade students were selected as media users because they had studied dance material in accordance with the intended learning outcomes. The research participants consisted of 18 sixth-grade students in the large-scale trial, 4 students in the small-scale trial, sixth-grade teachers, and material and media experts as product validators.

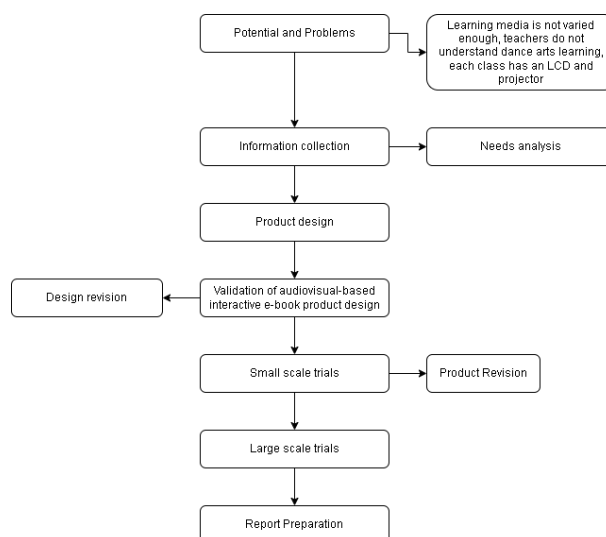


Figure 1. Borg & Gall Model

The collected data consisted of qualitative and quantitative data. Qualitative data were obtained through observation, interviews, and documentation, while quantitative data were obtained through validation questionnaires, response questionnaires, and student creativity assessment results. Data collection techniques included observation to determine student activity and creativity during learning, interviews to explore problems and media needs, questionnaires for expert validation and user responses, and documentation as supporting data. The research instruments used were observation sheets, interview guidelines, Likert scale questionnaires, and student creativity assessment rubrics. Student creativity assessment was carried out based on several indicators, namely fluency in producing movements, flexibility in developing movement variations, originality in creating dance movements, and elaboration abilities in perfecting dance movements according to the learning theme.

Before being used in research, the instrument first underwent validity and reliability testing. Validity testing was conducted through expert judgment by subject matter experts and media experts to assess the appropriateness of the content, presentation, language, and ease of use of the media. Furthermore, instrument reliability testing was conducted to ensure the consistency of the measurement results, ensuring the instrument's suitability for use in the research process.

Data analysis was conducted qualitatively and quantitatively. Qualitative data were analyzed using the Miles and Huberman model, which includes data reduction, data presentation, and conclusion drawing. Furthermore, quantitative data were analyzed using descriptive statistics in the form of percentages to determine the level of media feasibility. Effectiveness testing was conducted by comparing students' creativity results before and after using the media through a pretest and posttest. Data were analyzed using a normality test, paired sample t-test, and N-Gain analysis to determine the increase in student creativity after using the E-BISA media (an interactive audiovisual-based ebook).

Results and Discussion

Results

The identification of potential and problems that have been obtained from the results of interviews and observations show that class teachers are still constrained in the process of learning dance arts where

not all class teachers understand the learning of dance arts in elementary schools. So there is a real need in the field to present innovative learning media and in accordance with the development of the times, especially in the learning of dance arts grade VI at Sadeng 02 State Elementary School. Therefore, through the E-BISA media (interactive ebook based on audiovisual) which is designed systematically and adapted to the needs of students and teachers is expected to increase student interest and participation in learning, also able to increase their creativity in learning dance arts.

In the data collection stage, researchers gathered information related to students' needs and initial conditions. Data was obtained through observation, interviews, Likert-scale questionnaires, and a student creativity assessment rubric. Furthermore, researchers collected pretest and posttest data to determine changes or improvements in student creativity before and after using learning media. The collected data was then analyzed to determine its effectiveness in enhancing student creativity.

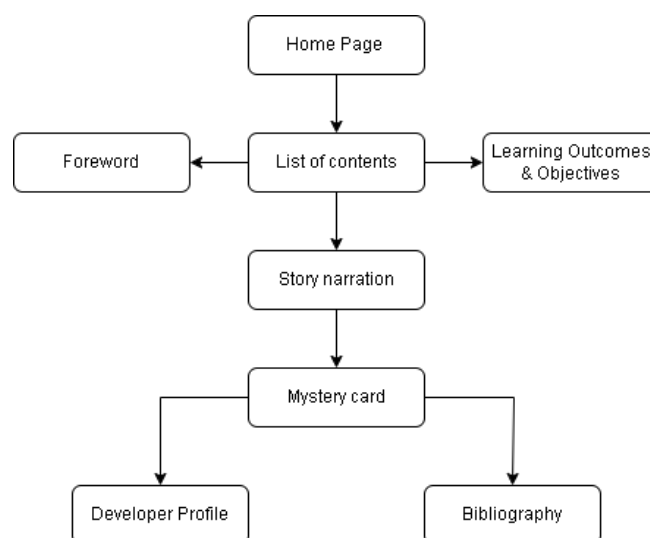


Figure 2. Prototype Media

Figure 2 shows the product design in this study, which is an ebook-shaped learning media developed as teaching material to support students' learning process. The product was designed based on learning objectives and student needs, taking into account the suitability of the material, visual appearance, and ease of use. E-BISA is systematically structured to enable students to understand the dance learning material more easily and engagingly. The developed media contains several main components, namely the cover page, foreword, table of contents, learning outcomes and objectives, story narrative, mystery cards, developer profile, and bibliography. In addition, the product design is complemented by attractive images, music, and color combinations that suit the characteristics of students at the concrete operational development stage of elementary school students, making the dance material easier to understand while providing wider space for movement exploration. This media can also be accessed through several devices, such as laptops, tablets, and smartphones, thus supporting more flexible learning.

After the product design was completed, validation was carried out by material experts and media experts to determine the feasibility of the product before being tested on students. Based on the results of the validation by material experts, the percentage was 95.7% with a very valid category. The highest scores were on the indicators of material suitability, material presentation, suitability for students, and learning benefits with a score of 5 for each point, and on the indicator of material accuracy, a score of 4 for each point. Therefore, the material experts stated that the learning materials in a set of E-BISA (Audiovisual-Based Interactive Ebook) learning media on the material of arranging new creative dance movements for grade VI were declared suitable for use without revision.

Meanwhile, validation from media experts obtained a percentage of 96% with a very valid category. This indicates that the media has met the aspects of media appearance, ease of use and suitability for students. There are two indicators that received a score of 4: color combination and media suitability to the developmental level of sixth grade students. Therefore, media experts stated that a set

of E-BISA (Interactive Audiovisual-Based Ebook) learning media on the material of arranging new creative dance movements for sixth grade is declared suitable for use with revisions according to suggestions.

The next stage in this research is product revision which is carried out based on suggestions and input from media experts on the product that has been developed. Based on the validation of media experts, there are several notes that need to be improved so that the resulting product becomes more suitable for use in learning, namely the font size used needs to be enlarged to make it easier for students to read, the suitability of the selection of font colors and images needs to be considered so that the display is clearer and more attractive, and the addition of numbers on each page to make it easier for users to understand the sequence of materials. The revision was carried out by the researcher with the aim of improving the quality of the display and readability of the product so that the developed learning media becomes more effective, attractive, and easy to use in the next trial stage.

Table 1. Descriptive Analysis

Descriptive Statistics					
	N	Range	Minimum	Maximum	Mean
PRETES1	4	0	5	5	5.00
POSTTEST1	4	0	10	10	10.00
PRETEST2	18	5	3	8	5.78
POSTTEST2	18	3	9	12	10.72
Valid N (listwise)	4				

Table 1 shows the results of the E-BISA (Audiovisual-Based Interactive Ebook) media trials on a small and large scale. In the small-scale trial stage involving 4 students, the average pretest score of 5.00 increased to 10.00 in the posttest. Furthermore, in the large-scale trial stage involving 18 students, the average pretest score of 5.78 increased to 10.72 in the posttest. In addition, the minimum score increased from 3 to 9, while the maximum score increased from 8 to 12. These results indicate an increase in student learning outcomes and creativity before and after using the E-BISA (Audiovisual-Based Interactive Ebook) media.

Table 2. Data Normality

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PRETEST	.167	18	.200*	.932	18	.211
POSTTEST	.207	18	.040	.908	18	.079

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table 2 shows the results of the normality test on the pretest and posttest data, which were normally distributed. This can be seen from the significance values for the pretest data of 0.211 and the posttest of 0.079, both of which are greater than 0.05. Thus, it can be stated that the distribution of data in both groups does not deviate from a normal distribution. This condition indicates that the research data is suitable for further analysis using parametric statistical tests, such as the paired sample t-test, because one of the main requirements for such analysis, namely data normality, has been met.

Table 3. Paired Samples T-Test

Paired Samples Test						
		Paired Differences	T	df	Significance	
		95% Confidence Interval of the Difference			One-Sided p	Two-Sided p
		Upper				
Pair 1	PRE TEST - POST TEST	-3.559	-17.234	17	<.001	<.001

Table 3 shows the results of the paired sample t-test on the pretest and posttest data. The analysis results show that the average pretest score is 5.78 and the posttest is 10.72, indicating an increase in learning outcomes after treatment. In this study, the hypotheses are H0 (there is no significant difference between the pretest and posttest scores) and H1 (there is a significant difference between the pretest and posttest scores). The statistical test results show a t of -17.234 with degrees of freedom (df) = 17 and a significance value of $p < 0.001$, so H0 is rejected and H1 is accepted. The average difference (mean difference) of -4.056 indicates that the posttest score is higher than the pretest. In addition, the effect size value (Cohen's d) of 4.062 is included in the very large category, which means that the treatment given has a very strong influence on improving student learning outcomes and creativity. Thus, the use of E-BISA media in dance learning is proven to significantly increase student creativity.

Table 4. N-Gain

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Ngain_Score	18	.29	1.00	.6823	.21102
Ngain_Persen	18	28.57	100.00	68.2275	21.10204
Valid N (listwise)	18				

Table 4 shows the results of the N-Gain analysis test, which obtained an average value of 0.6823 or 68.22%, which is in the moderate to high category. These results indicate that the E-BISA (Audiovisual-Based Interactive Ebook) media is quite effective in enhancing student creativity. Therefore, the developed media is not only suitable for use but also effective in enhancing student creativity in dance learning in elementary schools.



Figure 3. E-BISA Media

Figure 3 shows the final product of the E-BISA learning media after going through the product trial phase. Thus, the E-BISA learning media is ready for use in schools to support the learning process, particularly in dance subjects for sixth graders. The presence of this media is expected to assist teachers in delivering learning materials in a more engaging and interactive manner. Furthermore, E-BISA media can be accessed by teachers and students through various devices, such as laptops, computers, and smartphones, so students can not only study at school but also access learning independently at home.

Discussion

The results of this study show that E-BISA (an interactive audiovisual-based e-book) is effective in enhancing student creativity in dance learning. This finding indicates that appropriate learning media are essential in dance learning in elementary schools. This is in line with Ary (2024), who explains that dance learning in elementary schools still faces various obstacles, such as a lack of attention to dance learning, limited learning media, and minimal opportunities for students to develop creativity and imagination in dance movements. Consequently, dance learning may not be implemented optimally, and media innovations are needed that can assist teachers in delivering material while providing space for students to explore their creativity. In this study, E-BISA emerged as an alternative learning medium that combines audiovisual elements and interactive activities so that students can learn dance in a more engaging and contextual way.

The increase in student creativity after the implementation of E-BISA media shows that the designed media not only functions as a tool for delivering material but also creates a more interactive and meaningful learning experience. E-BISA media, which combines audiovisual elements, images, music, and interactive activities, helps students understand dance learning in a more concrete and interesting way. This result is consistent with a study by Noviani and Wangid (2018), which found that the use of interactive multimedia can improve students' creative thinking skills because it provides a more active and engaging learning experience and encourages student involvement in the learning process. In this study, the use of E-BISA media makes students more active in exploring dance movements compared to learning that only uses teacher explanations.

The findings of this study are also supported by Saputra et al. (2025), who show that the use of digital-based interactive learning media can increase student engagement during learning and help students understand the material more deeply. In this study, E-BISA media not only conveys dance material but also provides opportunities for students to explore movement independently through audiovisual elements and interactive activities available within the media.

The results of this study also align with research by Vuk (2023) on the development of creativity in elementary schools, which indicates that visual and creative-based learning experiences can enhance students' creative thinking processes more systematically. In E-BISA, the presentation of material through a combination of images, audio, and dance movement visualizations provides a more concrete learning experience, helping students understand and explore dance movements more creatively.

In addition to audiovisual elements, the narrative and mystery cards in E-BISA media also contribute to enhancing student creativity. Through stories themed around traditional games, students are stimulated to develop their imagination and create a variety of movements based on their individual interpretations. Therefore, students not only imitate dance movements but are also given the opportunity to explore movement ideas independently. This finding is supported by Rindengan's (2023) research on the use of picture storybooks, which shows that story-based media can enhance students' creative thinking skills by developing imagination, interpretation, and broader exploration of ideas.

The use of traditional game themes in E-BISA media is also a factor that supports increased student creativity in dance learning. Themes that are close to students' daily lives provide a more contextual learning experience, making it easier for students to explore movements based on their experiences and the environment around them. According to Martono (as cited in Ary & Art-edu, 2019), dance creation can be enriched through the environment and life phenomena around them as a source of inspiration for dance movements. This approach allows students to develop more creative movements based on real experiences they encounter in everyday life. In this study, the use of traditional game-themed stories in E-BISA media helped students express dance movement ideas more freely and meaningfully.

Furthermore, the relationship between creativity and dance ability is further strengthened by Anggraeni et al. (2020), who demonstrated a positive and significant correlation between creativity and dance ability in elementary school students. This suggests that providing movement exploration through traditional game themes in E-BISA media not only helps students understand dance material but also supports the optimal development of movement creativity.

The results of this study are also supported by Pangestu et al. (2024), who show that learning that provides space for exploration and active student involvement can significantly increase creativity. In

the context of this study, the E-BISA media provides students with opportunities to explore dance movement ideas through traditional game themes, so that students not only passively receive material but also actively participate in the learning process.

The results of this study also support the findings of Prianto and Nurharini (2023), who explain that the use of digital technology in learning can enhance student creativity through more engaging, interactive, and contextual learning experiences. In this study, the E-BISA media not only helped students understand the dance material but also provided a space for students to learn independently and explore dance movements based on the traditional game themes presented. Therefore, increased student creativity is influenced not only by the engaging delivery of material but also by the opportunities the media provides for students to actively develop ideas and express movement.

This research finding is further supported by a systematic review by Konstantinidou (2025), which demonstrated that creative dance instruction in elementary schools has significant potential for developing students' cognitive, social, and creative abilities. In the context of this research, E-BISA provides students with the opportunity to explore dance movements more actively, fostering creativity through more meaningful and expressive learning experiences.

The development of interactive audiovisual-based E-BISA learning media in this study is an innovative effort to address the challenges of dance learning in elementary schools, particularly those related to low student creativity, limited learning media, and teachers' lack of mastery of the material. Based on the research results, the discussion covers three main aspects: media development design, media feasibility, and media effectiveness in enhancing student creativity.

In terms of design, the E-BISA media was developed using a Research and Development (R&D) approach based on an adaptation of the Borg and Gall model, which was simplified into seven stages: identifying potential and problems, collecting data, designing the product, validating the product, revising the product, conducting product trials, and producing the final product. This media design is based on real needs in the field, namely the need for learning media that are able to present dance art materials in an interesting, interactive, and easy-to-understand manner for students and teachers.

The developed media is an interactive audiovisual-based e-book that integrates text, images, video, audio, and interactive quizzes. This design is tailored to the characteristics of elementary school students at the concrete operational stage; therefore, learning needs to be presented visually and contextually to facilitate understanding. This is consistent with Permatasari et al. (2023), who stated that learning for elementary school-aged children must consider the stage of cognitive development of students for learning to be more effective, and is supported by Kristiyawati (2024), who confirms that interactive audiovisual media can provide a more concrete and contextual learning experience for elementary school students.

Research conducted by Rukmi et al. (2025) shows that project-focused learning that incorporates local wisdom can improve students' creativity in elementary schools. These results align with the E-BISA study, which used traditional games as inspiration for dance movements. The integration of local culture has proven to be a powerful driver in advancing students' creativity. This research introduces novelty through the development of E-BISA (Interactive Audiovisual-Based E-Book) learning media specifically designed for dance learning in elementary schools by integrating text, images, audio, video, and interactive quizzes. In contrast to previous media, which tend to be general and monotonous, E-BISA provides broader opportunities for exploration, thereby increasing students' creativity and active participation. This is consistent with Atmarini et al. (2026), who stated that interactive media can encourage active participation and students' creative ideas, and Km et al. (2025), who explained that interactive multimedia provides a dynamic learning experience and supports exploration. In addition, the novelty of this research also lies in the focus on measuring creativity through direct practice of arranging dance movements, thus providing a real contribution to the development of technology-based dance learning in elementary schools.

Makawawa (2023) shows that teaching materials using narrative images can improve children's creative thinking skills at the elementary school level. This aligns with the use of E-BISA media, which combines stories about traditional games with dance movement composition activities. The application of narrative elements in teaching materials has been shown to stimulate students' imagination and creative ideas throughout the learning process.

Furthermore, the E-BISA media design also adheres to the principles of effective learning media. The media is designed to attract students' attention, increase learning motivation, and facilitate

understanding of the material through systematic and interactive presentation. This aligns with the theory proposed by Arsyad (2015) that learning media has attentional, affective, cognitive, and compensatory functions in supporting the learning process. By integrating audiovisual elements, this media is able to present material more concretely, thus helping students understand dance movements more easily. This is also supported by research by Fajri et al. (2021), which indicates that the use of audiovisual media can improve students' understanding of learning materials, and by Azzahra and Ary (2025), who state that the integration of visuals and audio in interactive media can significantly increase student focus and engagement.

The findings of this study are also supported by research by Auranisa and Nuryanto (2025), which shows that the use of learning media developed through Smart Apps Creator can significantly improve students' narrative writing skills. This finding confirms that the use of interactive digital media can stimulate active student participation during the learning process. In the context of this study, E-BISA media also provides an engaging learning experience, thus potentially enhancing student creativity in dance.

The use of E-BISA (an interactive audiovisual-based e-book) also offers distinct benefits because it allows students to interact and express their imagination directly with the learning material. This media not only presents learning materials but also provides opportunities for students to explore through creative exercises and interactive quizzes. According to Hofstetter (as cited in Sari & Lestari, 2019), interactive e-books can increase student engagement in learning. Furthermore, research by Nurhayati and Handayani (2020) also shows that the use of interactive e-books can increase learning motivation and facilitate the understanding of abstract material. This is further reinforced by Sumarsono et al. (2024), who stated that multimedia-based interactive e-books provide a wider space for exploration, thereby increasing students' creativity and active participation in learning. Thus, the E-BISA media design in this study is in accordance with the theory and results of previous research that emphasize the importance of using interactive media in learning in elementary schools.

The effectiveness of E-BISA media can also be explained through the characteristics of interactive multimedia that can increase student engagement during learning. Research by Primamukti and Farozin (2018) shows that the use of interactive multimedia has an impact on increasing learning interest and learning outcomes for elementary school students. These findings are in line with this study, because the integration of images, audio, video, and interactive activities in E-BISA media makes students more active in dance lessons and encourages them to explore movements independently. Previous research by Of et al. (2022) showed that E-BISA media can be used to train students' creative thinking skills. This media can deliver material in an engaging manner, thus helping students become more enthusiastic about the learning process. Furthermore, its flexible and interactive characteristics facilitate students' learning both independently and with teacher guidance. This further confirms that E-BISA media has substantial potential to develop student creativity at the elementary school level.

In terms of feasibility, the research results indicate that the audiovisual-based interactive E-BISA media has a very high level of feasibility. Validation by material experts and media experts yielded scores of 95.7% and 96%, respectively, both of which were categorized as very valid. These results indicate that the developed media has met the feasibility criteria both in terms of material content and media design. The material presented in the media is in accordance with learning competencies, is systematically arranged, and is easy for students to understand. Meanwhile, in terms of media, the visual appearance, layout, and interactivity are considered attractive and in accordance with the characteristics of elementary school students.

The existence of revisions based on suggestions from media experts, such as improvements to font size, color combinations, and the addition of page numbers, indicates that the development process was carried out systematically and continuously. Research by Nuzla et al. (2023) shows that interactive flipbook media was rated as highly feasible based on assessments by material experts and media experts. Furthermore, research by Dwiqi et al. (2020) also shows that interactive multimedia has a very high level of feasibility and is able to improve the quality of learning. This finding is also supported by Sugiono (2019), who stated that revisions based on expert input are very important to improve the quality of media in terms of readability, aesthetics, and ease of use. Thus, the validation results in this study strengthen the finding that technology-based and interactive learning media are of good quality and are suitable for use in the learning process.

Furthermore, in terms of effectiveness, the results of the study indicate that the use of audiovisual-based interactive E-BISA media can improve students' creativity in dance learning. This is indicated by an increase in students' average scores from pretest to posttest, both in small-scale and large-scale trials. In addition, the results of statistical tests using a paired-samples t test show a significant difference between students' scores before and after the use of the media. The mean difference of -4.056 indicates that the posttest score is higher than the pretest. In addition, the effect size (Cohen's d) of 4.062 is included in the very large category, which means that the treatment given has a very strong influence on improving student learning outcomes. These results indicate that E-BISA media has a significant influence on improving student creativity.

These findings align with a study by Saputra et al. (2025), which revealed that the use of web-based interactive learning media can significantly improve elementary school students' thinking skills. These results indicate that the implementation of E-BISA media has the potential to strengthen students' creativity by encouraging active participation during the learning process. Therefore, integrating technology into dance learning is an important step in improving the quality of education.

Another study by Asbah and Firdaus (2025) also revealed that the implementation of interactive digital learning media can significantly improve student comprehension at the elementary school level. This demonstrates that technology-enabled tools can facilitate students' understanding of lesson content and increase their engagement. Consistent with these findings, E-BISA media has been shown to enhance student creativity by delivering dance material through a combination of visual, audio, and hands-on activities.

Recent research by Wang et al. (2024) indicates that the application of interactive learning with a constructivist approach can significantly advance creative self-efficacy, critical analysis skills, and student achievement. These results indicate that learning tools that allow students to actively participate, explore concepts, and interact during the learning process can stimulate the development of creativity. Therefore, the application of E-BISA media in dance learning is in line with the findings of this study, as it provides opportunities for movement exploration and dynamic learning experiences for students.

The effect size (Cohen's d) of 4.062 , which is included in the very large category, indicates that the use of E-BISA media has a very strong influence on increasing student creativity. The magnitude of this effect may be attributed to several factors, including the high enthusiasm of students due to the use of new and previously unused learning media, which can substantially increase students' attention and engagement. In addition, previous instruction tended to be less varied and was dominated by conventional methods, so students had not received sufficient stimulation to develop their creativity. When E-BISA media (interactive audiovisual-based e-book) is applied, students become more active in exploring the material and expressing ideas through movement. On the other hand, students are also not accustomed to using audiovisual-based media in dance learning, so the application of this media provides a different learning experience and may lead to substantial improvements in both understanding and creativity. This is consistent with Mayer (2009), who states that multimedia-based learning can increase student engagement and understanding through a combination of visual and audio elements that support the learning process more effectively.

The N-gain analysis yielded a value of 68.22% , categorized as moderate to high, which also indicates that this media is quite effective in increasing student creativity. This increase is inseparable from the characteristics of the media that combines visual, audio, and practical activities, so that students become more active and involved in learning. This is in line with research by Wahyuningsih and Rintayati (2020), who state that the use of interactive e-books can increase student motivation and creativity in learning. In addition, research by Ali (2024) also shows that interactive e-book media can improve student understanding through the presentation of interesting and interactive material. These results are also supported by Carolin and Ary (2025), who state that interactive audiovisual-based media can significantly increase student creativity because it provides visual stimuli and a more meaningful learning experience.

In the context of dance learning, increased student creativity can be seen from their ability to create movements, express ideas, and develop movements based on traditional games they often play daily. This is in line with Guilford's theory, which states that creativity is the ability to produce new, original, and useful ideas. Furthermore, Hariani et al. (2019) stated that learning dance with a free expression approach can encourage students to develop their creativity through unique and natural

movements. With the E-BISA media, students are given space to explore and create through various activities provided in the media, so that their creativity can develop optimally.

A study by Salguero (2024) shows that the development of creativity in arts education can be achieved well through learning involving direct experience. The process of exploration and the use of innovative tools also play a significant role in encouraging the emergence of creative ideas in students. Learning that provides opportunities for students to explore and create independently has proven to be more successful in increasing creativity. These results support the use of E-BISA media, which provides opportunities for students to imagine and organize dance movements independently.

Overall, the results of this study indicate that the audiovisual-based interactive E-BISA media not only has a design that suits the needs of students and teachers, but also has a high level of feasibility and is effective in enhancing student creativity. This finding is in line with various previous studies that emphasize the importance of using technology-based and interactive learning media in improving the quality of learning and aligning it with students' needs. Thus, E-BISA media can be an innovative solution in dance learning in elementary schools, especially in enhancing student creativity through more interesting, interactive, and meaningful learning.

Conclusion

Based on the research results and discussion, it can be concluded that the E-BISA (interactive audiovisual-based ebook) media for sixth-grade elementary school dance instruction is deemed feasible and effective for use as a learning medium. This media is characterized by an audiovisual-based digital ebook that presents material in a more engaging and interactive manner through the integration of images, audio, mystery cards, and narrative stories themed around traditional games. The novelty of the E-BISA media lies in the integration of dance material design with audiovisual elements in a single digital learning product designed to enhance student creativity and engagement during the learning process. Validation results showed that the media received a 95.7% approval from material experts and a 96% approval from media experts, categorizing it as highly suitable for use in elementary school dance instruction.

In addition to being suitable, the E-BISA media also proved effective in enhancing student creativity. The trial results showed a significant increase between pretest and posttest scores, while the effectiveness test resulted in an N-Gain value of 68.22%, categorizing it as moderately effective. Thus, E-BISA media can be used as an innovative alternative for teachers in creating dance arts learning that is more interesting, interactive, and in accordance with technological developments, while also supporting the development of student creativity in elementary schools.

References

- Ahmadi, S., & Ary, F. (2022). The implementation of ethnomathematics in the Merdeka Curriculum through cultural hybridity in Semarang City. In *Proceedings of the UNNES Postgraduate Conference 2022* (pp. 447–453). <http://pps.unnes.ac.id/prodi/prosiding-pascasarjana-unnes/447>
- Anggraeni, S. W., Anwar, A. S., & Rahayu, S. (2020). The relationship between creativity and dancing ability. *International Journal of Theory and Application in Elementary and Secondary School Education*, 2(1), 29–38. DOI: <https://doi.org/10.31098/ijtaese.v2i1.163>
- Asbah, J., Firdaus, F. M., & Fathurrohman, F. (2025). The influence of interactive digital learning media on improving history learning comprehension in Grade IV students. *Jurnal Prima Edukasia*, 13(2), 339–349. DOI: <https://doi.org/10.21831/jpe.v13i2.79624>
- Auranisa, J. D., & Nuryanto, S. (2025). The development of Smart Apps Creator learning media to improve students' narrative writing skills. *Jurnal Prima Edukasia*, 13(2), 201–212. DOI: <https://doi.org/10.21831/jpe.v13i2.84629>
- Da Ary, D. (2019). Pacitanian art education: An alternative path toward the essential goals of art

- education in Indonesia. *Mudra Jurnal Seni Budaya*, 34(2), 177–185. DOI: <https://doi.org/10.31091/mudra.v34i2.706>
- Da Ary, D., & Markamah. (2024). Inhibiting factors of dance learning in the higher grades of elementary school. *Indonesian Journal of Educational Research and Review*, 7(2), 298–307. DOI: <https://doi.org/10.23887/ijerr.v7i2.80997>
- Dwiqi, G. C. S., Sudatha, I. G. W., & Sukmana, A. I. W. I. Y. (2020). Development of interactive science learning multimedia for fifth-grade elementary school students. *Jurnal Edutech Undiksha*, 8(2), Article 33. DOI: <https://doi.org/10.23887/jeu.v8i2.28934>
- Fajri, S., & Fujiawati, F. S. (2021). Design of the Android-based mobile application learning media B'TRACE for arranging traditional dance movements. *Jurnal Pendidikan dan Kajian Seni*, 6(1), 86–100. <https://jurnal.untirta.ac.id/index.php/JPKS/article/view/11914>
- Gunawan, G., Suhardi, S., & Makawawa, J. C. (2023). Developing picture storybook learning media in terms of students' critical and creative thinking skills. *Jurnal Prima Edukasia*, 11(2), 161–175. DOI: <https://doi.org/10.21831/jpe.v11i2.56795>
- Konstantinidou, E. (2025). Creative dance studies in elementary schools: A systematic search and narrative review. *Research in Dance Education*, 26(4), 388–422. DOI: <https://doi.org/10.1080/14647893.2023.2177266>
- Kristiyawati, D., & Da Ary, D. (2024). Interactive multimedia utilizing Adobe Flash for fine arts learning among elementary school students. *Sekolah Dasar: Kajian Teori dan Praktik Pendidikan*, 33(2), 147–159. DOI: <https://doi.org/10.17977/um009v33i22024p147-159>
- Luisandrith, D. R., & Yanuartuti, S. (2020). Interdisciplinary learning: Learning dance through the TikTok application to increase children's creativity. *Jurnal Seni Tari*, 9(2), 175–180. <https://journal.unnes.ac.id/sju/index.php/jst/article/view/42085>
- Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9780511811678>
- Nuzla Rizkia Rahma, Umar, U., & Kusnadi, U. (2023). Development of flipbook learning media for creative dance material in arts and culture subjects in elementary schools. *Jurnal Bintang Pendidikan Indonesia*, 1(4), 215–232. DOI: <https://doi.org/10.55606/jubpi.v1i4.2064>
- Pangestu, K., Malagola, Y., Robbaniyah, I., & Rahajeng, D. (2024). The influence of project-based learning on learning outcomes, creativity, and student motivation in elementary school science learning. *Jurnal Prima Edukasia*, 12(2), 194–203. DOI: <https://doi.org/10.21831/jpe.v12i2.63208>
- Primamukti, A. D., & Farozin, M. (2018). Utilization of interactive multimedia to improve children's learning interest and learning achievement. *Jurnal Prima Edukasia*, 6(2), 111–117. DOI: <https://doi.org/10.21831/jpe.v6i2.19183>
- Rindengan, M. (2023). The utilization of picture storybooks: Can it increase students' critical and creative thinking skills? *Jurnal Prima Edukasia*, 11(2), 176–185. DOI: <https://doi.org/10.21831/jpe.v11i2.56854>
- Rukmi, D. A., Nisa, A. F., & Zulfiati, H. M. (2025). Innovation of a project module based on the Ajak Temani Mandiri learning model integrated with local wisdom to improve the creative dimension of elementary school students. *Jurnal Prima Edukasia*, 13(1), 181–190. DOI: <https://doi.org/10.21831/jpe.v13i1.78206>
- Saputra, A. R., Murti, R. C., & Hastuti, W. S. (2025). The effect of web-based interactive learning media on elementary school students' critical thinking skills. *Jurnal Prima Edukasia*, 13(1), 159–168. DOI: <https://doi.org/10.21831/jpe.v13i1.75228>

- Sari, D., & Lestari, N. D. (2019). The effect of visual learning media on students' economics learning outcomes. *Jurnal Neraca: Jurnal Pendidikan dan Ilmu Ekonomi Akuntansi*, 2(2), 71–80.
- Tanaya, N. W., Cahyaningtyas, A. L., & Nurjanah, A. R. (2024). Strengthening multicultural education as an effort to increase understanding and appreciation of Indonesian cultural diversity at SB Permai Penang. *Buletin KKN Pendidikan*, 6(2), 131–140. DOI: <https://doi.org/10.23917/bkkndik.v6i2.8031>
- Tang, C., Mao, S., Naumann, S. E., & Xing, Z. (2022). Improving student creativity through digital technology products: A literature review. *Thinking Skills and Creativity*, 44, Article 101032. DOI: <https://doi.org/10.1016/j.tsc.2022.101032>
- Vuk, S. (2023). Development of creativity in elementary school. *Journal of Creativity*, 33, Article 100055. DOI: <https://doi.org/10.1016/j.yjoc.2023.100055>
- Wang, X., Huang, X., Han, Y., & Hu, Q. (2024). Promoting students' creative self-efficacy, critical thinking, and learning performance: An online interactive peer-assessment approach guided by constructivist theory in maker activities. *Thinking Skills and Creativity*, 52, Article 101548. DOI: <https://doi.org/10.1016/j.tsc.2024.101548>