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The development of interactive mobile learning media for *Egrang Batok* dance to improve learning outcomes

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Abstract: The lack of innovative technology-based learning media significantly impacts student learning outcomes. This study aimed to develop practical, feasible, and effective mobile learning media for fourth-grade elementary school dance lessons to enhance academic achievement. The implication of this study is that the learning process becomes more engaging through the integration of technology-based instructional tools. The research utilized the Research and Development (R&D) method with the ADDIE model. The subjects included one subject matter expert, one media expert, one teacher, and 36 fourth-grade students. Data collection techniques included pre- and post-tests, as well as non-test methods such as observation, teacher interviews, documentation, and questionnaires. Data analysis was conducted using the Shapiro-Wilk normality test, T-tests, and N-Gain tests. The feasibility analysis of the *TERBATIK* media indicated that it was highly feasible, with ratings of 100% from the subject matter expert and 93% from the media expert. Response rates from the teacher and students were 93.7% and 93.1%, respectively, placing them in the highly practical category. The normality test results were normal, with pre-test scores of 0.098 and post-test scores of 0.096 ($\rho > 0.05$). The effectiveness analysis via the T-test showed a significance value of 0.000 ($\rho < 0.05$), with the average score increasing from 55.6944 in the pre-test to 87.3611 in the post-test. The N-Gain score was 0.7313, representing the *high* category. Based on these results, it can be concluded that the *TERBATIK* media is feasible, practical, and effective in improving the learning outcomes of fourth-grade dance classes. These results imply that integrating mobile learning applications into arts education not only modernizes traditional dance instruction but also provides an accessible, interactive platform that bridge the gap between cultural content and digital-native students.

Keywords: mobile learning media, *Egrang Batok dance*, learning outcomes

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Introduction

Education is a fundamental need for humans. As stated in Article 1 Section 1 of NRI Law No. 20 of 2003: "Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and the skills needed by themselves, society, nation, and state." Without education, the human life cycle will not develop and may even regress (Cahyono, 2023). The development of science and technology (IPTEK) has influenced all areas of life, including education. Currently, advances in information technology in the world of education are flexible and not bound by space or time constraints (Ashari et al., 2022). In a short period of time, these conditions prompted the country to respond to the discourse of industrial revolution by optimizing the use of digital technology (Anggraini et al., 2020). The Industrial Revolution 4.0 has influenced education to adapt to modern learning methods (Fatmawati et al., 2021). This is especially important in ensuring that technology can be applied effectively in the learning process. Digital technology is now being used in education as a learning support medium, enabling access to information and the application of more

interactive and innovative learning methods. Technology-supported education can enrich and improve the learning process. This approach can be an alternative for more comprehensive and engaging learning, and it can facilitate the achievement of learning objectives (Asnidar & Junaid, 2022).

Technological developments have also changed teaching methods and interactions between teachers and students (Yani, 2023). Technology opens up opportunities to bridge traditional and modern learning approaches as one of the factors that support the fulfilment of human rights (Sarker et al., 2019). Conventional learning materials, which are one-way and delivered only via blackboard and chalk, are now shifting towards more collaborative, technology-based learning (Timotius & Dahliana Purba, 2023). Students must engage with digital media (Affeldt et al., 2018). With technology, students can learn independently, interact with a wider range of learning resources, and develop critical and creative thinking skills. Today, technology has brought new opportunities to the world of learning, enabling students and teachers to openly share, present, provide reasons, critique, and generate ideas in various languages and methods (Mercer et al., 2019). However, all of this cannot be separated from the role of teachers, who have a major influence on the learning process. Teachers as facilitators play a strategic role in fostering learning innovations, one of which is developing learning media that support the learning process and ensure learning activities are not monotonous or boring (Widyaningrum et al., 2022). Teachers have an irreplaceable role in the empowerment and development of national learning (Sadriani et al., 2023). Therefore, teachers must be able to adapt to the dynamics of developments in the field of education. However, the worrying reality in our education system is that developments in the world are not aligned with those in the teaching profession (Zebua, 2023). Given this reality, teachers need a comprehensive understanding and the readiness to adapt to the ever-evolving dynamics of the world of education.

Even though digital technology has developed rapidly, there are still many schools that have not optimally utilized digital technology. One problem still found at Jatisrono 1 Elementary School is the limited use of digital technology-based learning media. According to Punaji (Miftah, 2022), learning media has an important role in the learning process, as it contributes. Based on the researcher's observations and interviews with fourth-grade students at Jatisrono 1 Elementary School, several problems were identified in the dance subject. The problems that occurred were the lack of use of innovative technology-based learning media, where learning media was still limited to teacher books and student books. The researcher found that teachers still used the lecture method to deliver dance material, which made students feel bored and reduced their interest in dance lessons, as they experienced difficulties and considered dance irrelevant to their daily lives. This contradicts constructivist learning theory, which emphasizes that the learning process aims to help individuals discover their potential and expand their knowledge and skills through experience. In addition, time and cost constraints make it difficult for teachers to create innovative learning media. The limited use of learning media has an impact on student learning outcomes, especially in dance arts. According to Sudjana in (Yandi et al., 2023), learning outcomes are the various abilities mastered by students after going through the learning process. The teaching and learning process is considered successful if the level of understanding of the material taught achieves high learning outcomes, both individually and in groups, and the behaviors outlined in the learning objectives have been achieved by students, both individually and collectively (Ratna, 2016). The low learning outcomes are indicated by the fact that many students summative assessment results have not yet met the established learning outcome mastery criteria (KKTP in the Indonesian context).

Given the existing problems, dance education should not only provide material on art and culture, but also on the process of creating a work of art, where there are many methods in the creative process (Rochayati, 2023). Dance education should focus more on developing students mental, physical, and aesthetic sensitivity. Learning objectives can be achieved if students are actively involved in the learning process (Finaryanti et al., 2023). In the process, dance education must be packaged with various creative methods and media. The use of learning media can improve communication and optimize student learning outcomes (Rohima, 2023). Learning media is one of the factors for success in the learning process. According to Qorimah and Sutama (2022), learning media functions as a means of conveying messages and as a trigger for students thinking, attention, and motivation to encourage the learning process within themselves. In the context of education, motivation has a reciprocal relationship with the learning process. The two complement each other, with motivation and the learning process designed by teachers mutually supporting one another (Sari, 2018). Learning media is not only a complement to

learning, but also increases student enthusiasm for learning. The use of learning media is believed to help students understand the subject matter more easily (Wulandari et al., 2022). Learning media has several characteristics, so that inappropriate selection can reduce its effectiveness (Rahmi, 2022). In this case, learning media must also be made as attractive as possible to capture the attention of students. That way, the learning process will take place in a fun way while still paying attention to the designed learning objectives. There are various types of learning media, ranging from concrete learning media to technology-based learning media.

One type of learning media that utilizes technology is called mobile learning. Mobile learning media is media that utilizes technology in the form of mobile phones. Mobile learning is an adaptive learning alternative that is in line with the development of science and technology (Eliza et al., 2023). Meanwhile, according to Alkhalaf in (Salhab & Daher, 2023), mobile learning is defined as the use of small, portable wireless devices, such as mobile phones, digital assistants, smartphones, and small personal computers to achieve flexibility and interaction in the teaching and learning process anytime and anywhere. Mobile learning allows smartphones, which were previously used for communication, internet access, and social media, to now be transformed into learning tools equipped with learning materials, evaluation questions, and various other supporting features (Agustin & Wintarti, 2021). In the current era, mobile learning-based learning media are increasingly being used in the learning process. Mobile-based learning also supports distance learning and provides a more personalized learning experience tailored to individual needs (Rawis et al., 2023). This is in line with the opinion of Anggraini et al. (2023) that mobile learning is a flexible modern learning service option that is in line with advances in science and technology. This learning medium provides convenience, speed, and appeal in the learning process, while still maintaining the essence and basic principles of learning in general.

Similar research conducted by Roziqin et al. (2022) on the development of Android-based mobile learning for cultural arts subjects demonstrated that digital platforms are highly feasible for secondary education. Their findings, which underwent rigorous individual and group testing, consistently achieved feasibility scores above 85%, categorizing the media as "Very Suitable" for classroom implementation. This underscores the potential of mobile technology in transforming traditional arts instruction into a more accessible digital format.

Based on the above background, the researcher will develop Android-based learning media, namely mobile learning for dance subjects, specifically for traditional *Egrang Batok dance* creations. The objectives of this study include developing mobile learning-based media planning, testing the feasibility of the media, and testing the effectiveness of the media on traditional *Egrang Batok dance* creation material in grade IV of Jatisrono 1 Elementary School. The researcher strives to renew innovative learning media in line with developments in digital technology through the development of mobile learning-based learning media. With the development of this mobile learning-based learning media, it is hoped that the learning process will become easier, more effective, and more efficient, and can improve the learning outcomes of students in dance arts subjects.

Methods

This study used the research and development method. According to Borg and Gall in (Sugiyono, 2023294), research and development is a process/method used to validate and develop products. This research was conducted at Jatisrono 1 Elementary School. The development model used in this study was the ADDIE model. According to (Judijanto et al., 2024), in figure 1, the ADDIE model involves five stages/phases of development, namely analysis, design, development, implementation, and evaluation.

The first stage in this study was the analysis stage, where the researchers conducted identification through observation, teacher interviews, documentation, and questionnaires. This analysis was carried out to determine the characteristics of the students, the curriculum used, the needs of the students, and the facilities at Jatisrono 1 Elementary School.

The second stage in this study was the design stage, which included product design with a main focus on the systematic planning of interactive *Egrang Batok dance* learning media (*TERBATIK*). In the third stage of media design planning, the next stage was the development stage, which included the creation of interactive *Egrang Batok dance* media using the Articulate Storyline 3 application, with the

final output being an application that can be accessed via a smartphone and will subsequently be tested for feasibility by media experts and subject matter experts.

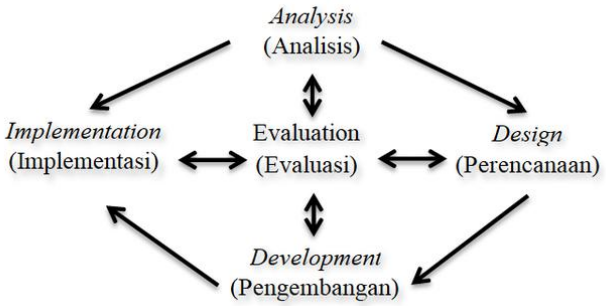

Figure 1. ADDIE Development Model

In this case, the material and media experts filled out the validation instrument sheet prepared by the researcher in the form of a Likert scale. The scores from the expert validation instrument will be used to determine the feasibility of the media product being tested. The media and material validation instrument grid by experts is presented in Table 1 and Table 2, and the assessment results will be calculated based on the criteria in Table 3.

Table 1. Material Validation Instrument Grid

No.	Aspect	Indicator
1.	The suitability of materials with learning outcomes and learning objectives	1. The suitability of the material with learning outcomes and learning objectives 2. Relevance of material to the topic of dance
2.	The suitability of the material to the questions on the media	1. Improvement in students critical thinking skills 2. Improvement in students knowledge 3. Alignment of questions with the material
3.	The suitability of the material with the images in the media	1. Appropriateness of material with images 2. Clarity of images
4.	Language appropriate to students thinking abilities	1. Clarity of language 2. Clarity of spelling 3. Appropriateness of sentence selection for student development 4. Sentence selection in the material

Table 2. Media Validation Instrument Grid

No.	Aspect	Indicator
1.	Appearance	1. Accuracy in selecting the background and layout proportions 2. Accuracy in selecting fonts for easy readability 3. Image size appropriate for the media 4. Accuracy in selecting videos that match the material 5. Video quality that is enjoyable for viewers
2.	Teachers skills in operating media	1. Content and material are in line with traditional dance games (*Egrang Batok*) 2. Media is easy to use for both teachers and students 3. Can be presented in interactive digital form
3.	According to the characteristics	1. The design is attractive 2. The colors used are appealing 3. The images used are appealing 4. The text used is easy to understand for both teachers and students 5. All buttons on the media are functional

4.	Usage	1. Suitability for users. The media is designed to be easy to use for all groups, including teachers and students. 2. Flexibility (can be used independently and with guidance). The media is designed to be easy for students to use independently.

Table 3. Expert Validation Assessment Criteria

Percentage (%)	Criteria
81% < – ≤ 100%	Very Feasible
61% < – ≤ 80%	Feasible
41% < – ≤ 60%	Less Feasible
21% < – ≤ 40%	Not Feasible
0% < – ≤2 0%	Very Unfeasible

The fourth stage is the implementation stage. After the media was validated by experts, the researchers conducted trials of the interactive *Egrang Batok dance* media (*TERBATIK*) on 36 students. The researchers divided the trial stage into two groups, namely a small group involving 6 students and a large group involving 36 students. The product was tested on the small group first, then before being tested on the large group, the researchers analyzed the learning process as evaluation material. Next, the product was tested on the large group. In the learning process, the researchers used the *TERBATIK* learning media product. The final stage was evaluation, in which the quality and effectiveness of the media as an interactive learning tool were assessed. This stage included analyzing questionnaires on teachers and student responses to the use of *TERBATIK* media, as well as normality tests, t-tests, and N-Gain tests to measure its effectiveness in learning.

This study uses a mixed approach that combines quantitative and qualitative approaches. The research was conducted in November-December 2025 with a main focus on the development of *TERBATIK* media that has an impact on learning outcomes in dance arts subjects. The data included quantitative data using pre- and post-tests, as well as qualitative data obtained from interviews, questionnaires, observations, and documentation in class IV of Jatisrono 1 Elementary School. Data analysis was performed using the SPSS Statistics 25 program, which included a normality test to assess data distribution, a T-test to compare student learning outcomes before and after media application, and an N-Gain test to assess the improvement in student learning outcomes after using *TERBATIK* media in the learning process.

Results and Discussion

Results

The first stage was the analysis stage. At this stage, researchers identified and analyzed problems found at Jatisrono 1 Elementary School using observation and teacher interviews. Based on the results of the analysis, several problems were found, including that teachers still use the lecture method in delivering dance material, which makes students feel bored and reduces their interest in dance lessons because they experience difficulties and consider dance to be irrelevant to their daily lives. Added to this are time and cost constraints, which make it difficult for teachers to create innovative learning media. The limited use of learning media has an impact on student learning outcomes, especially in dance, as indicated by the fact that several students have not achieved the minimum competency standard of 75. Of the 36 students in the fourth grade, 19 students (52.7%) have not achieved the minimum competency standard, while 17 students (47.2%) have achieved it. As a solution to this problem, the researcher developed a mobile learning-based dance learning media called *TERBATIK* for the main material of *Egrang Batok dance*. Furthermore, the researcher conducted a media needs analysis filled out by teachers and students as a reference for the design of the media product to be developed.

The second stage was the design stage. At this stage, the researcher began designing the *TERBATIK* media product. The resulting media was created using the Articulate Storyline application and designed in accordance with the learning objectives to be achieved in dance arts, specifically the

Egrang Batok dance material. The *TERBATIK* media was designed with several menus consisting of a home page, instructions, introduction, information, material, and quizzes. The output of the learning media was an application that could be accessed by students using smartphones. The *TERBATIK* media design consisted of a front page in Figure 2, a login page in Figure 3, a menu page in Figure 4, and a home page in Figure 5.

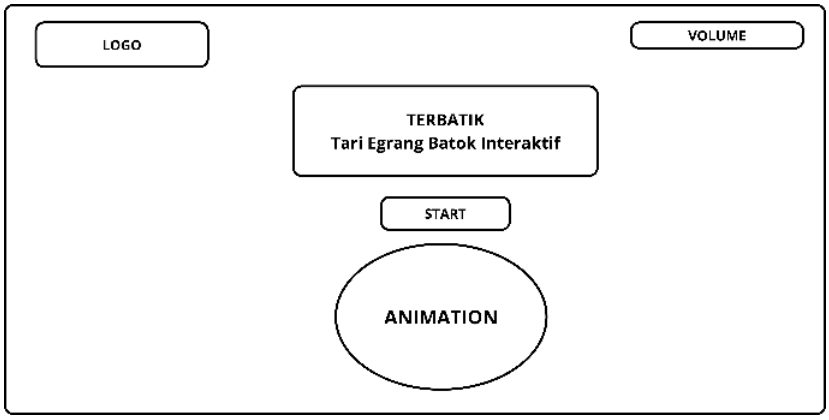

Figure 2. Front Page Design of *TERBATIK* Media

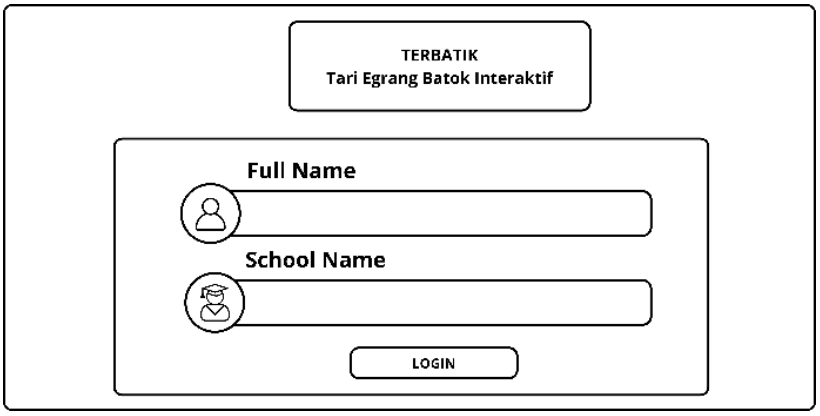

Figure 3. Login Page Design *TERBATIK* Media

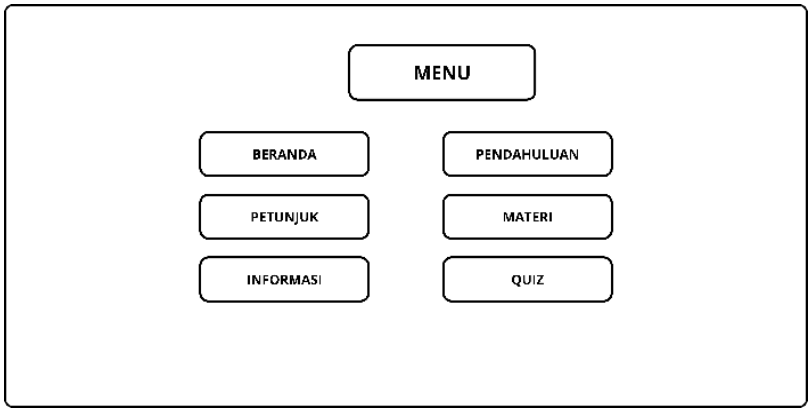

Figure 4. Menu Page Design *TERBATIK* Media

Figure 5. Home Page Design *TERBATIK* Media

The third stage is the development stage. This stage involves the development process of collecting various materials from a number of relevant sources, such as teacher books and student books. All materials in the form of text, images, videos, and infographics are then designed using the Articulate Storyline 3 application. The design and appearance are tailored to the characteristics of the students so as to increase their interest in learning and make it easier to understand. After the design process is complete, the media product will be saved and converted into an application. Learners can download the application and access the media via their mobile phones with an internet connection. The final products are presented in Figure 6, Figure 7, Figure 8, and Figure 9

Figure 6. Front Page of *TERBATIK* Media

Figure 7. Login Page of *TERBATIK* Media

Figure 8. Menu Page of *TERBATIK* Media

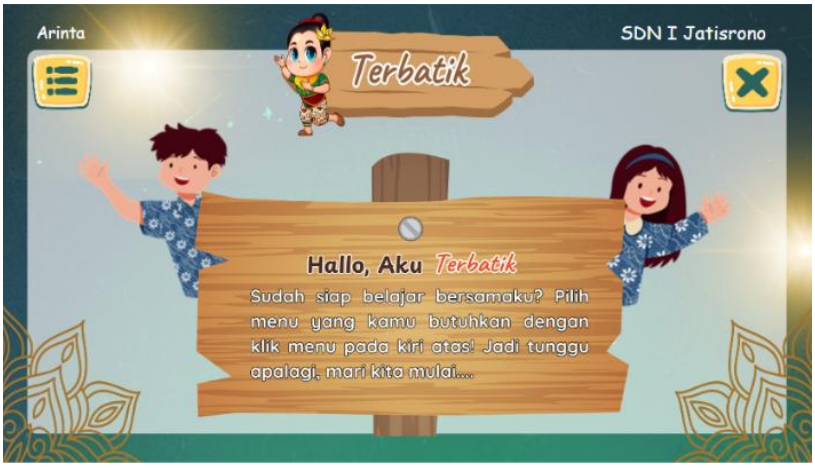

Figure 9. Home Page of *TERBATIK* Media

After the media was developed, its validity was then tested by subject matter and media experts to assess the suitability of the media, ensuring that the learning media was able to provide maximum benefits in the learning process. Through this stage, an assessment was carried out regarding the suitability of the media with the learning objectives, identification of shortcomings that needed to be improved, and analysis of strengths that could increase the effectiveness of media use. The main objective of this evaluation is to ensure that the developed media is not only suitable for use, but also contributes positively to improving the learning process. Based on the validation results by subject matter experts and media experts, the suitability of the material received a score of 80 out of a maximum score of 80 with a percentage of 100%, thus falling into the "very feasible" category for use. Meanwhile, the media suitability aspect received a score of 56 out of a maximum score of 60 with a percentage of 93%, which is also in the "very feasible" category. The results of the *TERBATIK* media suitability test can be seen in Table 4.

Table 4. Results of Material and Media Expert Validation

No.	Validation	Score Obtained	Maximum Score	Percentage	Category
1.	Material	80	80	100%	Very Feasible
2.	Media	56	60	93%	Very Feasible

The fourth stage is implementation. At this stage, *TERBATIK* media was applied in dance learning activities for fourth graders at Jatisrono 1 Elementary School. Before the learning activities took place, the researcher first prepared the necessary facilities and infrastructure and arranged the classroom so that the learning process could run smoothly. After ensuring that all supporting aspects were ready, the researcher then began to implement *TERBATIK* learning media in dance learning. The researcher distributed a pre-test to measure the student prior knowledge. In the initial trial, the media product was

tested on a small group of six students. These six students were selected using purposive sampling, which is the selection of samples based on a number of factors in accordance with predetermined criteria. The sample used in this small group consisted of 2 top-ranked students, 2 middle-ranked students, and 2 bottom-ranked students. After the pilot test on the small group was completed, the *TERBATIK* media was then tested on a large group with a sample of all 36 students. After the learning process was completed, the researcher gave a post-test to evaluate the increase in students understanding after participating in the learning process.

The fifth stage is evaluation. The evaluation stage is the final stage of this study, which includes analysis of the data obtained from the implementation stage. The evaluation includes an analysis of the teacher and student response questionnaires, which can be seen in Table 5, to assess the practicality of the *TERBATIK* media; a normality test to assess the data distribution, which can be seen in Table 6; a T-test to compare student learning outcomes before and after the application of the media, presented in Table 7; and an N -Gain test to assess the improvement in student learning outcomes after using the *TERBATIK* media in the learning process is presented in Table 8.

Table 5. Results of the Questionnaire on Teacher and Student Responses to *TERBATIK* Media

No.	Respondent	Score Obtained	Maximum Score	Percentage	Category
1.	Teacher	75	80	93.7%	highly practical
2.	Student	1342	1440	93.1%	highly practical

Based on the results in Table 5, the teacher and student response questionnaires were conducted at the end of the study. The results in the table show that the teachers responses scored 75 out of a maximum score of 80, with 93,7% falling into the “highly practical” category. For students, the results obtained were 1342 out of a maximum score of 1440, with 93,1% falling into the “highly practical” category. Thus, *TERBATIK* learning media can be said to be practical and effective learning media to support dance learning activities in grade IV at Jatisrono 1 Elementary School.

Table 6. Normality Test Results

Action	N	Mean	Sig.	Category
Pre-test	36	55.6944	0.098	Normal
Post-test	36	87.3611	0.096	Normal

Based on the normality test results in Table 6, the data will be considered normal if Sig. > 0.05. The significance values obtained for the pre-test were 0.098 and for the post-test were 0.096. Both have a sig. value of more than 0.05, so it can be concluded that the data is normally distributed. Therefore, the data can be analyzed using the T-test (paired sample t-test).

Table 7. T-Test Results

Action	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2-tailed)
Pre-test	36	55.6944	7.74597	1.29099	0.000
Post-test	36	87.3611			

Based on the T-test results in Table 7, the average pre-test score was 55.6944 and the post-test score was 87.3611. The Sig. (2-tailed) result was 0.000, where 0.000 < 0.05. This indicates that there is a significant difference in students before and after using the *TERBATIK* media.

Table 8. N-Gain Test Results

Action	N	Mean	Different	N-Gain	Criteria
Pre-test	36	55.6944	31.6667	0.7313	High
Post-test	36	87.3611			

Based on the N-Gain test results in Table 8, the results of the large group trial showed an average difference of 31.6667 with N-Gain results showing g > 0.7 with an N-Gain value of 0.7313, which is in the high category. This average increase indicates that the use of *TERBATIK* media has a positive contribution and is considered quite effective in improving student learning outcomes.

Discussion

This research and development (R&D) project produced an interactive *Egrang Batok dance* media (*TERBATIK*) for dance lessons with the main material being *Egrang Batok dance* for fourth grade students at Jatisrono 1 Elementary School. The main objectives of developing this media were to develop, test the feasibility, and test the effectiveness of improving student learning outcomes. *TERBATIK* is a creative media based on local culture, designed to introduce and teach traditional *Egrang Batok dance* to elementary school students in a fun, participatory, and educational way. This media combines elements of dance, traditional games, and interactive technology to create a meaningful and contextual learning experience. According to Rahmi (2022), media must be adapted to the conditions of the students. The learning media developed by the researcher is media created using the Articulate Storyline 3 application to overcome various problems in the classroom, such as students who often feel bored and have little interest in dance arts subjects because they experience difficulties and consider dance arts to be irrelevant in their daily lives. According to Nasution in (Husna & Supriyadi, 2023), educators need to be able to utilize learning media that is interesting, enjoyable, and relevant to the developing needs of students. The goal is for students to clearly understand the various examples presented by educators, so that *TERBATIK* media is presented in a digital form (application) based on mobile learning to make it easier for students to access the media via smartphones. The use of mobile technology in the learning process offers various advantages, including expanding access and providing flexibility in learning, increasing student interaction and participation, and saving costs and time compared to conventional learning methods (Rawis et al., 2023).

Based on its design, this media consists of several menus, including the front page, login page, home menu, instructions, introduction, information, materials, and quizzes. Each menu in the media application is equipped with explanations that are easy for students to understand. This media is also presented in an interactive form, which provides opportunities for students to be actively involved, such as through digital simulations or educational games (Badriyah et al., 2023). The addition of animated images, audio, video, and infographics makes students more interested in exploring each menu of the media. In the quiz menu, the researchers also applied more enjoyable evaluation questions with a game-like appearance so that students would be interested in getting the highest score. Previous research has revealed that in learning using learning media, the media used must be truly implementable in learning activities in order to make a real contribution to improving the quality of the learning process (Syam et al., 2022). The contribution of these research results has an impact on improving learning outcomes in dance subjects through the various advantages of the learning media developed by the researchers.

The use of interactive *Egrang Batok dance* learning media (*TERBATIK*) can improve dance learning outcomes in fourth grade. This finding is reinforced by previous research stating that learning media with Android application output is effective and very interesting to use in dance learning (Previlya & Perdana, 2023). The use of interactive learning media can increase student interest in learning new information in the material presented by the teacher, making the material easier to understand. Other findings also state that the quality of learning is clearly different when compared to conventional learning media, where teachers only use textbooks or lecture and group discussion methods (Nadzif et al., 2022). Thus, this study shows that *TERBATIK* learning media can improve dance learning outcomes in fourth-grade students through a more interesting and interactive learning experience. Students not only learn but also train their cognitive abilities and motor coordination.

TERBATIK media is very suitable for use in the dance learning process in the classroom. This media takes the form of an Android application that students can access using their mobile phones. Its appearance is enhanced with animations, a variety of movements, and bright colors, making it very attractive to students. Next, the validity of the media was tested by subject matter and media experts. The results of the *TERBATIK* media validity test showed that subject matter experts gave a score of 100% in the "highly feasible" category and media experts gave a score of 93% in the "highly feasible" category. These validity results indicate that the *TERBATIK* media developed by the researcher is very feasible for use in learning. This proves that the learning application, which is the output of interactive digital media, is software specifically designed to support learning activities (Hafizh & Fatah, 2022).

After conducting a validity test on the media, the researchers then tested the practicality of the media through a response questionnaire filled out by teachers and students. This questionnaire was analyzed to determine how practical the learning media was in the classroom learning process. The

results of this response questionnaire obtained a score of 93.7% from teachers and 93.1% from students. These results indicate that the media developed falls into the "Highly Practical" category. From these results, it can be said that *TERBATIK* media is practical because it is designed with interactive digital elements, making it more interesting and easier for students to understand. In addition to being practical, this media can also improve student learning outcomes. This is because the media successfully provides opportunities for active involvement, so that with enjoyable learning, student learning outcomes will also improve (Badriyah et al., 2023).

The normality test results on the *TERBATIK* media obtained a significance value for the pre-test of 0.098 and for the post-test of 0.096. Both have a Sig. value of more than 0.05, so it can be concluded that the data is normally distributed. The students' learning outcomes improved. The average pre-test score was 55.6944 and the post-test score was 87.3611. The Sig. (2-tailed) result was 0.000, where 0.000 < 0.05. This indicates that there was a significant difference in the students' learning outcomes before and after using the *TERBATIK* media. Furthermore, in the N-Gain test, the results of the large group trial showed an average difference of 31.6667 with the N-Gain result showing g > 0.7 with an N-Gain value of 0.7313, which is in the high category. This average increase shows that the use of *TERBATIK* media has a positive contribution and is considered quite effective in improving student learning outcomes. In line with previous research, the development of Android-based learning media is highly feasible and supports the learning process (Razilu, 2021).

The contribution of this research is in the form of products that can be used as learning media and additional learning resources in learning activities. Despite its advantages, this research still has limitations, namely that some of the student mobile phones are not sufficient to use this media. Therefore, for other studies that will use this study as a reference in developing similar learning media, the researcher has a solution, which is to ensure that all students have adequate mobile devices so that they can follow the learning process properly. A strong internet connection is also required when accessing this media application. This study shows that interactive digital learning media can be used as an innovative learning tool to support more active and interesting learning. With this learning media, it can help teachers as facilitators in creating more meaningful learning and, of course, improve students dance learning outcomes.

Conclusion

Based on the results of the study, the interactive *Egrang Batok dance* learning media "*TERBATIK*" in the dance subject of *Egrang Batok dance* material is considered very suitable for use, as seen from the validation results by subject matter experts and media experts. In addition, this learning media has proven to be practical because it has received highly practical responses from teachers and students through user response questionnaires. The interactive animation display in this learning media increases learning motivation and makes it easier for students to understand the material presented. The media is also easily accessible as it can be opened via a smartphone connected to the internet. Its effectiveness is also demonstrated by the improvement in student learning outcomes based on the N-Gain test. Thus, the interactive *Egrang Batok dance* media "*TERBATIK*" is declared feasible, practical, and effective in supporting dance learning in fourth grade.

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