Developing Flipbook Benadaku with YouTube videos to improve students' learning outcomes in natural and social sciences

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ABSTRACT

This research was motivated by the low learning outcomes of students in natural and social sciences subjects on the material of norms in regional customs. Consequently, this study aims to develop and determine the effectiveness and feasibility of the Flipbook Benadaku media with YouTube videos to improve the learning outcomes of fourth-grade students in these subjects. Research and Development (R&D) is the type of research conducted, utilizing the research model design from Dick and Carey. The research subjects consisted of 27 fourth-grade students. To collect data, both test and non-test techniques were employed. Specifically, the test technique involved pre-tests and post-tests, while non-test techniques included observation and interviews. As a result, the development of the Flipbook Benadaku with YouTube videos was achieved. The feasibility results of the Flipbook Benadaku with YouTube videos indicate that the media is suitable for use, as evidenced by the assessments of material experts and media experts, with percentages of 92% and 90.4% respectively. Furthermore, the learning outcomes of the fourth-grade students improved significantly, with an average pretest score of 45.83 and a post-test score of 86.67, resulting in an N-gain of 0.77, which is categorized as high. Thus, the media is considered quite effective. In conclusion, Flipbook Benadaku with YouTube videos is validated as effective for use in natural and social sciences learning and can significantly enhance students' learning outcomes on the material of norms in regional customs.

Introduction

Learning is a process that engages both educators and students. The process forms the foundation of educational activities in an academic institution. At the same time, learning is said to be successful if students can achieve learning outcomes according to predetermined standards (Wiratmaja, 2019). In this process, learning media, a tool that is utilized in the teaching and learning process, has crucial roles. Noviyanti et al (2022) claimed that learning media is a learning resource that helps teachers increase knowledge to be shared with students. These instructional tools function as a bridge or intermediary for teachers in delivering lesson messages to students that can attract students' attention to learning (Hidaya et al., 2022; Sholeh, 2019; Wahyuningtyas & Sulasmono, 2020). In

addition, it can encourage learners to take responsibility and control learning (Hasan, 2021). Apart from fostering a sense of responsibility in students, utilizing media in the educational process enhances learning effectiveness and efficiency by presenting the material clearly (Hidaya et al., 2022; Nugraha et al., 2023; Susanti & Sholihah, 2021).

The learning media used should be tailored to the needs of students so that students can be interested in learning and learning objectives can be achieved optimally (Batubara, 2020; Bulkani et al., 2022; Nurlita et al., 2024). Additionally, the development of science and technology in education can accelerate the development of learning resources and learning media (Ahmadi et al., 2023; Dewi et al., 2020; Melindawati et al., 2021). Furthermore, the use of technology in learning can facilitate the learning process, allowing for flexibility in both offline and online settings. This not only makes learning more interesting but also enhances engagement (Batubara et al., 2022, 2023; Yolanda et al., 2023). One of the media that utilizes technology is flipbook software-based media. A flipbook is a digital book file that can contain images, animations, videos, and audio so that readers can interact directly with the media as if they were reading a book. Flipbooks can indirectly increase students' interest in reading. The students can read material not always through printed books, but can be through flipbook media. The flipbook has several advantages, among others, namely: 1) learning material can be conveyed easily, concisely, and practically; 2) can be used in any space both closed and open; 3) moveable or easy to carry anywhere; 4) learning activities and interest can increase when using media (Setiadi et al., 2021).

The Heyzine flipbook is a flipbook-based web that can convert PDF module files from Canva into digital books that can be accessed for free or paid without downloading. Heyzine flipbook can be accessed via smartphone or PC (Saraswati et al., 2021). Similar to the flipbook website, in the Heyzine flipbook various features can be used to add links, images, videos, audio, and the web which makes the Heyzine flipbook contain more information from various diverse sources compared to modules or ordinary printed books. Heyzine flipbook media equipped with images, audio, video, and animation can be applied to learning which will stimulate the minds of students to encourage the learning process (Monitha et al., 2022). Learning using flipbook-based media certainly has a real impact on students. Flipbook-based learning media can increase student interest in learning, making it easier for them to understand the material they are studying. Consequently, student learning outcomes will also improve. Conversely, if learning is conducted without the use of learning media, it can become monotonous, decreasing student interest and resulting in lower learning outcomes (Sari & Ahmad, 2021). Therefore, flipbook-based learning media suits various subjects, including natural and social sciences.

Science is indispensable in the survival of individuals for a better future (Rahmawati et al., 2019). Natural and social science is one of the subjects contained in the independent curriculum. Specifically, one of the topics in the social domain of natural and social sciences is the material on norms in regional customs. This subject encompasses knowledge, understanding, and analysis related to the relationship between individuals and their surrounding environment. Therefore, social science is important to be taught from the elementary school level to shape the character of students and equip them to find solutions when facing problems in social life (Anisa et al., 2022; Sari & Ahmad, 2021). Additionally, social learning can foster students' curiosity, which will help them understand the concept of human life as individuals and social beings who interact with their environment. For instance, the topic of norms and customs is one that students will encounter in social science. In this topic, students will learn about the meaning of norms, customs, and types of customary norms that exist in different regions. Introducing the material on norms in customs to students is crucial for helping them get used to obeying existing norms or rules. Moreover, learning about norms in customs will foster good character in students (Karsiwan et al., 2023).

Research conducted by Usman supports the use of Flipbook Benadaku with YouTube videos, showing that validation by media and material experts achieved average feasibility scores of 82.8% and 86.4%, respectively. Additionally, the media practicality test, based on teacher and student response questionnaires, received percentages of 90.3% and 88.9%. These results indicate that the development of flipbook electronic teaching materials on economic activities for fourth-grade elementary students is both feasible and practical for use in learning (Usman et al., 2023). However, the current media lacks sound for interaction with readers. Therefore, in the development of Flipbook Benadaku with YouTube videos, sound will be incorporated.

Study results that the learning outcomes of fourth-grade students of SD Negeri Pongangan are still relatively low, this is due to the non-use of media during the learning process (Rahma & Asih, 2024). The same thing also happened at SDN Purwoyoso 01 Semarang. From the results of observations and interviews conducted at the end of December 2023 with the fourth-grade homeroom teacher at SDN Purwoyoso 01 Semarang, several problems were still found in learning activities that affected learning outcomes. After the implementation of the end-of-semester summative, the average learning outcomes of natural and social sciences students were 62 and there were still many students who were not complete. Of the 27 students in class IV, there are only 11 children who can achieve the Learning Objective Completeness Criteria, meaning that the percentage of students who are complete is only 40%. In contrast, the number of students who are not complete still dominates.

The results of observations and interviews show that the learning process has not been running optimally. Teachers have not been able to fully control the learning process, and students are less active in participating in learning. Moreover, the learning methods used are still conventional and teacher-centered, which causes students' interest in learning to be low, thereby diminishing their desire to learn. Additionally, the lack of utilization of learning media is also one of the factors that result in students not understanding the material taught, which affects their learning outcomes. Considering that the material on norms in regional customs is so complex, it becomes evident that learning media is important to use in learning.

Based on the research background and supported by the results of previous studies, the present study aims to develop flipbook Benadaku with YouTube videos to improve the learning outcomes in natural and social sciences of fourth-grade elementary school students on the material of norms in regional customs. Flipbook Benadaku learning media is expected to facilitate students' learning and make the learning atmosphere more interesting. This research examines whether flipbook Benadaku with YouTube videos is feasible to use in learning natural and social sciences at SD Negeri Purwoyoso 01 Semarang and whether the use of these media can improve student learning outcomes.

The results of this study are expected to contribute to the learning process in terms of technology utilization in making learning media. Moreover, this research is also expected to provide an understanding to teachers of the importance of using learning media in the learning process so that teachers can be motivated to improve their skills in developing learning media. Through the media development in this study, it is also anticipated that students will become more interested in learning. Additionally, this research is expected to provide a positive response to improving the quality of learning in elementary school.

Method

Research design

This research uses a type of Research and Development (RnD) method, which is a research approach used to produce a product and test its effectiveness (Sugiyono, 2017). The products developed in this research are flipbook Benadaku with YouTube videos for

natural and social science subjects in fourth grade at SDN Purwoyoso 01 Semarang. Moreover, this research model refers to the development model proposed by Dick and Carey, which includes the following systematics.
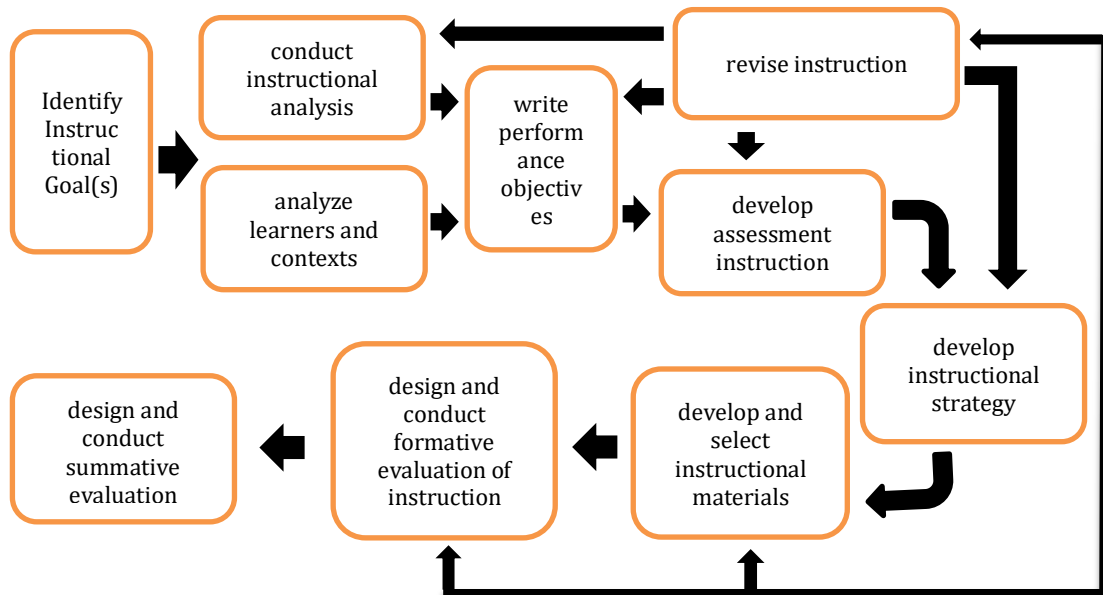

Figure 1. Research model by Dick and Carey

This research model refers to the development model proposed by Dick and Carey which has ten stages that are coherent, systematic, and interconnected with each other. So that it can facilitate the research to be carried out (Dick et al., 2015).

Participants

The subjects of this study were fourth-grade students from SDN Purwoyoso 01 Semarang, selected using a saturated sampling method, ensuring that all fourth-grade students, totaling 27, were included in the sample. This comprehensive inclusion provided a complete representation of the student population for the study. For the small-scale test, researchers employed a purposive sampling technique, deliberately selecting 6 students based on their intelligence levels to observe the media's impact on different academic abilities. This targeted approach allowed for detailed insights into the media's effectiveness across varied student performance levels. In contrast, the large-scale trial involved the remaining 21 students, aiming to validate the small-scale test findings and assess the broader applicability of the flipbook media. This dual-phase approach ensured a robust evaluation of the media's effectiveness, covering both specific and general student groups.

Data collection technique

The data collection technique used is a non-test method through observation and interviews, utilizing a questionnaire as the instrument. Following the observations and interviews, a needs questionnaire was distributed to be filled in by both teachers and students. Additionally, questionnaires were also provided to media experts and material experts to validate the developed products. Lastly, a student and teacher response questionnaires were administered to gather feedback related to the developed media. Besides the non-test techniques, this study also employed test techniques through pretests and post-tests by administering multiple-choice questions during both small-group and large-group tests.

Table 1 shows the results of teacher observations on the learning process. It explains whether the teacher masters the learning material acts as a facilitator, uses

learning media, encourages students, and assesses student engagement and the learning environment. Specifically, the table provides a detailed account of how effectively the teacher delivers the content and whether they can engage students through interactive teaching methods and integrate various learning media to enhance the educational experience. Additionally, the table examines how well the teacher motivates students to participate actively in class and how they foster a conducive learning environment that promotes student involvement and interest.

Table 1. Observation result

Information	Description
The teacher masters the learning	The teacher is well-versed in the learning material and can manage the class well
The teacher acts as a facilitator	The teacher bridges students in the learning process and answers students' questions
Teachers use media in the learning process	The use of media in the learning process has not been maximized, teachers still rely on teacher and student handbooks
Teachers encourage learners to utilize technology	The learning process is still conventional and is only based on books and students have not been taught to explore various information via the internet
Learners are active in learning	Learners lack enthusiasm and interest in learning
Interesting and fun learning	Learning is boring because students are less active and participate less in the learning process

Table 2 presents interview results with the teacher, presents a detailed analysis of the current state of the educational environment, focusing on key aspects of the learning process. It examines student engagement, the methods and media used in teaching, the outcomes of student learning, the availability and utilization of facilities and infrastructure, and the resources available for learning. These insights provide the strengths and weaknesses in the educational setting, highlighting areas that need improvement to enhance the overall effectiveness of the learning experience.

Table 2. Interview results with the teacher

Information	Description
Learning process	Students are less active in the learning process, there are still students who lack focus and have a low student understanding of the mastery of the material taught
Learning method	The learning process uses conventional methods, namely lectures and demonstrations
Learning media	The use of media in the learning process has not been maximized, so student interest in learning is very low
Learning outcomes	Low student learning outcomes, some students have not been able to communicate the material learned
Facilities and infrastructure	Facilities and infrastructure in the classroom are quite supportive of learning, but not yet maximized in their use
Learning resources	Learning resources are very limited, only based on teacher and student books

Table 3 depicts teacher and students need questionnaires, outlines a series of questions aimed at evaluating various aspects of the learning environment and the use of media in natural and social sciences education. It assesses the availability of facilities and

infrastructure, the integration of technology in the learning process, and the suitability of flipbook media for educational purposes. It provides two alternative answers, yes and no.

Table 3. Teacher and student needs questionnaires

Information	YES	NO
Do the facilities and infrastructure provided support learning?		
Does the learning process utilize technology?		
Does natural and social sciences learning always use learning media?		
Is flipbook media suitable for use in natural and social sciences learning?		
Does the flipbook media need to be supported with images and videos?		
Does the flipbook media need to be given practice questions		
Are the facilities and infrastructure provided support learning?		

Table 4 presents the criteria used to evaluate the feasibility of a given subject based on percentage scores. It categorizes the feasibility into four distinct levels: Very Feasible, Feasible, Less Feasible, and Not Feasible.

Table 4. Teacher and student response questionnaire criteria

Percentage	Criterion
82% < x ≤ 100%	Very Feasible
63% < x ≤ 81%	Feasible
44% < x ≤ 62%	Less Feasible
25% < x ≤ 43%	Not Feasible

Table 5 demonstrates the criteria used to evaluate the feasibility of a given subject based on percentage scores. It categorizes the feasibility into four distinct levels: Very Feasible, Feasible, Less Feasible, and Not Feasible.

Table 5. Expert response criteria

Percentage	Criterion
82% < x ≤ 100%	Very Feasible
63% < x ≤ 81%	Feasible
44% < x ≤ 62%	Less Feasible
25% < x ≤ 43%	Not Feasible

The data collection methods employed in this study include several techniques to ensure comprehensive and reliable results. These techniques encompass the observation results which provide insights into the classroom dynamics and student behavior, interview results which offer in-depth perspectives from both teachers and students, and various questionnaires designed for teachers and students.

Data analysis techniques

The data analysis techniques used in this study are descriptive qualitative, quantitative, and N-Gain analysis. Qualitative descriptive analysis is used to analyze directions and input from experts or experts on the development of media flipbook

Benadaku natural and social sciences subjects. Meanwhile, to analyze the scores given by experts on the development of flipbook Benadaku media, quantitative descriptive analysis was employed. The N-gain test is used to determine the effectiveness of flipbook Benadaku media in the form of increasing student learning outcomes in natural and social sciences subjects. The classification of N-gain criterion is presented in Table 6.

Table 6. N-gain criterion

Interval	Criterion
N-Gain ≥ 0,70	Tall
0,30 ≤ N-Gain ≥ 0,70	Keep
N-Gain ≤ 0,30	Low

Results

Conducting need analysis

The first stage of this research is to determine information regarding the subjects under investigation. Researchers address existing issues that occur in elementary schools in the form of learning outcomes. Data was obtained from observations and interviews conducted in fourth-grade SDN Purwoyoso 01 Semarang. The results of the data will be used as the basis for developing the flipbook Benadaku with YouTube videos. The second stage involves the collection of data and information. During this phase, researchers systematically identify and compile preliminary data, which is then analyzed and transformed into actionable information. These questionnaires play a critical role in shaping the design and implementation of the Flipbook Benadaku with YouTube videos, ensuring that the developed media is aligned with the educational requirements and preferences of its intended users.

The responses from the teacher and student questionnaires indicate that technology and learning media have not been utilized during the learning process. According to the questionnaire, both teachers and students agreed that flipbook-based media should be used for teaching natural and social sciences material on norms in regional customs. Detailed results of the teacher and student needs questionnaire are presented in Table 7.

Table 7. Results of teacher and student needs questionnaires

Information	Students	Teacher
Do the facilities and infrastructure provided support learning?	Yes (22) No (5)	Yes
Does the learning process utilize technology?	No (27)	No
Does natural and social sciences learning always use learning media?	No (27)	No
Is flipbook media suitable for use in natural and social sciences learning?	Yes (21) No (6)	Yes
Does the flipbook media need to be supported with images and videos?	Yes (20) No (7)	Yes
Does the flipbook media need to be given practice questions	Yes (17) No (10)	Yes
Do the facilities and infrastructure provided support learning?	Yes (22) No (5)	Yes

Product design

The third stage in the form of product design, is an effort to bring up the concept of ideas or ideas in designing initial products using editing applications. Several things need to be considered in developing flipbook media, including background selection, font

selection and size, images, colors, and material content. This second picture shows the final appearance of my Benadaku flipbook with YouTube videos. This picture shows the front of the media, the contents of the media containing material learning videos, and practice questions, as well as the final appearance of the media.

Picture 1. Flipbook Benadaku display

| Media front view | Preface display | CP,TP display |

| Material display | Material display | YouTube video link view |

| Exercise question display | Author bio display | Final media display |

Product validation results

The fourth step involves the validation of the product by both material and media experts. Upon completion of the media product design, it needs to be validated by these experts. For this purpose, researchers prepared statements and questions related to the developed media products, which were then evaluated by the experts. The outcomes of the validation tests conducted by the media and material experts are documented in the tables presenting the feasibility test results of the Flipbook Benadaku with YouTube videos. These results are detailed in Table 8 and Table 9.

Table 8. Media expert feasibility test

Aspect	Percentage	Description
Content	84%	Very feasible
Display	90%	Very feasible
Language	87.5%	Very feasible
Presentation	100%	Very feasible
Average	90.4%	Very feasible

Based on media experts, the development of the media flipbook Benadaku with YouTube videos in content, appearance, language, and presentation presented in the media obtained an average of 90.4% with a very feasible category. While the material expert, the development of flipbook Benadaku media with YouTube videos in terms of content, display, and language gets a percentage of 92% with a very feasible category.

Table 9. Material expert feasibility test

Aspect	Percentage	Description
Content	88.6%	Very feasible
Display	87.5%	Very feasible
Language	100%	Very feasible
Average	92%	Very feasible

The fifth stage is product revision. Product validation is carried out by experts or experts to find out whether there are still deficiencies in the media that have been developed. At this stage, researchers received input from experts as a reference in improving the media that researchers developed. The results of the revision from the expert are 1) the addition of procedures for using the media on the front page, which aims to provide information to media users before using the media; 2) the addition of navigation buttons, which aims to make it easier for users when running the media; 3) the addition of sound, aims to form interactions with readers; 4) providing exercise questions should be in the form of web links to make it more interesting when done.

Product trial results

The sixth stage is product testing. At this stage, researchers conducted a small-scale product trial in the fourth grade of SDN Purwoyoso 01 Semarang. In the small-scale trial, researchers used a purposive sampling technique by taking 6 samples from different intelligence levels, consisting of 2 top-ranked students, 2 middle-ranked students, and 2 lower-ranked students. After the small-scale trial, the seventh stage is product revision. At this stage, the researcher makes improvements after finding deficiencies in the product in the small-scale test.

Eighth, trial use. After revising the product, it was then tested on a large scale, namely in fourth-grade SDN Purwoyoso 01 Semarang with a total of 21 students. This test was carried out by giving test questions (pretest and posttest) as well as a questionnaire of teacher and student responses related to media development. This stage aims to test the effectiveness of flipbook Benadaku with YouTube videos as an effort to improve learning outcomes in natural and social science on the material norms in regional custom. The results of the teacher and learner response questionnaire can be seen in Table 10.

Table 10. Results of Teacher and student responses

Subject	Teacher	Small group	Large group	Information
Ease of use	100%	92%	100%	Very Feasible
attractiveness	100%	100%	100%	Very Feasible
Benefits	100%	95%	100%	Very Feasible
Average	100%	95.6%	100%	Very Feasible
Final Average	100%		97.8%	Very Feasible

Table 10 presents the evaluation results of the Flipbook Benadaku media's feasibility across different groups: teachers, small groups, and large groups. It assesses four key criteria: ease of use, attractiveness, benefits, and the overall average. For ease of use, the media received scores of 100% from teachers, 92% from the small group, and 100% from the large group, indicating it is very feasible. The attractiveness of the media was rated at 100% by all groups, reflecting its strong appeal. Additionally, the benefits of the media were rated 100% by teachers and the large group, and 95% by the small group. The final average scores for feasibility are 100% from teachers, and 97.8% from the combined small and large groups, confirming that the Flipbook Benadaku media is very feasible for use.

Table 11. Small-scale N-gain test result

Subject	Average pretest score	Average posttest score	N-Gain score	N-Gain Percentage	Information
small-scale test	59,1667	86,6667	0.679	67%	Effective Enough

Table 11 presents the results of the small-scale N-gain test, which evaluates the effectiveness of the educational intervention. The average pretest score was 59.17, and the average post-test score increased to 86.67, resulting in an N-gain score of 0.679. This corresponds to an N-gain percentage of 67%, indicating that the intervention was effective enough.

Table 12. Large-scale N-gain test result

Subject	Average pretest score	Average posttest score	N-Gain score	N-Gain Percentage	Information
Group I	32	74.5	0.617	61.7%	Effective Enough
Group II	47.5	87.5	0,76	76%	Effective Enough
Group III	58	98	0,95	95%	Very Effective
Average	45.83	86.67	0,77976	77,9%	Very Effective

Table 12 presents the large-scale N-gain test results, showing the effectiveness. Group I's average pretest score increased from 32 to 74.5, with an N-gain of 0.617 (61.7%), indicating it was effective enough. Group II's scores rose from 47.5 to 87.5, with an N-gain of 0.76 (76%), also effective enough. Group III saw the most improvement, with scores increasing from 58 to 98, and an N-gain of 0.95 (95%), classified as very effective. Overall, the average N-gain was 0.77976 (77.9%), which showed that it was very effective.

Discussion

The use of flipbook media has been shown to enhance students' interest in learning (Usman et al., 2023). This is further evidenced by the statistical result of this study that shows the positive effect of flipbook media on students' learning interest in natural and social sciences. This increase in engagement is attributed to the appealing design of the Flipbook Benadaku with YouTube videos, which effectively captures students' attention (Arifin et al., 2020; Yuniarti & Darmanto, 2022). When the media used in education attracts students' attention, it naturally boosts their enthusiasm for participating in the learning process, thereby improving their learning outcomes (Sari & Ahmad, 2021).

This research aims to assist both teachers and students in the educational process, ensuring that teaching and learning activities are both active and enjoyable. Such engaging learning experiences are expected to yield optimal learning outcomes for students (Khotimah et al., 2023). Additionally, the development of Flipbook Benadaku with YouTube videos can foster innovation and creativity among teachers in creating educational media, as flipbooks can be applied across various subjects (Rahma & Asih, 2024). Flipbooks are also highly versatile, offering numerous features that facilitate idea development and ease of application for teachers (Khotimah et al., 2023). Based on the identification of issues in this study, the effectiveness of the media was tested by comparing students' pretest and post-test learning outcomes on the material of norms in regional customs. The analysis results, presented in the N-gain table, indicate an average increase of 0.77 in learning outcomes, which falls into the high category. Consequently,

the Flipbook Benadaku media with YouTube videos is deemed highly feasible and effective for use in the learning process.

In testing the practicality of the media, validation was conducted by media experts and material experts, alongside teacher and student response questionnaires. The results of these analyses are presented in Tables 5, 6, and 7. The teacher and student response questionnaires yielded an average score of 100% from teachers and 98.7% from students, both categorized as very feasible. Furthermore, expert validation received scores of 90.4% from media experts and 92% from material experts, also categorized as very feasible. These validation results indicate that the Flipbook Benadaku media with YouTube videos is highly practical for use in learning (Arifin & Lestari, 2020; Manzil et al., 2022).

Based on previous research (Ahmadi et al., 2023; Bulkani et al., 2022; Manzil et al., 2022), the development of the Flipbook Benadaku with YouTube videos is shown to be highly feasible, effective, and practical for teaching natural and social science material on norms in regional customs. This conclusion is supported by the observed improvements in student learning outcomes and the positive results from expert validation. The Flipbook Benadaku with YouTube videos serves as an interactive medium that offers more advantages than traditional textbooks used in the learning process. It enables teachers to conduct lessons more effectively and efficiently, thereby enhancing student learning outcomes. Additionally, students can engage in independent learning and explore the material on norms and customs through the Flipbook Benadaku with YouTube videos, further improving their learning outcomes.

The development and implementation of Flipbook Benadaku with YouTube videos have significant theoretical and practical implications for the field of education, particularly in the natural and social sciences. Theoretically, this research supports the integration of multimedia learning tools in educational settings, aligning with cognitive theories that suggest multimedia can enhance learning by catering to multiple sensory modalities. The high feasibility percentages from material and media experts (92% and 90.4%, respectively) underscore the robustness of the Flipbook Benadaku as an educational tool. This validation indicates that carefully designed multimedia resources can effectively convey educational content and meet academic standards, supporting the theory that multimedia aids in better comprehension and retention of information (Monitha et al. 2022).

Practically, the substantial improvement in students' learning outcomes, as evidenced by the increase from a pre-test score of 45.83 to a post-test score of 86.67, highlights the effectiveness of using Flipbook Benadaku with YouTube videos in actual classroom settings. The N-gain of 0.77, categorized as high, demonstrates that this multimedia approach can significantly enhance students' understanding and retention of the material on norms in regional customs. This practical application suggests that educators can leverage multimedia tools to address diverse learning needs and improve educational outcomes (Rahma & Asih, 2024; Susanti & Sholihah, 2021). The positive feedback from students, observed through both test and non-test techniques, further supports the practical benefits of this approach, indicating higher engagement and motivation among students when multimedia tools are utilized (Wahyuningtyas & Sulasmono, 2020).

Additionally, the success of this multimedia tool in improving learning outcomes has broader implications for curriculum design and instructional strategies. Educators and curriculum developers can consider integrating similar multimedia resources across various subjects to foster an engaging and effective learning environment. The findings suggest that multimedia tools like Flipbook Benadaku with YouTube videos not only enhance academic performance but also cater to different learning styles, thereby promoting inclusive education. Moreover, this approach can serve as a model for future educational innovations, encouraging the development of interactive and multimedia-rich instructional materials to improve student engagement and achievement across different educational contexts.

Conclusion

The analysis indicates that the Flipbook Benadaku with YouTube videos, which includes material on regional customs norms, is highly suitable for teaching natural and social sciences. The development and implementation of this flipbook have demonstrated significant effectiveness, as evidenced by the observed improvements in student learning outcomes for the material on norms in regional customs. Furthermore, the Flipbook Benadaku with YouTube videos is practical, making it a valuable supplementary tool in the educational process. It enhances the presentation of instructional material, thereby supporting natural and social science education effectively.

The researcher acknowledges that this study is far from perfect and has several limitations. The limited number of research subjects is a significant constraint, affecting the ability to fully assess the effectiveness of the Flipbook Benadaku with YouTube videos. This study primarily focuses on the impact of learning media on student learning outcomes. Future researchers are encouraged to explore other factors influencing student learning outcomes.

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