

Development of Flipbook-Based Interactive Media in Science and Science Subjects, Story Materials about My Region

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Abstract: This research aims to develop FlipBook-based Interactive Media in the Science and Technology subject of News about My Region. To produce a valid instrument, the instrument that will be given to students will be tested for the validity and reliability of the instrument. This test will be carried out on students as test subjects on students. This research has succeeded in developing flipbook-based interactive media that is designed to support a more effective and interesting learning process. Based on the results of the feasibility test involving material and media experts, as well as trials on users (students), this media is considered suitable for use in learning. The results of the study show that flipbook-based interactive media can increase students' interest and involvement in the learning process, make it easier to understand the concepts taught, and increase interactivity between students and the material presented. This media also provides convenience in terms of managing learning materials that are more dynamic and flexible, so that they can be adjusted to the needs of students. The results of the evaluation in terms of practicality and effectiveness show that the use of this media can improve the quality of learning, because students are more active in participating in learning activities.

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Introduction

Education in the digital era has utilized the internet to obtain information and teaching materials. The internet is easily accessible, anywhere and anytime so that students, teachers, and other educational staff can take advantage of this convenience. Students can access online learning through various libraries, reports, journals, and other internet resources. This is one of the teaching alternatives to be more creative, innovative, contextual, and in accordance with teacher standards. Because when compared to the amount of material that must be completed, the time given to speak in front of the class is very limited. For this reason, learning design must allow students to participate in the independent learning process so that learning designs that use digital media can increase students' interest in learning

Development is often interpreted as a process of change that is planned to improve the quality and capacity of an entity, be it an individual, an organization, or a society. According to Kettunen (2019), development includes various aspects such as improving skills, knowledge, and innovation in the organization to achieve strategic goals. Development is a process, a way of making, or that can be associated with education means a process of gradual change towards a higher level and expanding as a whole. Ilmiawan & Arif (2018) defines development as the use of technical science in order to produce new materials or equipment, as well as substantially increase production and services for new processes or systems.

The learning media that is now growing rapidly is interactive media. Interactive media is an information intermediary from educators to students who utilize technology as part of the learning process. The use of interactive multimedia-based media helps educators to interact with students by using devices during the learning process. The learning that is carried out creates a fun, more meaningful and interesting learning atmosphere. Rina (2021) revealed that interactive media in education is able to create a more dynamic and fun learning environment. Interactive media in an educational context refers to the use of technology that allows two-way interaction between students and learning materials. This creates a more engaging and effective learning experience. According to Hendra et al. (2020), interactive learning media utilizes various types of media such as interactive videos, simulations, and educational games to increase student involvement in the learning process.

Flipbook, According to Fadia Velinda et al. (2024), Flipbook is a learning medium that presents information in a digital format with interactive elements. Web-based interactive flipbooks can improve the critical thinking skills of elementary school students. This study shows that 84.3% of students agree to use interactive Flipbooks because of the use of interesting animations and audio.

According to Aulia (2020), Flipbook is an interactive medium that allows users to view digital content in a flippable book format, similar to a printed book. Flipbooks not only provide visual content, but also support multimedia elements such as audio and video, which enhances the user's learning experience. Flipbooks, as an interactive learning medium, have undergone significant development in recent years. Compared to traditional methods, Flipbook is an effective and interesting learning medium with many advantages. With its ability to integrate various multimedia elements, Flipbooks can increase students' motivation to learn as well as understanding concepts.

The development of Flipbook in the context of IPAS learning has been carried out through various research and development methods. For example, research by Halimah et al. (2023) uses the ADDIE (Analyze, Design, Development, Implementation, Evaluation) model to create a Flipbook that suits the needs of grade IV elementary school students. The results show that the Flipbook is very suitable to be used as a learning medium. The development of interactive media such as Flipbooks in learning IPAS on the material Stories About My Region has proven to be effective in increasing students' interest in learning and understanding of the culture and history of their region. Flipbooks are a very useful tool for educators to convey material in an interesting and educational way.

Thus, the development of Flipbook-based interactive media is the right step in improving the quality of learning, motivating students, and facilitating independent learning. The integration of technology in learning such as Flipbooks provides an interesting and effective alternative in delivering subject matter to students.

Researchers are interested in developing Flipbook media as an interactive media in learning the Science of Science Story Material About My Region on the grounds that the use of Flipbook media can be used by students at school and at home, because it is packaged in a tool that is very close to students and teachers, namely on android mobile devices. By using an android mobile device, it is hoped that students will more easily access learning materials, especially about Stories about My Region. Based on this, the researcher intends to conduct a research with the title "Development of Interactive Learning Media Based on Flipbook for IPAS Subject Story Material About My Region with the hope of being able to make the learning atmosphere and learning process of IPAS interactive, effective and fun..

Research Method

The method used in this study is Research and Development using the ADDIE model. A research method used to create a product, as well as test the effectiveness of the product. The ADDIE model as a learning and development design model. As an effort to solve learning problems related to learning resources in accordance with the needs and characteristics of students.

This research and development resulted in storybook teaching materials in the form of Flipbooks and stories about my area for 4th grade elementary school students. After the Flipbook is developed, a formative evaluation is carried out to find out the shortcomings and errors in the development process. This formative evaluation is obtained from the validation of experts and the validation of users. The validation obtained from the Flipbook development research consisted of data on product evaluation results by experts (validation of material and media experts), data on user assessment results (teachers/parents), and data from observation results of Small Group Trials (4th grade elementary school students) to see the effectiveness of the media. Some of the reasons for choosing the ADDIE model are because the ADDIE model can present evaluation and at the same time improvement at each stage of its implementation. This is what makes the product developed something that can be accounted for. In addition, the advantage of using the ADDIE model is its simplicity which is not complicated but still systematic.

This research will be conducted at SD Negeri Mojokrapak 3, which is located in Mojokrapak Village, Tembelang Village, Tembelang District, Jombang Regency. With the research time in the Odd Semester of the 2024/2025 Academic Year. In this study, the object of the study is Flipbook-based interactive learning media in grade IV elementary school students.

The instruments used in this study are in the form of validation questionnaires by media experts, material experts, and student response questionnaires. The data analysis techniques used are quantitative and qualitative data. Data analysis techniques by conducting Media Validation of Flipbook Materials Stories About My Region by involving design experts, material experts, media experts, and peers. In the validation above, each indicator has a value weight of 1 to 5. A score of 1 means very bad, a score of 2 means bad, a score of 3 means moderate, a score of 4 means good, and a score of 5 means very good. The results obtained are interpreted based on the Criteria in Percentage.

Tabel 1. Criteria in Percentage

No.	Average Score	Category
1.	0% - 20%	Very Less

2.	21% - 40%	Less
3.	41% - 60%	Enough
4.	61% - 80%	Good
5.	81% - 100%	Excellent

Result and Discussion

Data Description

Instrument validity and reliability test

Validity Test

This research aims to develop FlipBook-based Interactive Media in the Science and Technology subject of News about My Region. To produce a valid instrument, the instrument that will be given to the students will be tested for the validity and reliability of the instrument. This test will be carried out on students as test subjects on students. The data desired in the questionnaire to the use of the product will ask about the Aspects of the Content of the Presentation Material, Ease of Access, Clarity of the Message Conveyed

To find out the students' response to the product design, it will be carried out in 3 stages, namely a small group trial which is categorized as an initial validation aimed at 5 students, a limited trial involving 15 students and a large group trial involving 30 students. Validity is a test tool to determine the accuracy of a measuring tool (Quisioner) that will be given to students, has the measuring tool measured which thing is meant?, with high validity the measuring tool is said to have measured the actual thing (the variable in question, in this case the student's initial knowledge). The results of the validity test using *the product moment* correlation will be compared with the table $N = 55$ in the table with $\alpha = 0.05$ obtained a value of 0.266, the results of the instrument test are as follows:

Table 2. Instrument Validity Test Results

Item	R Count	R table	Information
Item 1	0.640	0.266	Valid
Item 2	0.590		Valid
Item 3	0.822		Valid
Item 4	0.822		Valid
Item 5	0.602		Valid
Item 6	0.670		Valid
Item 7	0.590		Valid
Item 8	0.682		Valid
Item 9	0.702		Valid
Item 10	0.772		Valid
Item 11	0.722		Valid
Item 12	0.600		Valid
Item 13	0.673		Valid
Item 14	0.705		Valid
Item 15	0.762		Valid
Item 16	0.770		Valid
Item 17	0.470		Valid

Item 18	0.641	Valid
Item 19	0.593	Valid
Item 20	0.853	Valid

The results of the instrument test in table 2 above show that at a significant level of 5% of the instruments used in this study, the correlation coefficient value is greater than the *r*-table value of *Product Moment* of 0.266. Thus, it can be said that the instrument in this study is valid or can measure the variables studied by flipflop-based interactive media.

Instrument Reliability Test

Reliability is a tool used to determine the level of reliability of the measuring tool used, the higher the reliability value or the data is reliable, the measuring tool used is also better (reliable) to be used in subsequent research or different places (locations). The method used is with the alpha formula. The results of the data reliability test of the research results are as shown in the following table 3

Table 3. Reliability Test Results

Variable	r	Information
Student Instruments	0.935	Reliable

The results of the reliability test in table 4.2 above show that the value of the reliability coefficient of the variable used, in the variable above is greater than the *r*-table value of 0.6 with the *r*-value of 0.935, then the results of the respondents' answers are reliable, in other words, if the same research is carried out at different times, the respondents will give the same answer.

Design Expert Validation

Table 4. Percentage of Design Experts

No.	Aspects	Number of Items	Aspect Percentage	Percentage of Total Aspects
1	Learning Plan	7	85,7%	88,5%
2	Technology	4	90%	
3	Message design	4	90%	
Total		15		

Table 4 explains that the assessment from design experts reviewed from 3 aspects with a focus on the learning design aspect got a percentage value of 85.7%, for the technology aspect got a percentage of 90%, the message design aspect with a percentage of 85%, the total value of the aspect was obtained a percentage of 88.5% with a very good feasibility category. This means that the percentage of these aspects is said to have significant feasibility, so that the product developed is declared feasible to be used in the trials that will be carried out, namely trials for students in small groups, medium groups, and large groups.

Material Expert Validation

Table 5. Percentage of Material Experts

No.	Aspects	Number of Items	Aspect Percentage	Percentage of Total Aspects
1	Information helps to recognize existing	3	80%	80%

	alternatives and applicable conditions (information use)		
2	Purpose of Flipbook-Based Interactive Media Package Content	3	80%
3	Description of Flipbook-Based Interactive Media Content.	3	80%
4	Image Display	4	80%
Total		13	

Table 5 explains that the assessment from material experts will be reviewed in 4 aspects, namely from the information to help get to know the existing alternatives and applicable conditions (information use), the aspect of the Purpose of the Flipbook-Based Interactive Media Package, the aspect of the Description of the Flipbook-Based Interactive Media Content, and the aspect of Image Display. The results obtained for the Information aspect helped to get to know the existing alternatives and applicable conditions (information use) obtained a percentage of 80%, for the aspect of the Purpose of the Flipbook-Based Interactive Media Package Content obtained a percentage of 80%, for the aspect of Flipbook-Based Interactive Media Content obtained a percentage of 80%, for the aspect of image appearance obtained a percentage of 80% and for the aspect of Image Display obtained a percentage of 80%, with a total percentage of 80% with a good feasibility category, This means that material experts recommend that the product developed can be tested on students in the learning process.

Media Expert Validation

Table 6. Percentage of Media Experts

No.	Aspek	Number of Items	Aspect Percentage	Percentage of Total Aspects
1	Media Aspects	6	80%	80%
2	Linguistic Aspects	3	80%	
3	Aspects of Presentation	2	80%	
4	Aspects of the Effect of Media on Learning Strategies	5	80%	
Total		16		

Table 6 explains that the assessment of media experts will be reviewed in 4 aspects, including Media Aspects, Language Aspects, Presentation Aspects, Media Effect Aspects on Learning Strategies. The results obtained from the table above: for the Media aspect obtained a percentage of 80%, for the Language Aspect a percentage of 80%, the Presentation aspect obtained a percentage of 80%, and for the aspect of the Effect of Media on Learning Strategies obtained a percentage of 80%, a total percentage of 80% with a good feasibility

category, This means that media experts recommend that the product developed can be tested on students in the learning process.

Results of Student Responses to Small Group Trials

Table 7. Percentage of Student Responses

No.	Aspek	Jml.Item	Prosentase Aspek	Prosentase Total Aspek
1	Aspek Isi Materi Sajian	7	69,1%	73 %
2	Kemudahan Akses	4	73 %	
3	Kejelasan Pesan Yang Disampaikan	9	77,1%	
Total		22		

Table 4.7 explains that the assessment from the initial responses from 5 students who responded to 3 aspects of the assessment, namely the Content Aspect of the Presentation Material, Ease of Access, and Clarity of the Message Conveyed. From these aspects in the table, student responses to the Content Aspect of the Presentation Material obtained a percentage of 69.1%, for Ease of Access obtained a percentage of 73%, the Clarity of the Message Conveyed aspect obtained a percentage of 77.1%, with a total aspect of 73% with a good feasibility category.

In this trial there were several improvements in the content of the presentation material and the clarity of the message conveyed, from the results of the response there were several contents or contents that according to students had not been understood and were difficult to understand, so that the product developed was changed or revised in flipflop-based interactive media in certain parts. Subsequently, the results of this revision will be followed up in the next trial, namely a medium group trial after product improvements are made with reference to the results of student responses.

Results of Student Responses in Limited Group Trials

Table 8. Percentage of Limited Groups

No.	Aspects	Number of Items	Aspect Percentage	Prosentase Total Aspek
1	Aspects of the Content of the Presentation Material	7	68,5%	76,2%
2	Ease of Access	4	79,1%	
3	Clarity of the message conveyed	9	81%	
Total		22		

Table 8 explains that the assessment from the initial responses from 15 students who responded to 3 aspects of the assessment, namely the Content Aspect of the Presentation Material, Ease of Access, and Clarity of the Message Conveyed. From these aspects in the table, student responses to the Content Aspect of the Presentation Material obtained a

percentage of 68.5%, for Ease of Access obtained a percentage of 79.1%, the Clarity of the Message Conveyed aspect obtained a percentage of 81%, with a total aspect of 76.2% with a good feasibility category.

In this trial there were several improvements in the content of the presentation material and the clarity of the message conveyed, from the results of the response there were several contents or contents that according to students had not been understood and were difficult to understand, so that the product developed was changed or revised in flipflop-based interactive media in certain parts. Subsequently, the results of this revision will be followed up in the next trial, namely the medium group trial after product improvements are made by referring to the results of student reviews. From the trial in small groups, there was an increase in understanding of the learning video product, meaning that there was an increase in understanding in students which was reviewed from the 3 aspects that were raised. After a small revision was made in the medium or limited group trial with reference to the results of the student response, the last trial was carried out, namely the large group trial.

Results of Student Responses in Large Group Trials

Table 9. Percentage of Large Groups

No.	Aspects	Number of Items	Aspect Percentage	Percentage of Total Aspects
1	Aspects of the Content of the Presentation Material	7	89,3%	89,8 %
2	Ease of Access	4	90,2%	
3	Clarity of the message conveyed	9	88%	
Total		22		

Table 9 explains that the assessment of the initial responses from 30 students who responded to 3 aspects of the assessment, namely the Aspect of the Content of the Presentation Material, Ease of Access, and Clarity of the Message Conveyed. From these aspects in the table, student responses were produced in the Content Aspect of the Presentation Material obtained a percentage of 89.3%, for Ease of Access obtained a percentage of 90.2%, the Clarity of the Message Conveyed aspect obtained a percentage of 88%, with a total aspect of 89.8% with a very good feasibility category, meaning that there was an increase in student response after the revision was made.

This result according to the assessment guidelines in the percentage can be said to be significant in the assessment, this means that the product about developing FlipBook-based Interactive Media in the Science and Technology subject of News about My Region. It is said that it is suitable to be used in the learning process. In the limited time and this research is only to test the feasibility of the product developed, then for field trials involving other schools outside of small group, medium group and large group trials involving schools in the sub-district, district and provincial environment will be carried out later on the next research opportunity.

Discussion

In the current development of educational technology, the use of interactive media is one of the alternatives to improve the quality of learning. Flipbook-based interactive media, which combines visual, text, and sound elements, is expected to increase students' attention and make it easier to understand the subject matter. This study aims to find out whether the use of flipbook-based interactive media can improve student learning achievement.

The use of interactive flipbook media allows students to be more involved in the learning process. Attractive features, such as animations, voices, and easy navigation, make it easier for students to understand the concepts being taught. This is in line with the theory that interesting learning media can increase motivation and information retention. In addition, the variety of media used in flipbooks also supports various learning styles of students, both visual, auditory, and kinesthetic. Interactive flipbook media is designed with features that allow students to interact directly with the learning material, such as choosing answers to questions, exploring concepts through animation, and reflecting on their learning outcomes.

Improving critical thinking skills among students is one of the main focuses in 21st century education. Critical thinking involves the ability to analyze, evaluate, and construct logical arguments. One way to improve this ability is through the use of interesting and interactive learning media. Flipbooks as a learning medium that combines multimedia and interactivity elements have the potential to increase student attractiveness and support the development of their critical thinking skills.

Flipbooks, as an interactive learning medium, have undergone significant development in recent years. Compared to traditional methods, Flipbook is an effective and interesting learning medium with many advantages. With its ability to integrate various multimedia elements, Flipbooks can increase students' motivation to learn as well as understanding concepts.

The development of Flipbook-based media in the context of IPAS learning was developed on the basis of the immediate needs of schools for optimal improvement of the teaching and learning process. The importance of regional story material in learning social science in grade IV elementary school cannot be ignored. Because integrating regional stories in the curriculum, it is hoped that students can have a broader insight into the environment and culture, as well as foster a sense of love and responsibility for the region of origin.

The results of research that discusses FlipBook-based Interactive Media have been carried out a lot and have proven its good impact, such as research conducted by Nuwidiyanti and Sari (2020) showing that the development of Flipbook learning media in science learning grade IV elementary school can improve science literacy. This is in line with the thinking of Putra (2023) A digital flipbook is a software that can convert files into a flash flipping book format. This makes the digital book have the ability to be a flipping flash animation, making it interesting and interactive for its users. Thus, the definition of Flipbook according to experts is an interactive, dynamic, and effective digital learning medium in increasing students' understanding of concepts and learning motivation so that it can increase science literacy.

Other research that supports learning using flipflop-based interactive media such as those conducted by Sari, D. P., & Wulandari, R. A. (2023), Susanto, A. R. (2022), Raden, F. (2025), Prasetyo, E. (2022) concluded that the use of flipbook-based interactive media has a positive influence on students' critical thinking skills. Therefore, it is recommended to consider the use of flipbooks in learning activities to improve students' critical thinking skills at the high school level.

Other research conducted by Pratiwi, R. (2022), Setiawan, B. (2021), and Suryani, D., & Puspita, F. (2020) concluded that flipbook-based interactive media has a positive influence on students' learning motivation. The use of this media can be an effective alternative in increasing students' interest in learning and involvement in the learning process, especially in learning contexts that require a deeper understanding of concepts. Setiawan, A. (2021) found that the use of technology-based Flipbooks helps students understand science concepts more deeply, with positive feedback from teachers and students.

The importance of regional story material in learning social science in grade IV elementary school cannot be ignored. Because integrating regional stories in the curriculum, it is hoped that students can have a broader insight into the environment and culture, as well as foster a sense of love and responsibility for the region of origin. Referring to the description above, the researcher is interested in developing Flipbook media as an interactive media in learning the Science of Science and Technology Story Material About My Region on the grounds that the use of Flipbook media can be used by students at school and at home, because it is packaged in a tool that is very close to students and teachers, namely on android mobile devices. By using an android mobile device, it is hoped that students will more easily access learning materials, especially about Stories about My Region. Based on this, the researcher intends to conduct a research with the title "Development of Interactive Learning Media Based on Flipbook for IPAS Subject Story Material About My Region with the hope of being able to make the learning atmosphere and learning process of IPAS interactive, effective and fun.

Based on the results of the relevant research, the novelty of this research is to focus on the Folklore of the Origin of Jombang and Cultural Preservation. Because folklore is a cultural heritage that needs to be preserved. By developing Flipbook-based learning media, we can introduce folklore to the younger generation in a more interesting and effective way.

Conclusion

This research has succeeded in developing flipflop-based interactive media that is designed to support a more effective and interesting learning process. Based on the results of the feasibility test involving material and media experts, as well as trials on users (students), this media is considered suitable for use in learning. The results of the study show that flipflop-based interactive media can increase students' interest and involvement in the learning process, make it easier to understand the concepts taught, and increase interactivity between students and the material presented.

In addition, this media also provides convenience in terms of managing learning materials that are more dynamic and flexible, so that they can be adjusted to the needs of students. The results of the evaluation in terms of practicality and effectiveness show that the use of this media can improve the quality of learning, because students are more active in participating in learning activities that use this media.

Overall, the development of flipflop-based interactive media has proven to have the potential to support educational goals, especially in creating a more interactive and enjoyable learning atmosphere. Therefore, this media can be widely implemented in various learning contexts to improve student learning outcomes

Recommendation

Based on the results and findings of this study, it is recommended that future research expand the implementation of Flipbook-based interactive learning media to a broader range of subjects and educational levels. In particular, further studies may explore the integration of higher-order thinking skills (HOTS) content, gamification elements, and real-time feedback features to enhance students' cognitive engagement and learning outcomes.

Moreover, it is crucial to investigate the long-term impact of Flipbook-based media on learners' motivation, critical thinking abilities, and independent learning habits. Collaborative studies across multiple schools and regions are also suggested to increase the external validity and generalizability of the findings. However, several challenges may hinder the optimal utilization of this media. These include the limited availability of digital infrastructure, especially in rural or under-resourced schools, as well as the varying levels of digital literacy among both students and educators. Additionally, the absence of consistent teacher training in utilizing digital learning tools may impact the effective integration of Flipbook media into daily teaching practices. Therefore, addressing these barriers—through infrastructural support, digital training programs, and stakeholder engagement—is essential for maximizing the benefits and sustainability of Flipbook-based learning innovations in the classroom setting.

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References

- Aulia, F. (2020). Pemanfaatan Flipbook dalam Pembelajaran Interaktif. *Jurnal Pendidikan dan Teknologi*, 12(1), 45-58
- Halimah, S., & Abadi, N.S. (2023). Pengembangan Flipbook Digital untuk Pembelajaran IPAS Materi Cerita Tentang Daerahku di Kelas IV SD. *Didaktik: Jurnal Ilmiah PGSD STKIP Subang*, 10(1), 1930-1937. DOI: <https://doi.org/10.36989/didaktik.v10i1.2737>
- Hendra, D., Rahmawati, R., & Yulianti, A. (2020). "Media Pembelajaran Interaktif Meningkatkan Keterlibatan Siswa." *Jurnal Ilmiah Pendidikan*.
- Ilmiawan & Arif. (2018). Pengertian Pengembangan Menurut Ilmuwan. Repository UIN SUACID.
- Kettunen, J. (2019). Strategic Development in Higher Education: A Case Study. *Journal of Educational Management*, 33(1), 12-25
- Pratiwi, R. (2022). Pengaruh Media Pembelajaran Interaktif terhadap Motivasi Belajar Siswa di SMA. *Jurnal Pendidikan Teknologi dan Multimedia*, 5(3), 123-130.
- Setiawan, B. (2021). Peningkatan Motivasi Belajar Siswa dengan Menggunakan Media Flipbook. *Jurnal Inovasi Pembelajaran*, 7(2), 45-52.
- Suryani, D., & Puspita, F. (2020). Evaluasi Penggunaan Media Pembelajaran Digital untuk Meningkatkan Keterlibatan Siswa. *Jurnal Teknologi Pendidikan*, 9(1), 98-105.

- Sukmawati, E., & Sari, D. (2021). Pengaruh Media Pembelajaran Interaktif terhadap Prestasi Belajar Siswa. *Jurnal Pendidikan Teknologi dan Kejuruan*, 12(1), 45-56.
- Raden, F. (2025). Pengaruh Media Interaktif Berbasis Flipbook terhadap Kemampuan Berpikir Kritis Siswa di Sekolah Menengah Atas. *Jurnal Pendidikan dan Teknologi*, 12(3), 150-160.
- Rina, S. (2021). Peran Media Interaktif dalam Meningkatkan Keterlibatan Siswa dalam Pembelajaran. Tesis. Universitas Pendidikan Indonesia
- Sari, D. P., & Wulandari, R. A. (2023). Pengaruh Media Interaktif Berbasis Flipbook dalam Pembelajaran. *Jurnal Pendidikan Teknologi*, 10(2), 45-56.
- Susanto, A. R. (2022). Meningkatkan Kemampuan Berpikir Kritis Siswa dengan Media Pembelajaran Digital. *Jurnal Pendidikan Inovatif*, 9(1), 12-24.
- Velinda, Fadia., Kurnianti, E.M., & Hasanah, U. (2024). Analisis Kebutuhan Media Digital Flipbook Interaktif Berbasis Web untuk Meningkatkan Keterampilan Berpikir Kritis Siswa Sekolah Dasar. *Jurnal Basicedu*, 8(2), 1308–1316. DOI: <https://doi.org/10.31004/basicedu.v8i2.7325>