



Development of Kvisoft-Based Flipbook Learning Media on Learning Outcomes in Natural Sciences on the Human Circulatory System

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Abstract: Learning Natural Sciences (IPAS) at SD Negeri 01 Samong faces numerous shortcomings and obstacles, such as a lack of diverse learning resources and suboptimal use of media, which result in low student learning outcomes. This study aims to develop Kvisoft-based flipbook learning media for the Natural Sciences subject, specifically on the human circulatory system for grade V. This type of research is Research and Development (R&D) using the Borg and Gall development model. The population in this study consisted of 57 students, with 12 subjects in a small-scale test in grade VI and 45 subjects in a large-scale test in grade V at SD Negeri 01 Samong. Data collection techniques used include tests (pretest and posttest) and non-test methods such as observation, interviews, questionnaires, and document analysis. The validation results of the Kvisoft-based flipbook media were deemed "very feasible" by media experts with a percentage of 93%, material experts with a percentage of 85% (very feasible category), and language experts with a percentage of 81% (very feasible category). The response from teachers received a 100% rating, and the response from students received a 98% rating, both categorized as "very feasible." Based on the pretest and posttest results, the Kvisoft-based flipbook media was found to be effective in improving student learning outcomes, as evidenced by an increase in the average pretest score from 56.95 to 80.8 in the posttest results. The N-gain test results showed a value of 0.56, indicating a moderate category. From these results, it can be concluded that the Kvisoft-based flipbook media is effective for improving learning outcomes in Natural Sciences on the human circulatory system, and is feasible and practical for use in teaching grade V students at SD Negeri 01 Samong, Pemalang Regency.

Keywords: Kvisoft Flipbook; Natural Sciences; Learning Outcomes

Introduction

The improvement of education is one of the efforts by the Indonesian government to build a high-quality society. According to the Republic of Indonesia Law Number 20 of 2003 on the National Education System, its function is to develop abilities and shape the character of the nation to educate the life of the nation, aiming to enhance the quality and standard of education. To achieve national goals, the government continuously develops the curriculum to improve the quality of education (Sasmita & Darmansyah, 2022;

Wiradarma et al., 2021). One of the subjects included in the Merdeka Curriculum is Natural Sciences (IPAS), as stipulated in the regulation Permendikbudristek Number 7 of 2022 concerning Content Standards.

Science education is not only aimed at acquiring knowledge but also involves students in the process of discovery (Kenala & Wardani, 2021). A similar view is expressed by Sutrisna & Gusnidar (2022), stating that science has four dimensions: scientific attitude, process, product, and application. Science education aims to understand concepts related to the natural environment to develop process skills, acquire problem-solving

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knowledge, and apply concepts in daily life (Kelana & Wardani, 2021; Fitra, 2022).

In the implementation of science education, referring to Permendikbudristek Number 16 of 2022 on Process Standards, the learning process is conducted in an interactive, inspiring, enjoyable, and challenging manner that motivates students to participate actively and provides ample space for initiative, creativity, and independence by their talents and physical and psychological development. Additionally, the implementation of learning should involve the use of integrated, systematic, and effective information and communication technology to adjust to situations and conditions to enhance the efficiency and effectiveness of learning (Marini et al., 2022; Munir et al., 2023).

Based on this, an educator must be able to master and utilize information technology actively, creatively, and innovatively according to the students' situations and conditions during the learning process (Bulkani et al., 2022; Killen et al., 2023). Teachers play a crucial role in shaping the learning experience, so their choice of learning tools will significantly impact their students (Bulkani et al., 2022; Suwandi et al., 2023). Teachers can use technology as a learning tool, such as learning media, particularly in IPAS education. IPAS covers natural and social phenomena that occur in everyday life, requiring students to have extensive knowledge about these phenomena.

However, in reality, there are still issues at the elementary school level, such as teaching that does not align with the Merdeka Curriculum, resulting in teacher-centered learning that makes students passive and uninvolved in discovering and solving learning problems (El-Hamamsy et al., 2023; Mercier, 2024). This situation can occur due to the insufficient use of technology-based learning media in the science teaching and learning process. Another problem is the use of conventional media and teaching materials, such as textbooks and worksheets, which do not attract students' interest in reading.

The above issues were also found by the researcher at SD Negeri 01 Samong in Grade V. Based on observations, the researcher discovered problems such as the lack of innovative learning media at the school, with media being conventional and uninspired, relying solely on textbooks, worksheets (LKS), and the surrounding environment. Although the school has Wi-Fi and LCD projectors, their utilization during the learning process is not maximized. From the questionnaire results, it was found that most students already own personal mobile phones, but their use for learning is not yet optimal. The lack of utilization of learning tools, such as learning media, results in students being less active during lessons. These problems negatively impact student learning outcomes.

Among the students, there are those whose scores are below the Minimum Competency Criteria (KKM) set for the IPAS subject. Data recap shows that out of 45 students, 37 (82%) have not met the KKM, while 8 students (18%) have met the KKM, which is set at 65.

A solution to these problems is the development of creative and innovative learning media based on technology. Learning media play a role in increasing students' interest in learning, which is expected to improve their learning outcomes. This is because learning media can stimulate and direct students' attention, sparking curiosity and enthusiasm for learning (El-Hamamsy et al., 2023; Ow-Yeong et al., 2023). Similar opinions are expressed by Dewi et al. (2020) and Setiyani et al. (2022), stating that learning media can facilitate students' learning. One type of media that can be used to enhance IPAS learning is the flipbook. A flipbook is a collection of pages that can be opened and flipped through like a real book on a monitor screen (Divayana et al., 2019; Jannah & Atmojo, 2022). The flipbook is a digital version of a book, but its presentation is more vibrant due to colorful designs and the sound effect of flipping pages, making it more appealing to students (Yomaki et al., 2023; Yulaikhoh et al., 2023). The benefits of flipbook media in learning include ease of use without complicated steps, as flipbooks are designed to be as simple as possible without compromising quality for users (Rokhim et al., 2023; Suherman et al., 2023).

This flipbook development will be based on Kvisoft. Kvisoft is a platform in the form of an application that provides services for educators to use and create interactive flipbooks that can be used both offline and online (Linda et al., 2020; Oktaviana et al., 2019). Kvisoft's advantages include the ability to provide a flipping effect module, easy creation, the ability to combine module displays with audio or video, and publication in SWF (Shock Wave Flash) or HTML (Hyper Text Markup Language) formats for website publication (Rokhim et al., 2023; Suyasa et al., 2021). From this description, Kvisoft is an application provided for educators to innovate and create attractive flipbooks for student learning, accessible both offline and online. By using Kvisoft to create flipbooks, educators can make the design and appearance of the flipbook more engaging with images, audio, video, and quizzes, thereby increasing students' enthusiasm for learning (Divayana et al., 2019; Islami et al., 2021).

Previous studies have stated that Kvisoft-based flipbook learning media are effective for use at the elementary school level (Linda et al., 2020; Situmorang et al., 2020). Other findings also indicate that Kvisoft-based flipbooks can improve student learning outcomes (Kurniasih et al., 2021; Setiyani et al., 2022). Kvisoft-based flipbook learning media can also provide a good

understanding for students during the learning process (Atikah et al., 2022; Hardiansyah & Mulyadi, 2022).

Based on this background, the researcher conducted a study to develop a Kvisoft-based flipbook to improve student's learning outcomes on the human circulatory system in the IPAS subject for Grade V at SD Negeri 01 Samong. The purpose of this research and development is to test the feasibility, practicality, and effectiveness of the developed product. The development of the Kvisoft-based flipbook media includes materials from various sources, both written, audio, and video.

Method

The type of research used is Research & Development (R&D), which will produce a Kvisoft-based flipbook learning media to improve the learning outcomes of the Natural Sciences (IPAS) subject on the human circulatory system for Grade V students at SD Negeri 01 Samong. In the development of the Kvisoft-based flipbook media, the researcher followed the development procedures outlined by Sugiyono (2019), which consists of 10 steps. However, due to time and budget constraints, the researcher limited the process to the 8th step, which is the usage trial. The steps in this research are: (1) potential and problems; (2) data collection; (3) product design; (4) design validation; (5) design revision; (6) product testing; (7) product revision; (8) usage trial. The research scheme can be seen in Figure 1.

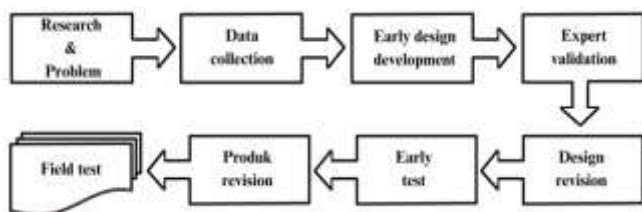


Figure 1. Modified from the Borg & Gall Model

The potential and problem stage is conducted to identify the potential problems at the school by observing, interviewing, and documenting data in the form of learning outcomes of Grade V students at SD Negeri 01 Samong. The next stage is planning the product to be developed to address the identified problems by distributing questionnaires to determine the needs of teachers and students. After analyzing the data from the needs questionnaires, the researcher designs the product in terms of design, materials, and language. The product design will be aligned with the Learning Outcomes (Capaian Pembelajaran, CP) and the target, which is the human circulatory system material

in the IPAS subject for Grade V. Once the product design is completed, design validation is conducted by competent expert validators in the fields of media, content, and language using validation sheets prepared by the researcher in the form of a Likert scale.

The next stage is design revision, where the product evaluated by the expert validators is revised based on their suggestions and feedback, making the product ready for testing. After the product is revised, it is tested on a small scale with 12 students in Grade VI using purposive sampling based on different cognitive abilities. During the product testing phase, learning is conducted using the Kvisoft-based flipbook learning media, and after the lesson, teachers and students are asked to fill out response questionnaires regarding the use of the flipbook media. The responses from teachers and students are analyzed, and any feedback can be used to revise the tested product. The final stage is the usage trial, where the developed product is tested on a larger scale. The researcher conducts the usage trial with 45 students in Grade V for the 2023/2024 academic year to determine the effectiveness of the developed product based on the student's learning outcomes.

The type of data used in this research is primary data. Primary data is data obtained directly during the research, in this case, both qualitative and quantitative data. Qualitative data in this research is obtained from observations, questionnaires, and teacher interviews conducted at SD Negeri 01 Samong. Quantitative data in this research is obtained from the learning outcomes of Grade V students at SD Negeri 01 Samong in the IPAS subject and the results of pretest and posttest assessments.

The research design used is a pre-experimental design with a one-group pretest-posttest model, which includes a pretest before the treatment and a posttest after the treatment. The goal is to determine the impact of using Kvisoft-based flipbook media by comparing conditions before and after the treatment (Sugiyono, 2019). Data collection techniques include tests and non-test methods. The test technique consists of 30 multiple-choice questions, and the non-test techniques include observations, questionnaires, interviews, and document data. To determine the feasibility of the developed product, data analysis was performed based on evaluations from expert validators in the fields of content, media, and language using a Likert scale. To assess the practicality of the product, student and teacher response questionnaires were used with a Guttman scale. To evaluate the effectiveness of the product, data analysis was conducted using gain tests based on the pretest and posttest scores of students in a large-scale trial.

Results and Discussion

Potential and Problems

Based on the preliminary research conducted at SD Negeri 01 Samong, several learning issues were identified. The learning activities had not utilize available technology such as LCD projectors, WiFi facilities, and laptops. During the experimental activities, the media and teaching materials used were still conventional and not multisource. Additionally, the learning outcomes for the Natural Sciences (IPAS) subject for Grade V students at SD Negeri 01 Samong did not meet the school's Minimum Competency Criteria (KKM) of 65. Out of 45 students, only 8 students (18%) achieved scores that met the KKM, while 37 students (82%) scored below the KKM.

Initial Data Collection

The researcher collected data by distributing questionnaires to assess the needs of teachers and students regarding the desired learning devices. The data revealed that the primary learning sources, teacher and student books, did not cover the material extensively. Furthermore, the learning media used by teachers during lessons were not maximized, resulting in a lack of student attention and motivation. The available teaching materials at the school were not multisource and thus did not meet the material needs. Teachers required additional learning tools to broaden students' understanding of the human circulatory system. There is a need for the development of engaging learning media with bright colors, added animations, embedded videos, and game-based quizzes to evaluate students' understanding and increase their interest in learning.

Teachers need a technology-based book, specifically a Kvisoft-based flipbook that includes material and animations, helping students better understand the content. Students require new and interesting learning tools. They agreed to use Kvisoft-based flipbook media with laptops during lessons. Broader material coverage, more animations, learning videos, and game-based quizzes can attract students' interest and enhance their understanding.

Product Design

The Kvisoft-based flipbook is designed in line with the Learning Outcomes and Objectives to be achieved. It is developed considering the characteristics of the students, focusing on text, animations, learning videos, and game-based quizzes. The flipbook is compiled using referenced sources and designed with the help of Canva. Once the material and design are completed, they are imported into Kvisoft for further editing, including adding learning videos, quizzes, and other animations.

The final product is saved in the Kvisoft application, allowing access without an internet connection. The Kvisoft-based flipbook consists of:



Figure 2. Cover



Figure 3. Instructions, Learning Outcomes, and Learning Objectives



Figure 4. Presentation of Material



Figure 5. Presentation Material via Video



Figure 6. Evaluation Quiz Link

The steps in designing the product include (1) preparing materials, layouts, and formats for customized material designs; (2) creating the product design; (3) applying Kvisoft in creating the flipbook.

Validation of Kvisoft-based Flipbook Design

In this stage, the researcher validates the product with expert validators, including a media expert who is a lecturer in the fine arts course of the elementary school teacher education program, a content expert who is a lecturer in the science course of the elementary school teacher education program, and a language expert who is a lecturer in the Indonesian language course of the literature education program, to test the feasibility of the product. After being assessed by the validators, the researcher can revise the developed product based on the feedback and suggestions provided during the validation process.

Table 1. Results of Kvisoft-based Flipbook Validator Assessment

Feasibility Aspect	Validation Index (%)	Information
Language	81	Valid
Page	93	Valid
Material	85	Valid

Table 1 shows the validation results provided by the validators, which are considered valid as they received scores above 80%, falling into the category of very suitable (Arikunto, 2021). The Kvisoft-based flipbook is declared valid overall, covering appearance, content, and language, and thus ready for testing. These results align with research conducted by (Putri et al., 2020), which obtained validation results for Kvisoft-based flipbook development from design validators with a score of 88.48% and content validation teams with a score of 80.52%, categorized as suitable. Another study by (Hiralda & Zulherman, 2023) also yielded similar results with scores of 92% for appearance and 99% for content, categorized as very suitable. Therefore, the developed Kvisoft-based flipbook product is suitable and can be used as additional teaching media in the

Natural Sciences learning process in elementary schools. In a study conducted by (Triwahyuningtyas et al., 2020), scores from content expert validators were 86.98% and scores from appearance expert validators were 84.66%, categorized as suitable with revision requirements.

Design Revision

Revisions are made by the researcher based on suggestions from media, language, and content experts. Suggestions from media experts include completing the cover with subject identity, improving the layout of images and text, changing the background design, and adding the supervisor's profile. Content expert suggestions include adding material on arteriosclerosis circulation disorders. Language expert suggestions include improving language conventions, direct sentence diction, and bibliography writing improvements.



Figure 7. Cover before revision



Figure 8. Cover after revision



Figure 9. Learning achievement before revision



Figure 10. Learning achievement after revision



Figure 14. Material after revision



Figure 11. Content layout before revision

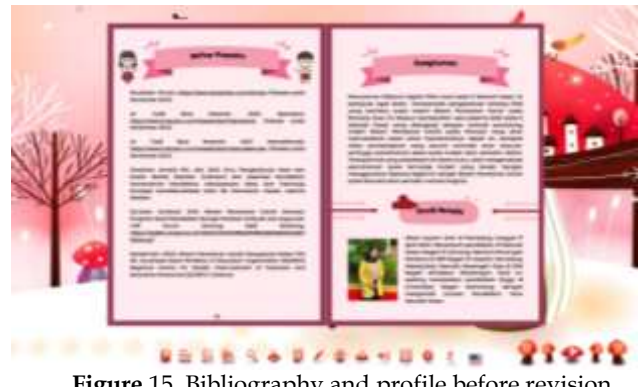


Figure 15. Bibliography and profile before revision



Gambar 12. Content layout after revision



Figure 16. Bibliography and profile after revision



Figure 13. Material before revision

Practicality of Kvisoft-Based Flipbook (Product Trial)

Small-scale product trials were carried out in class VI of SD N 01 Samong using 12 student samples from 52 students. The selection of these 12 students was heterogeneous based on class ranking, namely 4 students in the top rank, 4 students in the middle rank, and 4 students in the bottom rank. The small-scale trial was carried out by researchers accompanied by the class teacher. The product trial began by explaining how to use kvisoft-based flipbook media. After students have finished learning, students and teachers fill out additional student and teacher questionnaires provided by the researcher. Based on the results of the questionnaire recapitulation, student and teacher responses received very good responses with a percentage of responses obtained from teachers of 100%

and a percentage of student responses of 98%. This shows that Kvisoft-based flipbook media has received a very good response.

To test the practicality of Kvisoft-based flipbook media, a response questionnaire was distributed to teachers and students which had 3 aspects, namely material presentation, material content presentation, and language which were then divided into 6 indicators which included media display, animation display, instructions for use, material presentation, presentation. evaluation, and use of language in the product being developed.

Table 2. Results of Teacher and Student Responses to Kvisoft-Based Flipbook Media.

Respondent	Evaluation	Information
Teacher	100%	Very Worthy
Student	94%	Very Worthy

Table 2 shows the results of teacher and student responses to kvisoft-based flipbook media which had very decent results because the score was above 76%. Therefore, kvisoft-based flipbook media can be used practically in learning activities.

Table 3. Results of Teacher and Student Responses to Kvisoft-Based Flipbook Media

Respondent	Evaluation	Information
Teacher	100%	Very Worthy
Student	98%	Very Worthy

Table 3 shows the results of the responses provided by teachers and students to the Kvisoft-based flipbook media, with the results being very suitable as they received scores above 76%, indicating that the Kvisoft-based flipbook media received very positive responses. This is consistent with research conducted by (Reinita & Saralee, 2022), which obtained a practicality percentage of 97% from students and a practicality percentage of 97.5% from teachers. Research by (Aswirna & Ritonga, 2020) also showed practicality percentage scores of 97.64% from teachers and 80.35% from students, indicating it is highly suitable. The results of research conducted by (Maharcika et al., 2021) obtained practicality scores of 86.25% from teachers and 88.13% from students, categorized as very suitable. Based on these studies, it can be concluded that the developed Kvisoft-based flipbook media received high practicality scores. Practicality is assessed by the smooth and independent operation of the Kvisoft-based flipbook by students.

Effectiveness of Kvisoft-based Flipbook Media Usage Trial

A large-scale trial was conducted using Kvisoft-based flipbook media on the topic of the human circulatory system to assess the effectiveness of the product based on student learning outcomes. The research design used pre-experimental with a one-group pretest-posttest design, including a pretest before treatment and a posttest after learning.

Table 4. Results of Normality Test on Pretest and Posttest Effectiveness Trials

Group	Shapiro-Wilk		
	Statistic	df	Sig.
Pretest	.956	45	.090
Posttest	.947	45	.040

Based on Table 4, the normality test calculation data above shows that the sig value is $0.040 < 0.05$ for the pretest value and the sig value is $0.090 > 0.05$ for the posttest value, indicating that the pretest data is not normally distributed while the posttest data is normally distributed.

Table 5. Pretest and Posttest Scores of Students in Product Usage Trials

Test Type	Average	Average Difference
Pretest	56.95	23.85
Posttest	80.80	

Based on Table 5, it is known that the average student learning outcomes show an increase of 23.85 in large-scale product trials. The data shows that there are differences in student learning outcomes in the content of the science and human circulatory system lesson material in class V of SD Negeri 01 Samong before and after using kvisoft-based flipbook media. To determine the criteria for increasing the average pretest and posttest, N-gain analysis was carried out by comparing the difference between SMI and pretest.

Table 6. Average N-Gain Test Results

Average Difference	N-gain	Criteria
23.84	0.56	High

Based on Table 6, the average difference is known to be 23.84 in the large-scale product trial. This indicates that the students of class V in SD Negeri 01 Samong experienced an increase of 0.56 and fell into the moderate criteria. This average increase indicates that the use of Kvisoft-based flipbook media during IPAS learning on the topic of the human circulatory system in class V at SD Negeri 01 Samong successfully improved student learning outcomes. This is consistent with research conducted by (Oktaviana et al., 2019), which

shows that the use of Kvisoft-based flipbook media can improve the learning outcomes of third-grade mathematics students, with an N-gain score category of "moderate". The implementation of Kvisoft-based flipbook media in improving student learning outcomes is also evidenced by research conducted by (Aprilia, 2021), which found an increase in student learning outcomes after using Kvisoft-based flipbook media with a "High" category. Research conducted by (Berlian et al., 2022) also proves that the application of Kvisoft-based flipbook media can improve student learning outcomes with a "moderate" N-gain score category. This indicates that the use of Kvisoft-based flipbook media is appropriate and effective in the learning process because it can improve student learning outcomes.

Conclusion

Based on the research conducted by the researcher, it can be concluded that Kvisoft-based flipbook media can improve the learning outcomes of class V students at SD Negeri 01 Samong in the IPAS subject on the topic of the human circulatory system. This is evidenced by the average validation product assessment score obtained at 86.3% with a highly effective category. The analysis of pretest and posttest scores of students increased with an average improvement of 23.85 and an N-gain of 0.56, falling into the moderate category. This proves that the use of Kvisoft-based flipbook media is appropriate, practical, and effective in improving the learning outcomes of class V students in the IPAS subject on the topic of the human circulatory system.

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Author Contributions

Wilda Jayanti contributed to conducting research, developing products, analyzing data, and writing the article. Novi Setyasto as a supervisor in research activities to article writing.

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Conflicts of Interest

The authors declare no conflicts of interest.

References

- Aprilia, T. (2021). Efektivitas Penggunaan Media Sains Flipbook Berbasis Kontekstual untuk Meningkatkan Kemampuan Berfikir Kritis Siswa. *Jurnal Penelitian Ilmu Pendidikan*, 14(1), 10–21. <https://doi.org/10.21831/jpipfip.v14i1.32059>
- Arikunto, S. (2021). *Dasar-dasar Evaluasi Pendidikan* (3rd ed.). Bumi Aksara.
- Aswirna, P., & Ritonga, A. M. (2020). Development Of Discovery Learning - Based E-Book Teaching Based On Kvisoft Flipbook Maker On Science Literation In MAN 2 Padang Pariam. *Jurnal Studia Islamika*, 17(2), 47–75. <https://doi.org/https://doi.org/10.24239/jsi.v17i2.590.47-79>
- Atikah, N., Gistituati, N., Syarifuddin, H., & Fitria, Y. (2022). E-Module Mathematics by Using Kvisoft Flipbook in Elementary School. *Volume 2468, 2468*, 2021. <https://doi.org/10.1063/5.0102433>
- Berlian, U. ., Zulfikar, R. R. ., & Rosyadah, R. (2022). Penggunaan Media Flip Book Interaktif Berbasis Kvisoft Flipbook Maker Dalam Meningkatkan Penguasaan Konsep Pola Bilangan Pada Pembelajaran Matematika. *Jurnal Riset Pedagogik*, 6. <https://doi.org/https://doi.org/10.20961/jdc.v6i3.63917>
- Bulkani, Fatchurahman, M., Adella, H., & Andi Setiawan, M. (2022). Development of animation learning media based on local wisdom to improve student learning outcomes in elementary schools. *International Journal of Instruction*, 15(1), 55–72. <https://doi.org/10.29333/iji.2022.1514a>
- Dewi, T. H. S., Gunarhadi, & Riyadi. (2020). The effects of learning media based on illustrated story books on understanding mathematical concepts of primary schools. *ACM International Conference Proceeding Series*, 2020. <https://doi.org/10.1145/3452144.3453777>
- Divayana, D. G. H., Santiyadnya, N., Gede Ratnaya, I., Gede Sudirtha, I., Suratmin, & Putu Darmayasa, I. (2019). Digital book for assessment and evaluation courses based on Kvisoft-kelase asynchronous pattern. *Telkomnika (Telecommunication Computing Electronics and Control)*, 17(1), 328–336. <https://doi.org/10.12928/Telkomnika.v17i1.9764>
- El-Hamamsy, L., Bruno, B., Audrin, C., Chevalier, M., Avry, S., Zufferey, J. D., & Mondada, F. (2023). How are primary school computer science curricular reforms contributing to equity? Impact on student learning, perception of the discipline, and gender gaps. *International Journal of STEM Education*, 10(1), 60. <https://doi.org/10.1186/s40594-023-00438-3>
- Hardiansyah, F., & Mulyadi. (2022). Improve Science Learning Outcomes for Elementary School

- Students Through The Development of Flipbook Media. *Jurnal Penelitian Pendidikan IPA*, 8(6), 3069–3077. <https://doi.org/10.29303/jppipa.v8i6.2413>
- Hirald, A., & Zulherman. (2023). A Kvisoft Flipbook Maker-Assisted E-Book to Increase Students' Interest In Elementary Schools. *Jurnal Ilmiah Sekolah Dasar*, 7(3), 444–451. <https://doi.org/10.23887/jisd.v7i3.61193>
- Islami, N., Arif, T. F., Nasir, M., Azhar, S. P. M. T., Fakhruddin, F., & Irawan, D. (2021). Development of E-Module Assisted by Kvisoft Flipbook Maker on Work And Energy Materials for Senior High School Student Class X. *Proceedings of URICET 2021 - Universitas Riau International Conference on Education Technology 2021*, 525–529. <https://doi.org/10.1109/URICET53378.2021.9865898>
- Jannah, D; Atmojo, I. (2022). Media Digital dalam Memberdayakan Kemampuan Berpikir Kritis Abad 21 pada Pembelajaran IPA di Sekolah Dasar. *Jurnal Basic Edu*, 6(1), 1064–1074. <https://doi.org/10.4018/jicte.2005070103>
- Killen, H., Coenraad, M., Byrne, V., Cabrera, L., Mills, K., Ketelhut, D. J., & Plane, J. D. (2023). Teacher Education to Integrate Computational Thinking into Elementary Science: A Design-Based Research Study. *ACM Transactions on Computing Education*, 23(4), 41. <https://doi.org/10.1145/3618115>
- Kurniasih, M. D., Ratna Ermawati, I., Astuti, Fitriana, O., & Wan Achmad, W. F. (2021). The Effect of Character-Based Teaching Flipbook Media on the Results of Calculus Learning. *Proceedings - International Conference on Computer and Information Sciences: Sustaining Tomorrow with Digital Innovation, ICCOINS 2021*, 65–67. <https://doi.org/10.1109/iccoins49721.2021.9497228>
- Linda, R., Nufus, H., & Susilawati. (2020). The implementation of chemistry interactive e-module based on Kvisoft Flipbook Maker to improve student' self-learning. *AIP Conference Proceedings*, 2243, 030011. <https://doi.org/10.1063/5.0002309>
- Maharcika, A. A. ., Suarni, N. ., & Gunamantha, I. . (2021). Pengembangan Modul Elektronik (E-Modul) Berbasis Flipbook Maker Untuk Subtema Pekerjaan Di Sekitarku Kelas Iv Sd/Mi. *PENDASI: Jurnal Pendidikan Dasar Indonesia*, 5(2), 165–174. https://doi.org/10.23887/jurnal_pendas.v5i2.240
- Marini, A., Nafisah, S., Sekaringtyas, T., Safitri, D., Lestari, I., Suntari, Y., Umasih, Sudrajat, A., & Iskandar, R. (2022). Mobile Augmented Reality Learning Media with Metaverse to Improve Student Learning Outcomes in Science Class. *International Journal of Interactive Mobile Technologies*, 16(7), 99–115. <https://doi.org/10.3991/ijim.v16i07.25727>
- Mercier, A. K. (2024). Working within and against school structures: Exploring elementary teachers' agency for science and engineering instruction. *Learning, Culture and Social Interaction*, 44, 100777. <https://doi.org/10.1016/j.lcsi.2023.100777>
- Munir, N. P., Hidayat, N., Lestari, A., & Anas, A. (2023). Algebra-Ethnomathematics Integrated E-Modul for Luwu Culture with Flipbook Maker HTML 5 Assisted Application. *AIP Conference Proceedings*, 2805(1), 090021. <https://doi.org/10.1063/5.0149379>
- Oktaviana, N. V., Nayazik, A., & Rani, H. A. D. (2019). Efektifitas Efektivitas Penerapan E-Modul Berbasis Kvisoft Flipbook Maker Materi Satuan Panjang Kelas 3 SD. *Joined Journal (Journal of Informatics Education)*, 2(1), 32. <https://doi.org/10.31331/joined.v2i1.839>
- Ow-Yeong, Y. K., Yeter, I. H., & Ali, F. (2023). Learning data science in elementary school mathematics: a comparative curriculum analysis. *International Journal of STEM Education*, 10(1), 8. <https://doi.org/10.1186/s40594-023-00397-9>
- Putri, I. P., Yuniasih, N., & Sakdiyah, S. H. (2020). Pengembangan E-Modul Berbasis Kvisoft Flipbook Maker Perjuangan Para Pahlawan di Kelas IV Sekolah Dasar. In *Prosiding Seminar Nasional PGSD UNIKAMA*, 4(1), 523–530. <https://conference.unikama.ac.id/artikel/>
- Reinita, R., & Saralee, A. (2022). Development of Kvisoft Flipbook Maker Media on Integrated Thematic Learning in Fifth Grade of Elementary School. *Journal of Teaching and Learning in Elementary Education (Jtlee)*, 5(2), 136. <https://doi.org/10.33578/jtlee.v5i2.7919>
- Rokhim, A., Saputro, S., & Rahardjo, S. B. (2023). Need Analysis of Integrated Natural Science e-Module Development Using Kvisoft Flipbook Maker. *AIP Conference Proceedings*, 2540, 110020. <https://doi.org/10.1063/5.0106198>
- Sasmita, E., & Darmansyah. (2022). Analisis faktor-faktor penyebab kendala guru dalam menerapkan kurikulum merdeka (studi kasus: SDn 21 Kuto Tuo, Kec. Baso). *Jurnal Pendidikan Dan Konseling*, 4(6), 5545–5549.
- Setiyani, Waluya, S. B., Sukestiyarno, Y. L., & Cahyono, A. N. (2022). E-Module Design Using Kvisoft Flipbook Application Based on Mathematics Creative Thinking Ability for Junior High Schools. *International Journal of Interactive Mobile Technologies*, 16(4), 116–136. <https://doi.org/10.3991/ijim.v16i04.25329>
- Situmorang, M., Yustina, Y., & Syafii, W. (2020). E-Module Development using Kvisoft Flipbook Maker through the Problem Based Learning Model

- to Increase Learning Motivation. *Journal of Educational Sciences*, 4(4), 834. <https://doi.org/10.31258/jes.4.4.p.834-848>
- Suherman, Yarman, & Ahmad, D. (2023). The Development E-Module Based Flipbook Digital for Transformation Geometry Course. *AIP Conference Proceedings*, 2805(1), 090023. <https://doi.org/10.1063/5.0149337>
- Suwandi, Utaminingsih, S., & Darmanto, E. (2023). The effectiveness factorization media based on android on the achievement of students' learning outcomes. *AIP Conference Proceedings*, 2733(1), 030027. <https://doi.org/10.1063/5.0140378>
- Suyasa, P. W. A., Divayana, D. G. H., & Kristiantari, M. R. (2021). The effect of digital books based on kvisoft flipbook maker on student learning outcomes. *Journal of Physics: Conference Series*, 1810(1), 012046. <https://doi.org/10.1088/1742-6596/1810/1/012046>
- Triwahyuningtyas, D., Ningtyas, A. S., & Rahayu, S. (2020). The problem-based learning e-module of planes using Kvisoft Flipbook Maker for elementary school students. *Jurnal Prima Edukasia*, 8(2), 199–208. <https://doi.org/10.21831/jpe.v8i2.34446>
- Wiradarma, K. S., Suarni, N. K., & Renda, N. T. (2021). Analisis Hubungan Minat Belajar terhadap Hasil Belajar Daring IPA Siswa Kelas III Sekolah Dasar. *MIMBAR PGSD Undiksha*, 9(3), 408–415. <https://doi.org/10.23887/JJPGSD.V9I3.39212>
- Yomaki, E. K., Nunaki, J. H., Jeni, J., Mergwar, S. D. I., & Damopolii, I. (2023). Flipbook based on problem-based learning: Its development to bolster student critical thinking skills. *AIP Conference Proceedings*, 2614, 020022. <https://doi.org/10.1063/5.0126212>
- Yulaikhoh, D., Prayitno, H. J., Rahmawati, F. P., & Amalia, N. (2023). Digital literacy-based Flipbook in beam and cube volume learning with units in class v. *AIP Conference Proceedings*, 2727, 020074. <https://doi.org/10.1063/5.0141408>