

Practicality of Adobe Flash-Based Learning Media Science Subjects

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ABSTRAK

Penelitian ini bertujuan untuk menganalisis tingkat kepraktisan media pembelajaran berbasis Adobe Flash pada mata pelajaran Ilmu Pengetahuan Alam dan Sosial (IPAS). Penelitian ini dilaksanakan di SD Negeri 11 Kabila dengan menggunakan sampel penelitian siswa kelas III dan teknik simple random sampling. Jenis penelitian ini termasuk penelitian dan pengembangan (Research and Development/R&D) dengan mengadopsi model pengembangan ADDIE. Pengujian tingkat kepraktisan dilakukan pada tahap implementasi. Hasil penelitian menunjukkan bahwa rata-rata persentase keterlaksanaan media pembelajaran berbasis Adobe Flash pada empat kali pertemuan mencapai 100% dengan kriteria "sangat baik". Sementara itu, sebanyak 93% peserta didik memberikan respons positif terhadap media pembelajaran berbasis Adobe Flash. Dengan demikian, dapat disimpulkan bahwa media pembelajaran berbasis Adobe Flash dapat digunakan dalam pembelajaran mata pelajaran Ilmu Pengetahuan Alam dan Sosial (IPAS).

Kata Kunci: Media; Adobe Flash; Ilmu Pengetahuan Alam dan Sosial

ABSTRACT

The purpose of this study is to analyze the practicality level of Adobe Flash-based learning media in Natural Sciences and Social Sciences subjects. This study was conducted at SD Negeri 11 Kabila, using a third-grade research sample and simple random sampling. This type of research is included in the type of Research and Development (R&D) research by adopting the ADDIE development model. Testing the practicality level was carried out at the implementation stage. The results showed that the average percentage of implementation of Adobe Flash-based learning media showed that four meetings reached 100% with the criteria of "very good". While 93% of students gave a positive response to Adobe Flash-based learning media. It can be concluded that Adobe Flash-based learning media can be used in learning Natural Sciences and Social Sciences subjects.

Keywords: Media, Adobe Flash, Natural and Social Science

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INTRODUCTION

In today's era, technological developments have had a significant impact on various fields of education (Muhson, A. (2010), Zahwa, F. A., & Syafi'i, I. (2022). Teachers are required to have the understanding and knowledge to utilize existing technology to create learning media for delivering lessons in the classroom. Learning media used in the learning process is an important tool in conveying lesson material by teachers to students (Nurrita, T. (2018), Mustaqim, I. (2017) Mukholifah, M., Tisngati, U., & Ardhyantama, V. (2020). Learning media featuring animations is expected to stimulate students to respond quickly and absorb the

learning material presented by the teacher, while also assisting them in acquiring the knowledge and skills they have learned. One of the subjects studied by students in elementary school is Natural and Social Sciences (IPAS). Natural and Social Sciences (IPAS) is a subject that studies nature and its environment and understands the problems that arise. The material in the subject helps students develop cognitive, psychomotor, and affective knowledge to preserve, protect, and develop the potential of nature. However, in reality, the subject of IPAS is often considered a boring field of study that requires strong thinking because of the many theories that must be understood, which can lead to boredom in learning IPS.

The problems faced in learning Natural and Social Sciences are related to the minimal use of media by teachers when conducting learning in class, and the dominant role of teachers in learning activities, so that learning is focused on textbooks and rarely uses learning media but occasionally uses picture media only. In learning activities by choosing interesting media will make students enthusiastic in learning that is appropriate and appropriate can facilitate students' absorption or understanding of the learning delivered by the teacher (Anugrah, et al. (2022). The use of instructional media in the learning process is expected to encourage students to play an active role in the learning process, ensuring that learning is not solely teacher-centered but also student-centered. Furthermore, teachers must understand that the learning methods used must be tailored to the learning material in the teaching and learning process.

The subject of Natural Sciences (IPAS) is one of the interesting subjects to learn because through it students can acquire knowledge, skills, attitudes, sensitivity to the interrelated aspects of nature and society in everyday life. Students' understanding of the material of the IPS subject is the main goal of the learning process. Therefore, it is necessary to utilize interactive multimedia as an innovation in current learning media. The role of media is very important in the learning process so that the material delivered by the teacher is quickly delivered and easily accepted optimally by students. The learning media that can be developed for learning Natural and Social Sciences (IPAS) is by utilizing Adobe Flash. Adobe Flash is an application capable of developing interactive multimedia by presenting images, animations, presentations, games, and even films (Afriani & Fitria, 2021). Adobe Flash is a program or software used as a learning medium in the form of animations, games, and internet enrichment applications that can be viewed, played, and run in Adobe Flash Player. Using Adobe Flash as a learning medium is beneficial for teachers as an aid in preparing teaching materials, making the learning process more effective and enabling students to better understand the concepts presented, especially in social studies. The use of Adobe Flash-based learning media in Social Studies subjects has advantages, including: (1) Adobe Flash learning media is an independent learning media that presents various content, both animations and materials accompanied by images, (2) This learning media can increase motivation in learning Social Sciences (IPS). (3) Learning media makes it easier to understand the lesson material, students relate it directly to everyday life, (4) through animation in learning media, the material being taught can be presented clearly, (5) The menus presented in learning media make it easier to operate.

Meanwhile, the weaknesses of Adobe Flash-based learning media for social studies subjects include: (1) it requires skills in creating learning media, it is very complicated, (2) the creation process is long, (3) not all computers can install the creation software. The development of Adobe Flash-based learning media for the subject of natural resource diversity, utilizing technology, is expected to help students understand Natural and Social Sciences. Furthermore, this learning media can enhance and direct students' attention, thereby fostering

student motivation. The use of Adobe Flash-based learning media in the learning process creates an engaging learning environment and encourages students to be more active in developing their potential.

The aim is to develop learning media for the material on the diversity of natural resources based on Adobe Flash that suits the needs of students, by considering the selection of media that suits the characteristics of elementary school students. This is in accordance with the function of media proposed by Wina Sanjaya (in Rizqi & Aghni, 2018) by using learning media, it is hoped that students will be more motivated in learning. Thus, the development of learning media not only contains artistic elements but also makes it easier for students to learn the subject matter so that it can increase students' enthusiasm for learning.

Therefore, this study aims to examine the practicality of Adobe Flash-based learning media in improving students' knowledge about the diversity of natural resources on Earth. Based on this, the researchers want to develop Adobe Flash-based learning media on the subject of natural resource diversity that can be accessed via mobile phones, computers, and laptops. The media to be developed combines sound and images.

METHODOLOGY

This research falls under Research and Development (R&D) and utilizes the ADDIE model developed by Reiser and Mollenda (Rayanto & Rusmawan, 2020; UntoroSeto & Triayudi, 2023). The quality of the developed products is evaluated based on criteria of validity, practicality, and effectiveness. However, the primary objective of this research is to describe the practicality level of of Adobe Flash-based learning media. This research uses the development of the ADDIE model developed like flow chart of research in Figure 1 by Reiser and Mollenda which consists of analysis, design, development, implementation and evaluation stages.

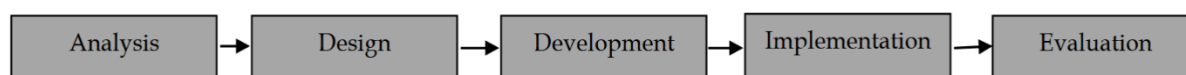


Figure 1. Flow chart of research

Practical testing of the Adobe Flash-based learning media product was conducted during the implementation phase to assess the effectiveness of the learning practices achieved with the developed media. This included assessing the practicality of the teaching module through a learning implementation assessment sheet and a student response questionnaire. The implementation will take place at Kabila 11th State Elementary School in the 2023/2024 academic year. The research subjects were 14 fifth-grade students.

The practicality of Adobe Flash-based learning media was evaluated using a learning implementation activity sheet based on the steps outlined in the learning media for each meeting. The assessment included two activities, one implemented and one not implemented. The percentage of activity implementation for all learning aspects is determined using formula 1.

$$\% \text{ Implementation} = \frac{\text{many steps have been taken}}{\text{planned number of steps}} \times 100\%$$

Learning implementation is assessed by comparing the overall average score results with the established criteria for learning implementation (Purnomo, 2014), as shown in Table 1.

Table 1. Learning Implementation Criteria

Persentase	Criteria
81 – 100	Very Good
61 – 80	Good
41 – 60	Moderate
21 – 40	Less Good

A response questionnaire was administered to students to gauge their reactions to the learning experience using the developed teaching modules. In this study, the response questionnaire utilized a Likert scale, where respondents were assigned scores of 1 (strongly disagree), 2 (disagree), 3 (agree), and 4 (strongly agree).

RESULTS AND DISCUSSION

The effectiveness of the learning process can be evaluated through the implementation sheet, which follows the steps detailed in the learning media, or by examining the student response questionnaire sheet

Results

The implementation of Adobe Flash-based learning media in the Natural Sciences (IPAS) subject, focusing on the diversity of natural resources, was conducted in four meetings, observed by the evaluator (teacher). The percentage data for learning implementation is depicted in Figure 2:

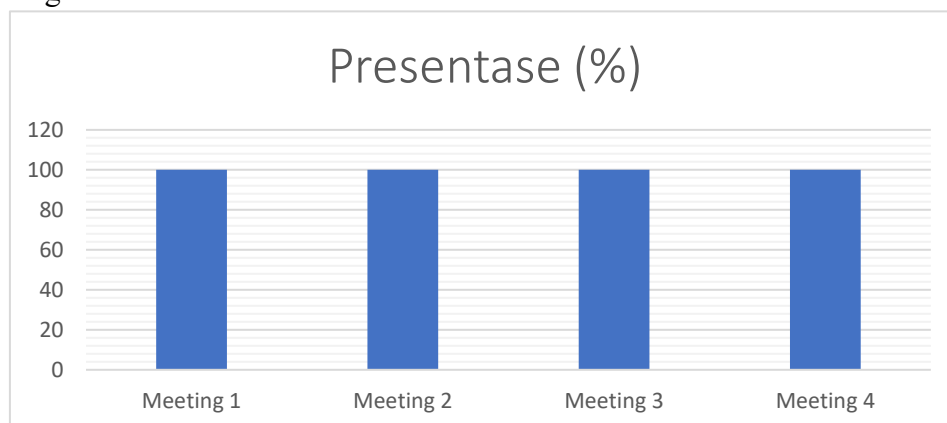


Figure 2. *Percentage diagram of implementation of learning media*

Figure 2 shows that the learning implementation met the "very good" criteria during the four meetings. Figure 2 shows that the learning implementation was very good from the first to fourth meetings, with all learning activities carried out 100%, achieving the "very good" criteria. The observed learning implementation encompassed all learning activity steps outlined in the learning media. The learning activities in this study consisted of four meetings. In the first meeting, 21 learning activity steps were observed, and in the second meeting, 21 more

were observed. Furthermore, in the third meeting, 21 learning activity steps were observed, similarly in the third meeting, 21 learning activity steps were observed.

Student Response Questionnaire

The student response questionnaire aimed to assess student responses to the Adobe Flash-based learning media used in the study. The student response questionnaire sheet contained seven questions, namely: (1) Students enjoyed participating in the learning proses, (2) students enjoyed learning the Adobe Flash-based material on natural resource diversity, (3) students were enthusiastic about learning the Adobe Flash-based material on natural resource diversity, (4) students were active in the learning process using Adobe Flash-based learning media, (5) students found it easy to learn the Adobe Flash-based material on natural resource diversity, (6) Adobe Flash-based learning media was easy to use because it was accompanied by instructions, (7) Adobe Flash-based learning media increased my curiosity to learn the Adobe Flash-based material on natural resource diversity. The student response data is illustrated in Figure 3.

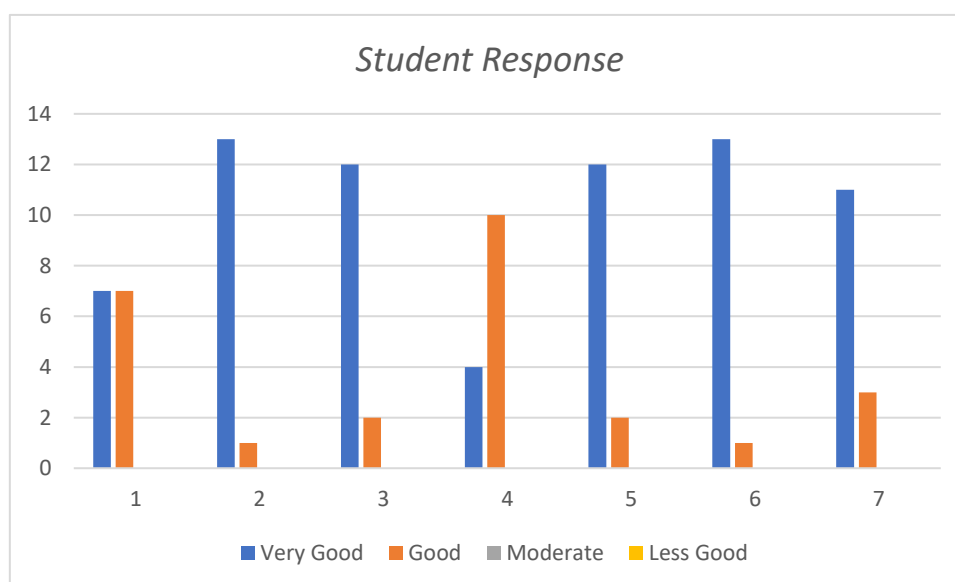


Figure 3. Percentage diagram of student questionnaire responses

In Figure 3, the results of the analysis of the student response questionnaire using the formula that the implementation of Adobe Flash-based learning media on the material on the diversity of natural resources shows that the majority of students (93%) gave a positive response regarding learning with Adobe Flash-based learning media on the material on the diversity of natural resources that had been developed.

Based on positive student responses, the use of Adobe Flash-based learning media on the material on the diversity of natural resources meets the practical criteria for application in classroom learning. Therefore, based on student input on the learning process, it meets the criteria for implementing teaching and learning activities.

Discussion

The development of Adobe Flash-based learning media on the material of natural resource diversity is an innovative effort in utilizing technology to improve the quality of learning in elementary schools. In the current digital era, the use of technology in education has become increasingly important because it can support the learning process to be more interactive, interesting, and effective. Learning media is not only used as a tool for delivering material, but also serves as a means to create meaningful learning experiences for students. Therefore, the development of technology-based learning media is expected to help students better understand Social Studies learning materials, especially topics related to the diversity of natural resources.

The material on natural resource diversity is one of the important topics in Social Studies learning because it introduces students to the various natural resources found in Indonesia and their utilization in daily life. However, in practice, students often experience difficulties in understanding the material if the teacher only uses conventional teaching methods such as lectures and textbooks. Learning that relies solely on verbal explanations tends to make students feel bored and less interested in participating actively in classroom activities. As a result, students' understanding of the material becomes less optimal. Therefore, teachers need to utilize learning media that can visualize concepts in a more concrete and attractive way.

Adobe Flash-based learning media can be an alternative solution to these problems because it is capable of presenting learning materials in the form of animations, images, audio, videos, and interactive quizzes. The combination of these elements can attract students' attention and encourage them to participate more actively in the learning process. Interactive media also provides opportunities for students to learn independently because they can access the material repeatedly according to their learning needs. This is in line with the opinion of Wina Sanjaya (in Rizqi & Aghni, 2018), who states that learning media has the function of increasing students' learning motivation and helping teachers deliver material more effectively.

The use of Adobe Flash in learning media development is expected to create a more enjoyable learning atmosphere. Elementary school students generally have characteristics such as liking colorful visual displays, animations, games, and activities involving direct interaction. Therefore, the selection of Adobe Flash as a medium is considered appropriate because it can accommodate these characteristics through attractive visual and audiovisual presentations. Learning media designed according to students' characteristics will make it easier for them to understand abstract concepts. In learning about natural resource diversity, for example, students can directly see images and animations of renewable and non-renewable natural resources, their distribution, and their benefits for society.

In addition, Adobe Flash-based learning media can improve students' learning motivation. Motivation is an important factor in determining students' success in learning. Students who have high learning motivation tend to be more enthusiastic, active, and serious in participating in the learning process. Conversely, students with low motivation usually show less interest in learning activities. Through interactive media, students are presented with learning experiences that are not monotonous, so they become more enthusiastic and interested in learning the material. Interactive features such as quizzes, games, and animations can also provide challenges that encourage students to continue learning.

The development of learning media should also pay attention to the suitability of the material with the curriculum and learning objectives. In developing Adobe Flash-based

learning media, the material on natural resource diversity must be systematically arranged so that students can understand it gradually. The material should be presented from simple concepts to more complex concepts, accompanied by examples related to students' daily lives. In addition, the use of simple language and attractive visual displays will help students understand the material more easily. Thus, the media not only functions as an entertainment tool but also as an effective educational tool in supporting the achievement of learning objectives.

Furthermore, the development of Adobe Flash-based learning media can support student-centered learning. In modern learning, students are expected to be actively involved in the learning process, while teachers act as facilitators. Interactive learning media allows students to explore material independently, answer quizzes, and interact directly with the media. This condition can encourage students to think critically and develop their learning abilities. Students are not only passive recipients of information but also active participants in the learning process.

The use of technology-based learning media also has a positive impact on teachers. Teachers can more easily explain learning materials because the media provides visualizations and simulations that support explanations. In addition, learning activities become more efficient because the media has been systematically designed according to learning objectives. Teachers can also use the media repeatedly in different classes, making the learning process more practical and effective.

The development of Adobe Flash-based learning media is expected to improve the quality of Social Studies learning in elementary schools. The media can create a more interactive, innovative, and enjoyable learning environment. Through attractive visual and audiovisual presentations, students can better understand the material on natural resource diversity and become more motivated to learn. Therefore, the development of this learning media is not only focused on aesthetic aspects but also on educational functions that can facilitate students in understanding learning materials and increase their enthusiasm for learning.

CONCLUSION

Based on the results of the analysis and description of the practicality of the implementation of Adobe Flash-based learning media, it can overcome problems in learning and learning objectives can be achieved. The results can be concluded that the Adobe Flash-based learning media on the material of natural resource diversity that was developed is categorized as practical because it is seen from the implementation of learning that has the criteria of "very good" and students give a "very good" response to the implementation of Adobe Flash-based learning media on the material of natural resource diversity can increase students' enthusiasm in teaching and learning activities.

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Author Contributions

Sukri Katili: Conceptualization, methodology, writing, review, and editing

REFERENCES

- Afriani, L., & Fitria, Y. (2021). Pengembangan Media Pembelajaran Berbasis Teknologi Berbantuan Adobe Flash Cs6 untuk Pembelajaran pada Masa Pandemi Covid-19. *Edukatif: Jurnal Ilmu Pendidikan*, 3(4), 2141–2148. <https://doi.org/10.31004/edukatif.v3i4.1171>
- Anugrah, A., Istiningsih, S., & Zain, M. I. (2022). Pengembangan Media Pembelajaran Wordwall Berbasis Game Edukasi Pada Mata Pelajaran IPS Kelas VI SDN 48 Cakranegara. *Pedagogia: Jurnal Pendidikan Dasar*, 2(3), 208-216.
- Astiti, K. A., Supu, A., Sukarjita, I. W., & Lantik, V. (2021). Pengembangan bahan ajar ipa terpadu tipe connected berbasis pembelajaran berdiferensiasi pada materi lapisan bumi kelas vii. *Jurnal Pendidikan Dan pelajaran Sains Indonesia (JPPSI)*, 4(2), 112–120. <https://doi.org/10.23887/jppsi.v4i2.38498>
- Atika, I. N., & Malasari, P. N. (2022). Perancangan Media Pembelajaran Menggunakan Adobe Flash Professional Cs6 Berbasis Pendekatan Realistic Mathematics Education. *Aritmatika: Jurnal Riset Pendidikan Matematika*, 3(3).
- Fauzan, A. F. A., Dewi, N. R., & Pamelasari, S. D. (2014). Pengembangan modul IPA terpadu dengan pendekatan kontekstual pada tema cahaya bagi kehidupan. *Unnes Science Education Journal*, 3(1). Retrieved from <https://journal.unnes.ac.id/sju/usej/article/view/2965>
- Fauziah, U. (2015). Desain penelitian pengembangan bahan ajar IPA terpadu tema cahaya dan warna untuk pembelajaran IPA SMP. *Prosiding Simposium Nasional Inovasi Dan Pembelajaran Sains*, 8. Retrieved from <https://shorturl.asia/kVD7d>
- Harimanto, S., Degeng, I. N. S., & Sitompul, C. N. (2015). Pengembangan Bahan Ajar Ilmu Pengatahuan Alam Terpadu Berbasis Kontekstual Untuk Siswa Kelas VIII. *Jurnal Teknologi Pembelajaran Devosi*, 5(2), 184–189. Retrieved from <https://shorturl.asia/iQdWO>
- Marshanawiah, A., Arifin, S., Hakim, F., Anaguna, N., & Muliani. (2023). Pengembangan E-Modul Ajar Konsep Dasar Matematika SD Berbasis Realistic Mathematics Education Berpadu Problem Based Learning dengan Menggunakan Flipbook. *Journal on Education*, 05(03).
- Muhson, A. (2010). Pengembangan media pembelajaran berbasis teknologi informasi. *Jurnal pendidikan akuntansi indonesia*, 8(2).
- Mukholifah, M., Tisngati, U., & Ardhyantama, V. (2020). Mengembangkan media pembelajaran wayang karakter pada pembelajaran tematik. *Jurnal Inovasi Penelitian*, 1(4), 673-682.
- Mustaqim, I. (2017). Pengembangan media pembelajaran berbasis augmented reality. *Jurnal Edukasi Elektro*, 1(1).
- Nurrita, T. (2018). Pengembangan media pembelajaran untuk meningkatkan hasil belajar siswa. *Jurnal misykat*, 3(1), 171-187.
- Oktafiani, D., Nulhakim, L., & Pamungkas Alamsyah, T. (2020). Pengembangan Media Pembelajaran IPA Berbasis Multimedia Interaktif Menggunakan Adobe Flash

Pada Kelas IV. *Jurnal Guru Sekolah Dasar, Universitas Sultan Ageng Tirtayasa, Indonesia*, 8(3), 527–540.

- Pratini, H. S., & Prihatini, E. Y. R. (2020). Pengembangan Media Pembelajaran Bangun Ruang Sisi Datar Berbasis Adobe Flash Professional Cs5. *Delta: Jurnal Ilmiah Pendidikan Matematika*, 8(1), 123. <https://doi.org/10.31941/delta.v8i1.971>
- Purnomo, B. (2014). Pengembangan Bahan Ajar Ilmu Pengetahuan Sosial Terpadu Dengan Pendekatan Kontextual Pada SMP Kelas IX Semester 1. *Jurnal Ilmiah Universitas Batanghari*, 14(2). <https://doi.org/10.33087/jiubj.v14i2.292>
- Rayanto, Y. H., & Rusmawan, P. N. (2020). *Model in teaching and developmental research*. Lembaga Academic & Research Institute.
- Rizqi, & Aghni, I. (2018). Fungsi Dan Jenis Media Pembelajaran Dalam Pembelajaran Akuntansi Functions And Types Of Learning Media In Accounting Learning. In *Jurnal Pendidikan Akuntansi Indonesia: Vol. XVI* (Issue 1).
- UntoroSeto, D., & Triayudi, A. (2023). Analysis of Blended Learning Development in Distance Learning in Variation of Borg \& Gall and Addie Models. *Journal La Multiapp*, 4(6), 231–242. <https://doi.org/10.37899/journallamultiapp.v4i6.973>
- Usmeldi, U., Amini, R., & Asrizal, A. (2021). Pendampingan guru dan peserta didik dalam pembelajaran ipa terpadu di smp. *Abdimas Galuh*, 3(2), 288–297. <https://doi.org/10.25157/ag.v3i2.5791>
- Zahwa, F. A., & Syafi'i, I. (2022). Pemilihan pengembangan media pembelajaran berbasis teknologi informasi. *Equilibrium: Jurnal Penelitian Pendidikan dan Ekonomi*, 19(01), 61-78.