Jurnal Cakrawala Pendas
Vol. 11 No. 1, January 2025
DOI: http://dx.doi.org/10.31949/jcp.v11i1.11868

p-ISSN: 2442-7470
e-ISSN: 2579-4442

DEVELOPMENT OF BEJAMI (BELAJAR EKONOMI) LEARNING MEDIA BASED ON ANDROID APPLICATIONS AS AN INNOVATION IN SOCIAL STUDIES LEARNING IN GRADE V OF ELEMENTARY SCHOOL

Wita Sari[1*], Rana Gustian Nugraha[2], Enjang Yusup Ali[3]
[1,2,3]Universitas Pendidikan Indonesia
[1]wita.sari@upi.edu

Abstract
The purpose of this study was to identify the extent to which the results of the development of BEJAMI (Belajar Ekonomi) learning media on economic activity material in grade V of elementary school. BEJAMI learning media is an android application that has several features including learning materials, learning videos, educational games and learning reflections. The research method used in this material is Research and Development (RnD) and uses the ADDIE model which includes 5 stages, namely analysis, design, development, implementation, and evaluation. The results of this study are that BEJAMI learning media is suitable for use in the learning process by obtaining an average media validation result of 91.5%, an average material validation of 94%, and an average language validation result of 98%. Media trials were carried out in three stages, namely individual trials obtaining results of 92.8%, in small groups of 91.32%, and in large groups of 89.32%. Thus, BEJAMI learning media is considered very good as a learning media used in social studies subjects on economic activity material in everyday life in grade V of elementary school.
Keywords: *Application; BEJAMI; Economy; Intructional Media*

Abstrak
Tujuan dari penelitian ini adalah untuk mengidentifikasi sejauh mana hasil pengembangan media pembelajaran BEJAMI (Belajar Ekonomi) pada materi kegiatan ekonomi di kelas V SD. Media pembelajaran BEJAMI adalah sebuah aplikasi android yang memiliki beberapa fitur diantaranya materi pembelajran, video pembelajaran, permainan edukatif dan refleksi pembelajaran. Metode penelitian yang digunakan pada materi ini adalah *Research and Development* (RnD) dan menggunakan model ADDIE yang meliputi dari 5 tahap yaitu analisis, desain, development, implementasi, dan evaluasi. Hasil dari penelitian ini yaitu media pembelajaran BEJAMI sudah layak digunakan dalam proses pembelajaran dengan mendapatkan hasil validasi media rata-rata sebesar 91,5%, validasi materi rata-rata sebesar 94%, dan hasil validasi bahasa mendapatkan rata-rata sebesar 98%. Uji coba media dilaksanakan sebanyak tiga tahap, yaitu uji coba perorangan mendapatkan hasil sebesar 92,8%, pada kelompok kecil sebesar 91,32%, dan pada kelompok besar sebesar 89,32%. Dengan demikian media pembelajaran BEJAMI dinilai sangat baik sebagai media pembelajaran yang digunakan pada mata pelajaran IPS materi kegiatan ekonomi pada kehidupan sehari-hari di kelas V SD.
Kata Kunci: Aplikasi; BEJAMI; Ekonomi; Media Pembelajaran

Received	: 2024-11-18	Approved	: 2025-01-14
Reviesed	: 2024-12-23	Published	: 2025-01-31

Introduction

Technological advances drive progress in the world of education, including in the use of technology in creating learning media to support the learning process in schools (Khotimah, 2020). Education in the digital era or the current era has significant differences from the previous era, this is because the advancement of technology that dominates everyday life also occurs in

the learning process. Learning in the digital era can be done offline or online, and utilizes technology in the process such as cellphones, laptops, and computers (Rizal, 2023).

According to Ilham (2019), education is an important tool to advance various aspects of human life in Indonesia. Education is an effort made consciously and planned to create a pleasant learning atmosphere and learning process, so that students can actively develop their potential to have spiritual religious strength, self-control skills, good personality, intelligence, noble morals, and skills needed by themselves, society, nation, and state (Pristiwanti, et al., 2022; Makkawaru, 2019).

Along with technological advances, the world of education has also experienced developments in the application of technology. Education is a learning process that involves knowledge, activities, or skills that aim to help individuals obtain information relevant to the world of work (Maritsa, et al., 2021). The importance of education in life is emphasized by Nurkholis (2013), who states that education is a process that supports balance in the development of individuals and society. This view is reinforced by Rahmatiani, who explains that education is an effort made consciously and planned to form intelligent and characterful individuals. In addition, according to Safitri, Yuniati, and Rosita (2022), education plays an important role in supporting technological development. Thus, it can be concluded that education and technology complement each other. Progress in one aspect must be balanced with progress in other aspects in order to create balance. Therefore, education is a crucial element in helping society adapt to the increasingly rapid pace of technological development.

Education and technology have a very close relationship in today's digital era. Rosenberg, an expert in learning development, stated that technology-based education utilizes digital technology in the learning process to increase its efficiency and effectiveness (Zakaria, et al., 2023). Furthermore, Ningsih (2024) explained that digital technology opens up opportunities for wider access to various learning resources, encourages more interactive learning methods, and provides opportunities for educators to adopt more creative and innovative teaching approaches. Based on these studies, it can be concluded that technology plays an important role in increasing efficiency and supporting various aspects of learning.

One of the important elements in the learning process is learning media. Choosing the right media plays a crucial role in supporting the success of learning. According to Nurrita (2018), learning media is a means used to support the teaching and learning process, helping to clarify the message conveyed, so that learning objectives can be achieved effectively and efficiently. According to Arsyad (in Aghni, 2018) learning media is everything including tools, environments and various activities that are adapted to expand knowledge, shape attitudes, or develop skills in each individual. Learning media is now increasingly developing in line with increasingly advanced technological advances, along with technological advances as well as the learning media that is applied. Conventional media and digital media are learning media that are often used to support learning (Yuniarti, et al, 2023).

In accordance with the changing times, learning media has also shifted from conventional media to digital learning media. The learning process that utilizes digital learning media is one of the interesting ways or methods of learning for students that can reduce boredom and create a pleasant learning environment, and encourage interaction between teachers and students (Sari, et al, 2024). Digital learning media is able to foster interest and motivation of students while learning because of its interesting and interactive nature. The many features such as animation, video, and educational games add to the student's learning experience, making the learning environment more enjoyable. These features help reduce boredom in learning and increase student participation during the learning process (A'Yun, et al, 2024). However, there

are still many teachers who prefer to use conventional learning media rather than digital media. This is in line with the opinion of Rahma, Harjono, and Sulistyo (2023), who stated that the use of digital learning media is still minimal because most teachers feel more comfortable using conventional media than digital media.

BEJAMI (Belajar Ekonomi) learning media is an application-based digital learning media that offers an interactive learning platform with structured content on economic material on production, distribution, and consumption in grade V of elementary school. This learning media can be accessed via an Android cellphone with offline network mode so that it can be accessed anywhere without using the internet. The main function of this BEJAMI media is as a supporting media in learning and facilitating students in learning social studies on economic material on production, distribution, and economics in grade V of elementary school.

The BEJAMI application was developed as an innovative solution to overcome the limitations of conventional and other digital learning media. Conventional learning media are often limited to printed materials or less interactive activities, so that students feel bored and have difficulty understanding abstract concepts such as economic activities. Meanwhile, other digital media are often not specifically integrated with the elementary school social studies curriculum, or do not provide adequate features to support students' independent learning. As a digital learning media specifically designed to support elementary school social studies learning, the BEJAMI application offers several advantages, such as interactive learning materials presented in the form of text, images, and interactive animations that make it easier for students to understand economic concepts, learning videos that help students visualize abstract concepts and increase the appeal of learning, educational games designed to test students' understanding in a fun way while increasing students' memory of the material, and learning reflection features that help students and teachers evaluate learning outcomes so that the learning process can be adjusted to students' needs. With these features, the BEJAMI application not only makes it easier for teachers to deliver material, but also increases student involvement in learning, which is ultimately expected to improve students' understanding of social studies material, especially on the topic of economic activities.

As previously explained, the use of digital learning media has an influence on the learning process. One of the subjects at the elementary school level is Social Sciences. Social Sciences or Social Sciences is a science that studies social sciences and humanities in life. However, in reality, learning media in social studies subjects is less interactive. This statement is in line with the research of Hersita, et al, (2020) which found the lack of availability of social studies learning media that only use printed books and globe maps and the absence of media updates, resulting in a lack of student understanding of the material taught by the teacher. In the research of Sukmanasa, et al, (2017) it was found that the media generally used by teachers only use pictures in books, descriptive material presentations and pictures that tend to be monotonous. This causes students to still often have difficulty remembering social studies subject material and students consider social studies learning boring, uninteresting, considered less significant, and quite difficult.

In addition to the use of conventional media, there are several researchers who have developed digital learning media on economics material. In the study of Shavirah et, al (2024) developed E-Comic learning media for economics learning in elementary schools, but the media was still in PDF format so it was less interactive during learning. In the study of Marifah and Amaliyah (2022) also developed a digital media in the form of Google Slides, but there are shortcomings in this learning media, namely the learning media in the form of Google Slides is

still less interactive and is very dependent on the internet network so that the media cannot be used offline.

From the following problems, it can be concluded that the limited interactive learning media in elementary school social studies subjects is a factor in students' lack of understanding of social studies material. So this study is interested in developing BEJAMI learning media based on android applications in social studies subjects on economic activity material in grade V of elementary school. The BEJAMI application is an android application developed to support elementary school social studies learning as a digital learning media in supporting learning specifically on economic material. The application is equipped with learning materials, learning videos, games, and learning reflections. The application was developed to make it easier for teachers in learning social studies on economic material to achieve learning objectives.

This study aims to describe the development of BEJAMI learning media based on Android applications as a learning innovation in grade V of elementary school, to find out the validation results and feasibility of BEJAMI media on economic activity material in grade V of elementary school, and to find out students' responses.

Research Methods

The research method is the steps and plans applied in the research process (Waruwu, 2023). The research method used in this study is using research and development or what is often called the Research and Development (RnD) research method. The RnD research method is a research and development method used in creating a particular product and testing the effectiveness of the product (Sati et al, 2023). The focus of this study is to develop BEJAMI learning media based on the Android application as an innovation in social studies learning in grade V of elementary school. The model used in this study is the ADDIE model which consists of five stages, namely Analysis, Design, Development, Implementation, and Evaluation (Rosmiati, 2019).

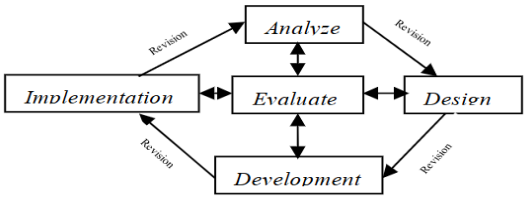

Figure 1. ADDIE model research flow, source (Khairunnisa et al, 2024)

The explanation of the ADDIE stages in this study is as follows:

a. Analysis

This study conducted several analyzes, namely analysis of the learning process, analysis of school facilities, analysis of software and hardware, and analysis of students (Susilawati, 2024).

b. Design

At this stage, the researcher created a product design that would be developed assisted by Canva software. The Canva application is used at the design stage to make it easier for researchers to create initial designs for the learning media to be developed.

c. Development

At this stage, the researcher developed learning media using Smart Apps Creator software. This software is used to create learning applications, where the initial design is converted into an apk file through the processing process in Smart Apps Creator. After the media has been developed, a validation test process is carried out by experts. Media experts assess design indicators, audio-visual presentation, ease of use, and product presentation quality. Material experts assess the appropriateness of the content, language, presentation of material, and the effectiveness of the

learning media. Meanwhile, language experts assess the appropriateness of the language, the quality of the narrator's voice, and the overall presentation of the media. This validation process aims to ensure that the learning media developed meets quality standards and is suitable for use.

d. Implementation

At this stage, the media is tested through three stages of trials, namely individual trials, small group trials, and large group trials to determine the feasibility of the media.

e. Evaluation

At the last stage of this research, the researcher observes aspects that must be improved based on the results of the product trial.

Data collection in this study used individual trials, small group trials, and large group trials. This study was conducted in grade V of elementary schools in Bandung district with 44 students as participants, which can be seen in table 1 below.

Table 1. Research Participants

No.	Stages	Number of Subjects
1.	Individual product trials	5
2.	Small group product trials	12
3.	Large group trials	27
	Total	44 students

The data sources in this study used to determine the response to the feasibility of the media developed in this study were, 1) media expert instruments, 2) material expert instruments, 3) language expert instruments, and 4) student instruments. The data analysis method used was a qualitative and quantitative descriptive approach. Quantitative data was obtained from the results of interviews, feedback or suggestions from validators, responses during product trials, and student observation results. Quantitative data was obtained by calculating the average score obtained. On the validator sheet and questionnaire, it was calculated using a Likert scale using a score of 1-5 which included strongly disagree, disagree, doubtful, agree, and strongly agree (Mawardi, 2019), presented in table 2.

Table 2. Product Assessment Criteria

Score	Criteria
1	Strongly disagree
2	Disagree
3	Doubtful
4	Agree
5	Strongly agree

After the data has been calculated, the results are interpreted based on the validation criteria from the validator listed in table 3.

Table 3. Interpretation of Product Assessment

Validation Criteria	Validation Level
76% - 100%	Very valid, or usable without revision
51% - 75%	Fairly valid, or usable but needs minor revision.
26% - 50 %	Not valid, it is recommended not to use it because it needs major revisions.
0% - 25%	Invalid, should not be used

Results And Discussion

The results of the development of BEJAMI learning media based on the Android application are explained based on the formulation of the problem using the ADDIE model which includes 5 stages.

In the early stages of BEJAMI media development, it began with analyzing needs. This stage begins with the analysis stage which includes analysis of the learning process, analysis of school facilities, analysis of software and hardware, and analysis of students (Susilawati, 2024). The analysis stage is carried out to identify the conditions and needs of the media to be developed and to analyze the results of interviews and observations. Interviews were conducted with grade V students and a grade V elementary school teacher in Bandung Regency. From the results of the interview, information was obtained regarding the problems that stated that there were obstacles to student learning regarding the material on economic activities in everyday life, as well as the absence of learning media to support learning activities on the material. When participating in the learning process, students were less enthusiastic as a result of being less interested or feeling bored during the learning process. After further analysis through the interview process, there were several aspects that influenced the problem, namely that during learning the teacher only used the lecture model or method when learning economic activities. In addition, teachers do not utilize learning media when teaching economic activities where teachers only rely on textbooks in the classroom. These findings are in line with research conducted by Sukmanasa, et al, (2017) who found that students considered social studies learning boring, uninteresting, considered less significant, and quite difficult because the media generally used by teachers only used pictures in books.

In addition to the analysis of the learning process, a study was conducted on solutions to overcome the problems. To overcome these problems, one solution was found, namely by developing BEJAMI (Belajar Ekonomi) learning media based on the Android application. This is also the result of the analysis of school facilities, where school facilities support the use of BEJAMI learning media with the availability of school tablets to access BEJAMI learning media. BEJAMI learning media is an Android application to support learning of economic activities in grade V of elementary school. This application is made as attractive and interactive as possible to attract and help students when learning economic activities. The purpose of developing this media is to help teachers in making learning conditions when learning economic activities more interactive, interesting, and enjoyable. With the existence of interactive learning media, it can increase motivation, interest, and involvement of students in the learning process, so that better and more enjoyable learning is created (Putra et al, 2024)

Analysis of software and hardware needs is a consideration in media development. BEJAMI media uses software such as Canva, Smart Apps Creator (SAC), Capcut, and hardware in the form of laptops and smartphones.

Based on the results of the analysis, the researcher developed BEJAMI learning media based on Android applications to help the learning process on economic activity material in grade V of elementary school with the hope of being able to create interesting and enjoyable learning conditions and provide an understanding of learning economic activities.

The second stage is the design or planning stage. The design stage is to prepare a plan related to how to develop teaching materials (Asmayanti, Cahyani, Idris., 2021). The purpose of this stage is to create a product design that is adjusted to the findings of the analysis and needs in the development of Android applications. Design creation at this stage is assisted by Canva software. This application presents materials regarding economic activities regarding production, distribution, and consumption accompanied by examples of activities and examples

of each activity. In addition, there are also learning videos to provide an understanding of the material, games as practice materials for students to understand the material, and reflections to see student responses after using the material. The following is a display of the BEJAMI media design.

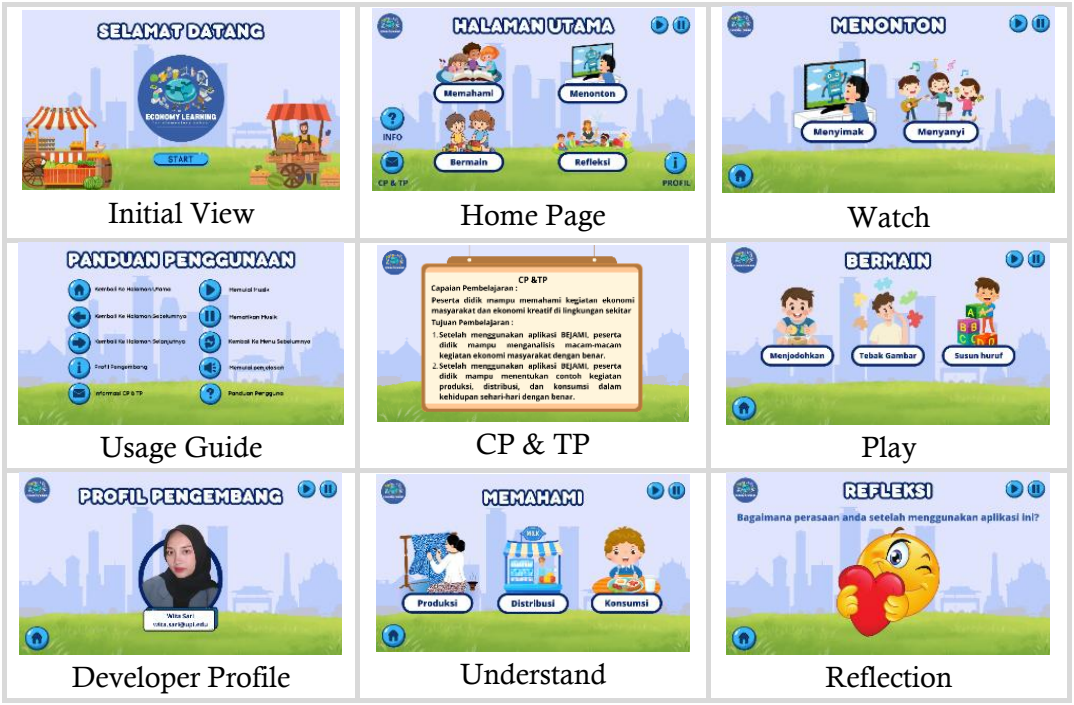

Figure 2. BEJAMI Application Design

After the design stage, the next step is to the development stage. The development process begins by downloading the design on Canva, preparing the learning video link, and preparing the sound to be used, after all is collected it will be entered into the Smart Apps Creator (SAC) software. The SAC software was chosen because it helps researchers to create application learning media easily. The process of moving the design into SAC is converted into an .apk file, explained in the image below.

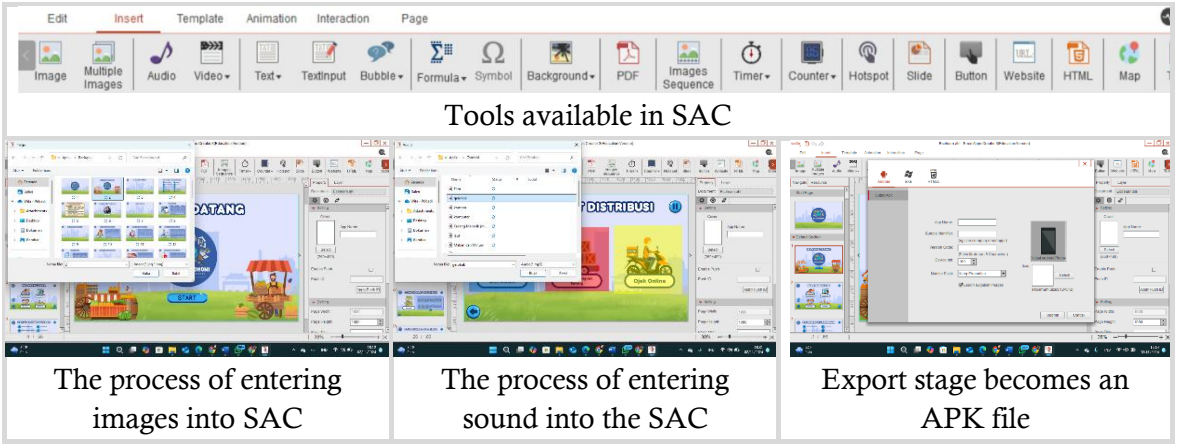

Figure 3. Application Creation

After the application is complete, the next step is the validation stage which is obtained through validation results obtained from 2 media experts, 2 material experts, and 2 language experts. The results of the media feasibility test questionnaire recapitulation are described in Table 4 below:

Table 4. Recapitulation of Validation Results

Validator	Percentage
Media Expert I	94%
Media Expert II	89%
Material Expert I	89%
Materials Expert II	100%
Linguist	100%
Linguist II	96%
Average	94,6%

The average result of the validation assessment from the validator on the BEJAMI media was 94.6%, indicating that the BEJAMI media is suitable for use in the learning process.

In the implementation process, the media was tested on 44 fifth grade students divided into 3 trials, namely 5 students as individual trials, 12 students as small group trials and 27 students as large groups. During the trial process, students were given a questionnaire to assess the BEJAMI learning media in order to level the usefulness of the product. In the individual trial conducted on 5 fifth grade elementary school students in Bandung Regency, the following results were obtained:

Table 5. Recapitulation of Individual Trial Responses

Aspect	Percentage (%)	Information
Understanding the Material	88%	Very good
Motivation and Enjoyment in Learning	92%	Very good
Design and Accessibility	92,8%	Very good
Average	90,93%	Very good

Based on the recapitulation table of individual trial results, the BEJAMI learning media received a very positive response with an average percentage of 90.92%, which is included in the "Very Good" category. This media is considered to help understand the material, increase motivation and enjoyment in learning, and have an appropriate and easily accessible design. These results indicate that the BEJAMI application is suitable for use in the learning process.

Table 6. Recapitulation of Individual Student Observation Results

Aspect	Percentage (%)	Information
Suitability to Learning Objectives	90%	Very good
Supports Learning Content	100%	Very good
Media Accessibility	93,3%	Very good
Media Practicality	100%	Very good
Media Suitability	80%	Good
Average	92,6%	Very good

Based on Table 6, the results of the individual recapitulation show that BEJAMI media is considered very good in supporting the learning process, with an average score of 92.6%. This media is proven to be relevant to learning objectives, supports the content of the material, is easy to access, and is very practical to use. However, the aspect of media suitability, which scored 80%, still has room for improvement. Overall, BEJAMI media is effective in supporting learning and can be further optimized for better results.

Table 7. Recapitulation of Small Group Tests

Aspect	Percentage (%)	Information
Understanding the Material	90%	Very good
Motivation and Enjoyment in Learning	86,2%	Very good
Design and Accessibility	88,3%	Very good
Average	88,2%	Very good

Based on the recapitulation table of the results of the small group trial, the BEJAMI learning media received a very positive response with an average percentage of 88.2%, which is included in the "Very Good" category. This media is considered effective in helping students understand the material, increasing motivation and enjoyment of learning, and has an appropriate and easily accessible design. Overall, these results indicate that the BEJAMI application is suitable for use in the learning process.

Table 8. Recapitulation of Observation Results of Small Group Students

Aspect	Percentage (%)	Information
Suitability to Learning Objectives	90%	Very good
Supports Learning Content	93,3%	Very good
Media Accessibility	93,3%	Very good
Media Practicality	100%	Very good
Media Suitability	80%	Good
Average	91,32%	Very good

Based on Table 8, the results of student observations of the learning media show a very good assessment, with an average score of 91.32%, which is included in the "Very Good" category. This media is considered relevant to learning objectives, supports the content of the material, is easy to access, practical to use, and is quite appropriate to learning needs. However, the Media Suitability aspect still has room for improvement. Overall, this learning media is considered optimal in supporting the learning process of students.

Table 9. Recapitulation of Large Group Tests

Aspect	Percentage (%)	Information
Understanding the Material	89,6%	Very good
Motivation and Enjoyment in Learning	88,1%	Very good
Design and Accessibility	88%	Very good
Average	88,5%	Very good

Based on the recapitulation table of the results of the large group trial, the BEJAMI learning media received a very positive response. With an average percentage of 88.5%, this media is included in the "Very Good" category. Aspects such as understanding the material, motivation and enjoyment in learning, and design and accessibility show that this application is effective, fun, and easy to use. These results indicate that the BEJAMI application is worthy of use in the learning process.

Table 10. Recapitulation of Observation Results of Large Group Students

Aspect	Percentage (%)	Information
Suitability to Learning Objectives	90%	Very good
Supports Learning Content	93,3%	Very good
Media Accessibility	93,3%	Very good
Media Practicality	90%	Very good
Media Suitability	80%	Good
Average	91,58%	Very good

Based on Table 10, the results of student observations show that this learning media is considered very good in supporting the learning process. Overall, the media obtained an average score of 91.58%, which is included in the "Very Good" category. This media is proven to be relevant to learning objectives, supports the content of the material, is easily accessible, practical, and has good suitability with learning needs. However, the aspect of media suitability still has room for improvement, with a score in the "Good" category. These results indicate that the developed learning media is effective in meeting the learning needs of students.

The final stage in this study is evaluation. After the implementation of BEJAMI learning media to students, there are several notes that must be considered as evaluation materials for BEJAMI learning media obtained from student questionnaires, observations, and testimonies from students. First, BEJAMI media can be implemented in large groups but teacher assertiveness is needed so that learning conditions remain conducive and run effectively and efficiently. Second, according to the responses or testimonies of students who stated that they wanted to add games to BEJAMI media. Finally, in large groups the available text is less legible but can be assisted by the voice explanation feature.

Conclusion

The development of BEJAMI learning media using the R&D research method with the ADDIE model produces media that is suitable for use and has been validated by 6 experts. The validation results obtained an average value of 94.6% indicating that BEJAMI media is suitable for use in the learning process. At the implementation stage, three trials were carried out, namely individual trials obtaining an average result of 92.8%, small groups of 91.32%, and large groups of 89.32%. This value illustrates that BEJAMI media is very good for use in learning. Thus, BEJAMI learning media is considered very good as a learning media used in the material of economic activities in everyday life in grade V of elementary school. Through interactive experiences, BEJAMI learning media contributes to motivating students and making it easier for teachers to deliver material visually, especially in the material of economic activities in everyday life. This media also has the potential to be applied more widely, although trials are needed in various regions and the development of offline versions to reach areas with limited internet. With teacher training and adjustments to local needs, BEJAMI can be an effective technology-based learning media in various conditions.

References

Aghni, R. I. (2018). Fungsi Dan Jenis Media Pembelajaran Dalam Pembelajaran Akuntansi. *Jurnal Pendidikan Akuntansi Indonesia*, *16*(1). https://doi.org/10.21831/jpai.v16i1.20173

Asmayanti, A., Cahyani, I., & Idris, N. S. (2020). Model ADDIE untuk Pengembangan Bahan Ajar Menulis Teks Eksplanasi Berbasis Pengalaman. *Seminar Internasional Riksa Bahasa*

XIV, 259–267. http://proceedings.upi.edu/index.php/riksabahasa

Charismana, D. S., Retnawati, H., & Dhewantoro, H. N. S. (2022). Motivasi Belajar Dan Prestasi Belajar Pada Mata Pelajaran Ppkn Di Indonesia: Kajian Analisis Meta. *Bhineka Tunggal Ika: Kajian Teori Dan Praktik Pendidikan PKn*, *9*(2), 99–113. https://doi.org/10.36706/jbti.v9i2.18333

Dodi, I. (2019). Menggagas Pendidikan Nilai dalam Sistem Pendidikan Nasional. *Didaktika: Jurnal Kependidikan*, *8*(3), 109–122. https://jurnaldidaktika.org/contents/article/view/73

Hersita, A. F., Kusdiana, A., Respati, R., & Respati, R. (2020). Pengembangan Media Infografis sebagai Media Penunjang Pembelajaran IPS di SD. *PEDADIDAKTIKA: Jurnal Ilmiah Pendidikan Guru Sekolah Dasar*, *7*(4), 192–198. https://doi.org/10.17509/pedadidaktika.v7i4.30132

Khotimah, U. (2019). Pengaruh Teknologi terhadap Pembelajaran Abad ke 21. *Universitas Lambung Mangkurat*, 1–26.

Makkawaru, M. (2019). Pentingnya Pendidikan Bagi Kehidupan dan Pendidikan Karakter dalam Dunia Pendidikan. *Jurnal Konsepsi*, *8*(3), 1–4.

Marifah, S., & Amaliyah, N. (2022). Pengembangan Media Pembelajaran Interaktif Berbasis Google Slide pada Mata Pelajaran IPS Sekolah Dasar. *Jurnal Basicedu*, *6*(4), 7563–7572. https://doi.org/10.31004/basicedu.v6i4.3596

Maritsa, A., Hanifah Salsabila, U., Wafiq, M., Rahma Anindya, P., & Azhar Ma'shum, M. (2021). Pengaruh Teknologi Dalam Dunia Pendidikan. *Al-Mutharahah: Jurnal Penelitian Dan Kajian Sosial Keagamaan*, *18*(2), 91–100. https://doi.org/10.46781/al-mutharahah.v18i2.303

Mawardi, M. (2019). Rambu-rambu Penyusunan Skala Sikap Model Likert untuk Mengukur Sikap Siswa. *Scholaria: Jurnal Pendidikan Dan Kebudayaan*, *9*(3), 292–304. https://doi.org/10.24246/j.js.2019.v9.i3.p292-304

Mulatsih, B. (2021). Pengembangan Aplikasi Wayang Kuis Edukatif dalam Penguatan Karakter Kebhinekaan Peserta Didik. *Ideguru : Jurnal Karya Ilmiah*, *6*(1), 1–10.

N A`Yun, N. Afifah, S. W. et al. (2024). Optimalkan Kurikulum Merdeka; Peran Media Pembelajaran Digital pada Pendidikan Sekolah Dasar. *Jurnal Ilmiah Pendidikan Dasar*, *09*.

Ningsih, E. P. (2024). Implementasi Teknologi Digital dalam Pendidikan: Manfaat dan Hambatan. *EduTech Journal*, *1*(1), 1–8. https://doi.org/10.62872/qbp1fg61

Nurkholis. (2013). *Pendidikan Dalam Upaya Memajukan Teknologi Oleh: Nurkholis Doktor Ilmu Pendidikan, Alumnus Universitas Negeri Jakarta Dosen Luar Biasa Jurusan Tarbiyah STAIN Purwokerto*. *1*(1), 24–44.

Putra, D. E., Hanifah, N., & Ismail, A. (2024). Pengembangan Media Bomb-Bomb Car pada Materi ASEAN Kelas VI SD. *Ideguru: Jurnal Karya Ilmiah Guru*, *9*(2), 507–515. https://doi.org/10.51169/ideguru.v9i2.884

Rahma, F. A., Harjono, H. S., & Sulistyo, U. (2023). Problematika Pemanfaatan Media Pembelajaran Berbasis Digital. *Jurnal Basicedu*, *7*(1), 603–611. https://doi.org/10.31004/basicedu.v7i1.4653

Rosmiati, M. (2019). Animasi Interaktif Sebagai Media Pembelajaran Bahasa Inggris Menggunakan Metode ADDIE. *Paradigma - Jurnal Komputer Dan Informatika*, *21*(2), 261–268. https://doi.org/10.31294/p.v21i2.6019

Safitri, A. O., Yunianti, V. D., & Rostika, D. (2022). Upaya Peningkatan Pendidikan Berkualitas di Indonesia: Analisis Pencapaian Sustainable Development Goals (SDGs). *Jurnal Basicedu*, *6*(4), 7096–7106. https://doi.org/10.31004/basicedu.v6i4.3296

Saiful Rizal, A. (2023). Inovasi Pembelajaran untuk Meningkatkan Hasil Belajar Siswa di Era Digital. *Attanwir : Jurnal Keislaman Dan Pendidikan*, *14*(1), 11–28. https://doi.org/10.53915/jurnalkeislamandanpendidikan.v14i1.329

Sari, M., Elvira, D. N., Aprilia, N., Dwi R, S. F., & Aurelita M, N. (2024). Media Pembelajaran Berbasis Digital Untuk Meningkatkan Minat Belajar Pada Mata Pelajaran Bahasa Indonesia. *Warta Dharmawangsa*, *18*(1), 205–218. https://doi.org/10.46576/wdw.v18i1.4266

Sati, A. T., Tri Aditya, D., Azzahra, N. L., & Djutalov, R. (2023). Perancangan Sistem Informasi Keuangan Peninggaran Raya (OPERA) Berbasis Dekstop Dengan Java SE & Mysql menggunakan Metode Research and Development (RND). *JORAPI : Journal of Research and Publication Innovation*, *1*(2), 196–200. https://jurnal.portalpublikasi.id/index.php/JORAPI/index

Sugiantara, I. P., Listarni, N. M., & Pratama, K. (2024). Urgensi Pengembangan Media Pembelajaran Lingkaran Untuk Meningkatkan Hasil Belajar Siswa. *Jurnal Literasi Digital*, *4*(1), 73–80. https://doi.org/10.54065/jld.4.1.2024.448

Susilawati, A., Sujana, A., & Ali, E. Y. (2024). Pengembangan Pop-up Book Digital untuk Meningkatkan Pemahaman Konsep Kelas IV Materi Bagian Tumbuhan dan Fungsinya. *Ideguru : Jurnal Karya Ilmiah*, *10*(1), 158–164.

Ujud, S., Nur, T. D., Yusuf, Y., Saibi, N., & Ramli, M. R. (2023). Penerapan Model Pembelajaran Discovery Learning Untuk Meningkatkan Hasil Belajar Siswa Sma Negeri 10 Kota Ternate Kelas X Pada Materi Pencemaran Lingkungan. *Jurnal Bioedukasi*, *6*(2), 337–347. https://doi.org/10.33387/bioedu.v6i2.7305

Y. Nur Shavirah, P. Selfi Cholifah, Y. K. B. (2024). Pengembangan Media E-Comic Materi Usaha Ekonomi Perseorangankelas V Sekolah Dasar Yunita. *Jurnal Pembelajaran, Bimbingan, Dan Pengelolaan Pendidikan*, *4*(12). https://doi.org/10.17977/um065.v4.i12.2024.18

Yuniarti, A., Titin, T., Safarini, F., Rahmadia, I., & Putri, S. (2023). Media Konvensional Dan Media Digital Dalam Pembelajaran. *JUTECH : Journal Education and Technology*, *4*(2), 84–95. https://doi.org/10.31932/jutech.v4i2.2920

Zakaria, Sukomardojo, T., Sugiyem, Razali, G., & Iskandar. (2023). Menyiapkan Siswa untuk Karir Masa Depan Melalui Pendidikan Berbasis Teknologi : Meninjau Peran Penting Kecerdasan Buatan. *Journal on Education*, *5*(04), 14141–14155. http://jonedu.org/index.php/joe