Social Science Learning through Google Sites and Smart Box in Junior High Schools

Fadhil Akbar[1*], Imam Suprayogo[2], M. Fahim Tharaba[3], Bima Fandi Asy'arie[4], Weni Mariyana[5] (iD)

[1,2,3,4] Universitas Islam Negeri Maulana Malik Ibrahim Malang, Malang, Indonesia

[5] Universitas Negeri Malang, Malang, Indonesia

A B S T R A K

Guru IPS kurang menggunakan pendekatan metode yang tepat. Kegiatan pembelajaran juga kurang yang memanfaatkan teknologi, sehingga siswa kesulitan dalam belajar. berdasarkan hal tersebut, tujuan penelitian ini yaitu untuk mengembangkan pembelajaran IPS melalui google sites *dan* smart box *sebagai media pembelajaran. Penelitian ini menggunakan jenis penelitian dan pengembangan (R&D), dengan menggunakan model pengembangan ADDIE. Subjek penelitian yaitu ahli materi, ahli desain pembelajaran, dan ahli media pembelajaran. subjek uji coba penelitian yaitu siswa SMP Negeri 12 Malang yang berjumlah 33 siswa. Metode yang digunakan untuk mengumpulkan data yaitu wawancara, kuesioner, observasi, tes, dan dokumentasi. Instrumen yang digunakan untuk mengumpulkan data yaitu lembar kuesioner dan soal tes. Teknik yang digunakan untuk menganalisis data yaitu analisis deskriptif kualitatif dan kuantitatif. Hasil penelitian menunjukkan bahwa, Pertama, desain produk pengembangan pembelajaran IPS melalui aplikasi pendukung seperti* (Canva, Capcut, Wordwall, dan Google sites). *Penilaian validator ahli materi sebesar 83,0%. Penilaian validator ahli desain pembelajaran sebesar 83,0%. Penilaian validator ahli media pembelajaran sebesar 83,3%. Ketiga, perolehan kepraktisan desain produk pembelajaran IPS setelah diimplementasikan kepada siswa memperoleh nilai tertinggi sebesar 62,0%, dengan kategori "Sangat Layak". Respon guru mendapat persantase 4,7% "Sangat Praktis". Disimpulkan pengembangan pembelajaran IPS melalui* google sites *dan* smart box *terbukti sangat efektif dan berjalan secara optimal. Implikasi penelitian ini yaitu pembelajaran IPS melalui* google sites *dan* smart box *dapat digunakan untuk membantu siswa belajar.*

A B S T R A C T

Social studies teachers need to use the correct method approach. Learning activities also do not utilize technology, so students need help learning. Based on this, this study aims to develop social studies learning through Google sites and bright boxes as learning media. This study uses the research and development (R&D) type, using the ADDIE development model. The study subjects were material experts, learning design experts, and learning media experts. The subjects of the trial study were 33 students of SMP Negeri 12 Malang. The methods used to collect data were interviews, questionnaires, observations, tests, and documentation. The instruments used to collect data were questionnaire sheets and test questions. The techniques used to analyze the data were qualitative and quantitative descriptive analysis. The study's results showed that, First, the design of social studies learning development products through supporting applications such as (Canva, Capcut, Wordwall, and Google Sites). The assessment of the material expert validator was 83.0%. The evaluation of the learning design expert validator was 83.0%. The assessment of the learning media expert validator was 83.3%. Third, the practicality of the design of the IPS learning product after being implemented in students obtained the highest value of 62.0%, with the category of Very Appropriate. The teacher's response received a percentage of 4.7%, Very Practical. It was concluded that developing IPS learning through Google Sites and Smart Boxes was proven very effective and running optimally. This research implies that social studies learning through google sites and smart boxes can be used to help students learn.

*Corresponding author
E-mail addresses: fadhilstillah@gmail.com (Fadhil Akbar)

1. INTRODUCTION

Digital media has become a tool that has various functions and is relevant to overcoming educational problems in the modern era. Digital media facilitates access and helps students understand and apply the subject matter delivered by teachers in daily life (Banks et al., 2019; Degner et al., 2022). In this context, considering that learning is increasingly mediated by digital technology, students' learning experience with digital technology is increasingly important because it can affect their learning success (Kwangmuang et al., 2021; Rohles et al., 2022). Teachers' role is to support students' development to gain broader knowledge. Therefore, teachers' strategies for creating learning innovations will allow students to solve various problems, especially in the classroom (Banks et al., 2019; Degner et al., 2022; Maynard et al., 2023). Using technology, teachers can make lessons more engaging and interactive, and students can easily access lessons that allow learning to be more optimal (Brändle et al., 2023).

Recently, the phenomenon that has occurred in education has been criticized for focusing too narrowly on technology development for students. As a result, teachers who use less digital media and contribute less to the development of students acquire extensive knowledge and skills (Parmiti et al., 2023; Roemintoyo & Budiarto, 2021; Ruiz-Bañuls et al., 2021). The fact that occurred shows that social studies teachers do not use the right method approach. The learning process of activities is often lonely and less interactive with learning activities that utilize technology (Hasanah et al., 2021; Maharani Zan & Mardian, 2022). In conditions like this, teachers are often hesitant to implement the choice of learning models that require student approval. This is common even though the learning method is limited to a few options (Schneider et al., 2018). Technological developments and easily accessible information can affect how students learn, and this form of change must be considered in depth to solve existing problems (Kwangmuang et al., 2021; Parmiti et al., 2023). In addition, various risks and high competition at the global level can put pressure on the world of education to produce learning innovations that must utilize technology as a learning tool for students (Bašić, 2021).

Based on this, the solution offered is to use digital learning media specifically designed for learning, especially social studies learning. One of the main objectives of social studies learning is for students to understand and have the ability to make the right decisions about the social principles that make up complex societies, both at the national and global levels (Aryawan et al., 2018; Mariyana et al., 2024). Therefore, appropriate media is needed to help students understand social principles. One of the learning media that can be used through Google Sites and Smart Box. Interactive learning media created through the Google website, such as materials, supporting images, videos, and practice questions to measure students' level of understanding, can positively contribute to students learning. Google Sites is a learning media tool that teachers can use as a method to make the teaching materials delivered more interesting and interactive (Efendi & Insani, 2024; Putri et al., 2023; Saputra et al., 2023; Shobri & Rifqi, 2023). On the other hand, web-based learning implemented through Google Sites aims to increase students' interest, ultimately affecting their learning outcomes. In addition, the use of smart *box* media can also help students learn social studies.

Smart box media is a learning tool in the form of a small box containing lesson materials presented to students (Failasufah & Setyasto, 2023; Yuliastri et al., 2021). Smart box media is a learning media tool to introduce materials to students. Smart boxes are made of environmentally friendly materials, such as used cardboard that is packaged to look attractive. This medium allows students to learn, explore, and discover their knowledge. In addition, this media is considered important to solve teachers' problems in choosing interesting, easy-to-use, and suitable media for the social studies learning process (Tirtoni et al., 2019). One of the benefits of using smart box media is that it can improve the student learning process. Teachers can use this medium to create a better learning atmosphere and increase students' concentration in the classroom (Panca Wahyu Kusumaningrum et al., 2021). Smart box media includes reading materials, learning videos, and questions that appear after scanning *barcodes*. This choice of media seems relevant to the problems teachers have identified so far. Using smart box media can increase students' learning motivation, which shows that they are more effective in the learning process (Burns, 2026; Tirtoni et al., 2019).

Some of the relevant studies that have been conducted have different differences and characteristics. The three trends of previous research are: First, through Google Sites, teachers can create interesting and dynamic content, which makes learning more effective and fun for students (Putri et al., 2023; Qona'ah et al., 2024; Setyawan, 2019; Shobri & Rifqi, 2023). Second, smart box media packaged by teachers with the integration of innovative technology and teaching materials can enrich the student learning experience and support various learning styles. Of course, this media is a learning medium that becomes more optimal and interesting for students (Maryana & Wulandari, 2024; Sulaedah et al., 2022; Tirtoni et al., 2019). Third, learning with technology has been proven to improve student learning achievement. The integration of technology in the learning process allows students to gain access to more

diverse teaching methods, a better understanding of the material, and increase their learning motivation to get a wider range of learning materials (Azmi, 2024; Subroto et al., 2023; Susilawati, 2020; Wijayanti et al., 2021). These studies have not combined Google Sites and smart box media to improve social studies learning achievement in students. So, this is a novelty because the product design developed can be a learning innovation. Based on this, this research aims to create social studies learning through Google Sites and smart boxes as teaching media.

2. METHOD

This research uses a Research and Development (R&D) design with a qualitative and quantitative approach. This study uses the ADDIE model. There are five stages in the ADDIE development model with the phase stages carried out: Analysis, Design, Development, Implementation, and Evaluation (Branch, 2009). At the analysis stage, the activities analyze the needs and characteristics of students' use of media, initial abilities, availability of supporting facilities, and curriculum. At the design stage, the activities are determining the material's structure, defining the design specifications to be developed, making learning designs on existing applications, making learning model elements, and preparing expert assessment instruments, practitioners, and limited trials and wide trials. At the development stage, the activities carried out are conceptually and practically developing media. At the implementation stage, the activities carried out are to test products in limited quantities, for example, one-to-one and small group trails, and to test products in a wider number, such as field trails. In the evaluation stage, the activities carried out are formative on the ongoing process and summative evaluation of the efficiency and effectiveness of the production and use of learning media.

The research subjects are material experts, learning design experts, and learning media experts. The subjects of the research trial were students of SMP Negeri 12 Malang, which amounted to 33 students. The methods used to collect data are interviews, questionnaires, observations, tests, and documentation. This semi-structured interview method means that the conversation is free but still focused on the research topic. This interview can be conducted with the principal, social studies teacher, and deputy principal for curriculum at SMP 12 Negeri Malang. Questionnaires or instruments are used to collect data from validators in providing assessments and validation of social studies learning development.

Observation is used to assess student performance using social studies learning development through Google Sites and smart box media. The test method measures student learning achievement using a transpersonal learning model developed through Google Sites and smart box media. This test consists of a pretest and a post-test. The pretest is carried out before students learn using the development made, while the post-test is carried out after the social studies learning development. The documentation method is used for document collection. In this context, researchers rely on a single data source to support and provide physical evidence after conducting the research. The collected documents can be written sources such as student grades, teaching modules, pictures or photos, etc. The instruments used to collect data are questionnaires and test questions. The instrument grid is presented in Table 1.

Table 1. Research Instrument Grid

No.	Statement
1	The entire material presented in the product is developed, in accordance with the material studied and easy to understand
2	The product design of the material content is organized systematically, and can be rotated repeatedly
3	Descriptions, discussions, and assignments of practice questions are well understood
4	The entire content of the material presented can motivate you to be more enthusiastic about learning
5	Selection of writing, colors, animations and images according to the content of the material
6	The language, and the time spent presenting the developed material, makes it easier for you to learn
7	The content of the product material developed, can add to your skills in learning
8	The material content of the product design is developed, providing you with a lot of learning aids
9	The material content of the product design developed, is able to provide attractiveness
10	This learning development product has a positive impact

The techniques used to analyze the data are qualitative and quantitative descriptive analysis. Qualitative descriptive analysis is used to manage data from input provided by experts and students

regarding Google Sites and smart box learning media in social studies learning. Quantitative descriptive analysis is used to manage data in the form of expert scores regarding Google Sites and smart box learning media in social studies learning.

3. RESULT AND DISCUSSION

Result

This research uses the ADDIE model to develop social studies learning through Google Sites and smart boxes as teaching media. The results of the research based on the stages of the ADDIE model are presented as follows. First, analysis. First, Needs analysis. Social studies lessons are a compulsory subject for students in school. This learning involves deeply understanding the student's experience, knowledge, and character-building needs. The benefits of these lessons help create educational programs appropriate to the student's moral, intellectual, and emotional development stage while considering their social and cultural context. Given the increasingly rapid development of the times, teachers need to use technology, social interaction, and problem-based approaches in learning to meet the needs of students to understand and use information wisely. Thus, the results of this analysis are used as a guideline for building and designing teaching material products made using Google Sites and smart boxes. Second, Character analysis of the use of learning media. Questions were provided to find out more about the use of Google Sites and smart boxes, which were then answered by 33 students who had become respondents.

Table 2. Non-Cognitive Diagnostic Assessment

Statement	Answer
What reading materials do you want to study natural resource potential?	Modules 43.5%, selected articles 9.4%, handouts 55.2%, etc. 29.1%.
What learning media do you want to learn about natural resource potential?	Audio 20%, Images 22.6%, Video 42.3%, Articles 8.2%, etc. 6.9%.
What way of learning do you prefer to learn about natural resource potential?	Discussion 40%, Presentation 36.4%, lecture 9%, others 14.6%.
When taking social studies lessons, which one do you want?	Groups of 4-6 people 37.4%, Groups of 2-3 people 46.2%, and individuals 16.4%.
When taking social studies lessons, which one do you want?	Yes 82%, and No 18%.
Are you interested in learning about the potential of natural resources associated with the Bromo Tengger Semeru National Park?	Yes 94%, and No 6%
Are you a native of Malang? If not where are you from?	Class B students are native Malang residents

The results of the curriculum analysis show that SMP Negeri 12 Malang is currently using the "Independent Curriculum", which is based on three main pillars: government policies and student needs. The school's curriculum structure includes all learning materials for three years. The curriculum consists of ten to twelve subjects and local content and self-development provided to students. Each indicator shows student achievement in learning outcomes and the Minimum Completeness Criteria (KKM) with a score of 72.

Second, design. The second stage involves product design and efforts to create new learning media using Google Sites and smart boxes. There are several steps to take in this design. First, the first step is to identify the structure of the material. The social studies subject matter presented can come from various sources, including books, the internet, and other media that can support it. Afterward, the materials will be arranged according to the learning objectives. Second, determine the specifications of the design being developed. The specifications that must be chosen depend on the needs, availability of resources, and product orientation based on the product developed according to the needs of students with the content of social studies material. In this case, it includes two aspects, namely, the pedagogic aspect and the non-pedagogic aspect. Third, develop a learning design for existing applications. In designing IPS training, determining supporting applications can be downloaded on the Play Store. Fourth, development. At this stage, media is developed based on previously developed designs. Design social studies learning products through the google sites website, packaged on smart box media. The results of the developed products are presented in Figure 1.
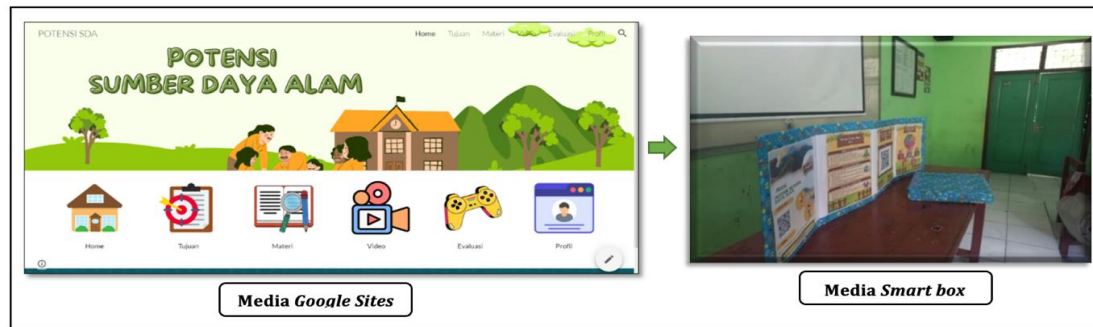
Figure 1. Display of Social Sciences Learning Material Products via Google Sites and Smart Box

The media that has been developed is then reviewed by validators in the field of learning media, design and learning materials that are evaluated by the validator team. First, experts' Verification of material content includes material expert validators, which provide for indicators such as "language use, material description, student learning participation, material presentation, and material correctness and suitability." The total score is 62. The value is around 83.0% with the category of Very Worthy. Second, Validation of learning design experts. In this team, the assessment was carried out by three people. The validation carried out by related learning design experts included aspects of related indicators (accuracy of the formulation of learning objectives, relevance of learning strategies to learning objectives, technical quality of learning design, digital-based learning, attractiveness to motivate learning and accuracy of learning design), which obtained a score of 61. The score is around 83.0%, with the Very Worthy category. Third, Validation of learning media experts. The assessment conducted by relevant learning design experts includes indicators related to (the attractiveness of appearance, letters, and writing, interaction level of learning design, and graphic display); the total score obtained is 62. This score obtained a percentage of 81.3% in the Very Worthy category. Thus, the product design that has been made is worth testing for students.

The media that obtained very feasible qualifications from experts were tested first in small groups of 10 students. It includes several aspects observed, such as (interest in learning, attractiveness, and effectiveness). The results of the data analysis showed that the results of the small group trial obtained a score of 667. The design of social studies learning products through Google Sites and smart boxes, which includes aspects of assessing interest, attractiveness, and effectiveness, received a percentage score of 88.0%. This percentage of values is included in the Very Worthy category, So the product design that has been made can be tested on a large group. The fourth stage is the testing of items in large groups with 33 students with the use of learning media. The guidelines provided for referral responses are as follows: (1) inappropriate; (2) it is not suitable; (3) hesitation; (4) appropriate; and (5) very appropriate. The table below shows the evaluation of the student's response statement. The results of the trial are presented in Table 3.

Table 3. Student Responses to the Large Group Test

No.	Statement	Student Response				
		1	2	3	4	5
1	All material presented in the product is developed, in accordance with the material studied and is easy to understand.	0%	0%	7,0%	52,7%	40,3%
2	The product design of the material content is arranged systematically, and can be played repeatedly.	0%	0%	12,9%	42,3%	44,8%
3	Descriptions, discussions and giving practice questions can be understood well.	0%	0%	18,8%	55,4%	25,8%
4	The entire content of the material presented can motivate you to be more enthusiastic about learning.	0%	0%	9,4%	47,1%	43,5%
5	Selection of writing, colors, animations and images according to the content of the material.	0%	0%	10,5%	47,2%	42,3%
6	The language, and time spent in presenting the material developed, makes it easier for you to learn.	0%	0%	5,9%	34,1%	60,0%

No.	Statement	Student Response				
		1	2	3	4	5
7	The content of the product material developed can increase your learning skills.	0%	0%	9,4%	31,7%	58,8%
8	The material content of product design is developed, giving you a lot of learning help.	0%	0%	4,8%	41,1%	54,1%
9	The material content of the product design being developed is able to provide interest for you to learn.	0%	0%	5,8%	31,7%	62,5%
10	Produk pengembangan pembelajaran ini, memberikan dampak positif bagi Anda dalam proses pembelajaran.	0%	0%	5,8%	48,2%	46,0%

This category has three categories with responses obtained from student responses. The design of social studies learning products through Google Sites and smart boxes has a very good impact on students, as evidenced by the highest score obtained in the statement of 9 points with a percentage of 62.5% in the Very Feasible category. This evidence underscores that teachers and students can benefit greatly from the product design that has been developed. After the implementation of the design design, the development of the product design is carried out for the students. Then, it is important to understand the level of practicality achieved in the social studies learning process through google sites and smart boxes. Some of the indicators assessed are (syntax, social principles, and reaction principles) which are some of the elements of the learning model that are tested after the development product is implemented in students. The results of the response to the practical value of this product design show that the learning development design that utilizes technology in social studies subjects is very practical, with an average score of 4.8%. This indicates that the development is placed in the Very Practical category after being piloted on students. Using learning media through Google Sites and smart boxes in social studies learning runs optimally. It helps teachers manage their time while allowing students to listen to the material in class and at home.
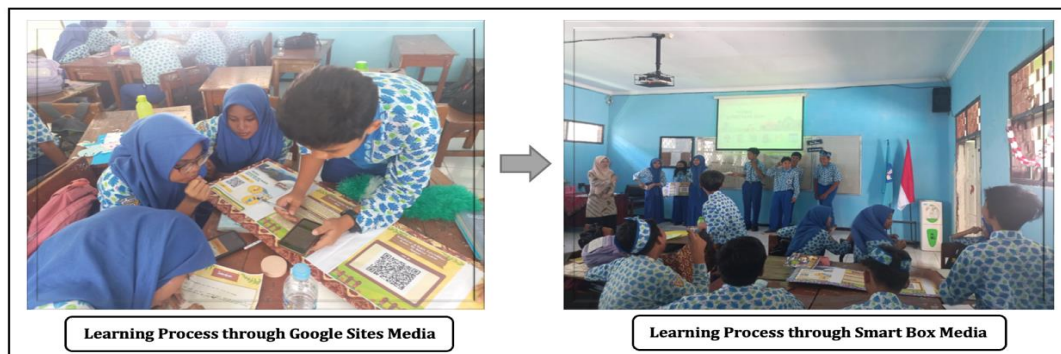

Figure 2. Learning Process through Google Sites and Smart Box Media

Fifth is evaluation. Social studies learning media through Google Sites and smart boxes can be used as a means of learning, which makes the learning environment more conducive, and students can return to learning subjects taught at home to be more motivated and enthusiastic about learning. Students can exclusively complete assignments by using this medium. Teachers also use applications such as WhatsApp to create groups as online communication; this makes it easier for students to do so to convey the subject matter both in class and when they are at home. Thus, the product design developed can create students' creativity to utilize technology effectively and wisely.

This fifth stage concerns the extent of the effectiveness of social studies learning carried out through Google Sites and smart boxes. At this stage, there is an assessment of tests carried out before and after the product is developed on students. This aims to see the results of the effectiveness of product design made using media through Google Sites and smart boxes. Then, the daily average score obtained by social studies teachers is a value that must be compared. Before the development design, the daily score of 69 students was less than the average score set, meaning that 43% of the sample of 33 respondents still needed to meet the assessment standards. However, after the development design was implemented through Google Sites and Smart Box, students got an average score of 90%; this shows that the student's grades increased by 57% after the development product was implemented.

Discussion

The results of data analysis show that learning through Google Sites and smart boxes is suitable for social studies learning. This is due to the following factors. First, learning through Google Sites and smart boxes is feasible because it makes it easier for students to learn social studies. Social studies learning through the google sites website and smart box has been running optimally. Learning through Google Sites and Smart Box is very feasible for social studies learning because these two tools offer high convenience and interactivity for students. Google Sites allows teachers to create engaging and informative websites so students can easily access course materials, assignments, and learning resources (Putri et al., 2023; Qona'ah et al., 2024). Collaborative features in Google Sites facilitate collaboration between students on group projects (Putri et al., 2023; Qona'ah et al., 2024; Saputra et al., 2023). On the other hand, Smart Box provides an interactive learning platform. The combination of these two tools supports the understanding of social studies concepts and encourages active student engagement, thereby improving their motivation and learning outcomes. This aligns with previous findings that reveal that the product should be tested to ensure that it works properly for students (Rustandi & Rismayanti, 2021; Saputra et al., 2023). There is a needs analysis; the main priority is given to the quality of media use for students, initial ability, availability of supporting facilities, and curriculum (Rusdi, 2018; Tasmiyah et al., 2023). In the implementation stage, teachers achieve learning objectives by using teaching materials, learning methods, and learning media planned for the classroom situation. This involves the use of learning strategies that aim to help students achieve the expected competencies after participating in the learning of the developed product (Nurhikmah et al., 2023; Rusdi, 2018; Tasmiyah et al., 2023).

Second, learning through Google Sites and smart boxes is worth using because it increases students' enthusiasm for learning. The use of social media in education can be very helpful in improving students' enthusiasm for learning. Teaching materials must be interesting so that students are happy and not bored (Nuryasana & Desiningrum, 2020; Purba & Harahap, 2022; Safitri et al., 2020). By using technology, students can gain better digital skills, adapt to individual curricula, access global information, and collaborate with students from all over the world (Qona'ah et al., 2024; Sinta et al., 2020). Through the learning process through Google Sites and smart boxes, users can prepare content more easily, and students can access it outside of learning while in class (Rusdi, 2018; Tasmiyah et al., 2023; Warburton, 2022). This is because one of the advantages of google sites is that it allows for distance learning that can be done online (Puspitasari, 2021; Tasmiyah et al., 2023). This way, students can study independently at home or elsewhere. Educators who have innovated in learning through technology as a teaching medium with a different model have a good impression on students.

Third, learning through Google Sites and smart boxes is worth using because it creates fun learning activities. Some applications that support the development of social studies learning through Google Sites use types (Canva, Capcut, and Wordwall). The Canva app is a design and visual communication platform that aims to allow people worldwide to design and publish their work wherever they are (Isnaini et al., 2021; Khairunnisa & Apoko, 2023). In this case, this type of application offers a wide range of templates that can be used to meet educational needs, such as worksheets, posters, infographics, and presentations. Teachers can present material more dynamically and easily with this feature (Hamda & Azima, 2024; Jafar Adrian et al., 2022). The CapCut app is a program developed by Chinese technology company ByteDance, which also produces a digital media platform, it allows users to edit videos on their smartphones with effects, music, subtitles, and other features (Pratama et al., 2023; Tiwi & Mellisa, 2023). While CapCut is typically used for film editing, it can also be used to create digital animations for online learning (Tiwi & Mellisa, 2023). Furthermore, Wordwall applications are a learning medium that can help students better understand their learning. Vocabulary that is systematically arranged and displayed with letters is provided by this application. Teachers can use this application to create various educational games with various themes, such as quizzes, matchups, find the match, and the like (Sari & Yarza, 2021). This is what makes social studies learning activities more enjoyable.

Previous findings reveal that the use of digital-based media can increase students' desire to learn as well as create a more lively environment (Batubara, 2021; Devi & Rerang, 2023; Hidayah et al., 2017). Other findings also revealed that using digital media such as Google Sites can increase students' motivation to learn (Shobri & Rifqi, 2023; Widiastuti et al., 2023). This study implies that social studies learning media through Google Sites and smart boxes effectively build the social studies learning process. Given the rapid development of technology, teachers' efforts when using digital media through Google Sites as a learning medium are a plan in the learning process. If learning is connected to technology, students feel comfortable and this can foster their passion for learning. In addition, teachers can also utilize digital-based technology to make learning more real and engage students more enthusiastic about learning (Muttaqin et al., 2021).

4. CONCLUSION

The results of this study show that, first, the design of social studies learning development products requires four supporting applications such as (Canva, Capcut, and Wordwall). The assessment of the validators of material experts, learning design experts, and learning media experts obtained the qualification of Very Feasible. Second, the acquisition of practicality in the design of social studies teaching products after being implemented to students obtained the Very Feasible category. On the other hand, the response to the acquisition of product design practicality assessed by social studies subject teachers received a very practical category. The use of Google Sites and smart boxes in social studies learning at SMP Negeri 12 Malang has a positive effect, such as increasing students' access to more interactive and easy-to-reach learning materials. Learning media through these two allows students to access educational content at any time, facilitate collaboration, and develop digital skills and information literacy, thereby supporting a more effective and efficient learning process.

5. REFERENCES

Aryawan, R., Sudatha, I. G. W., & Sukmana, A. I. W. I. Y. (2018). Pengembangan E-Modul Interaktif Mata Pelajaran IPS Di SMP Negeri 1 Singaraja. *urnal EDUTECH Universitas Pedidikan Ganesha*, *6*, 180–191.

Azmi, C. (2024). Penerapan Pembelajaran Berdiferensiasi pada Tema Perkembangan Teknologi untuk Meningkatkan Hasil Belajar Siswa Sekolah Dasar. *Jurnal Didaktika Pendidikan Dasar*, *8*(1), 263–284. https://doi.org/10.26811/didaktika.v8i1.1246.

Banks, G. C., Dionne, S. D., Sayama, H., Schmid, M., & Special, M. (2019). Leadership in the Digital Era: Social Media, Big Data, Virtual Reality, Computational Methods, and Deep Learning. *The Leadership Quarterly*, *30*(5), 101325. https://doi.org/10.1016/S1048-9843(19)30520-X.

Bašić, M. (2021). Organisational learning antecedents and open innovation: Differences in internationalisation level. *International Journal of Innovation Studies*, *5*(4), 161–174. https://doi.org/10.1016/j.ijis.2021.12.001.

Batubara, H. H. (2021). *Media Pembelajaran Digital*. Bandung: PT Remaja Rosdakarya.

Branch, R. M. (2009). *Instructional Design: The ADDIE Approach*. Springer Science & Business Media,.

Brändle, M., Sotiriadou, C., & Zinn, B. (2023). Self-assessments, attitudes, and motivational orientations towards the use of digital media in teaching a comparison between student teachers of different subject clusters. *Heliyon*, *9*(9), e19516. https://doi.org/10.1016/j.heliyon.2023.e19516.

Burns, M. (2026). *Deeper learning with QR codes and augmented reality: a scannable solution for your classroom*. Corwin Press.

Degner, M., Moser, S., & Lewalter, D. (2022). Digital media in institutional informal learning places: A systematic literature review. *Computers and Education Open*, *3*(December 2021), 100068. https://doi.org/10.1016/j.caeo.2021.100068.

Devi, M. S. N., & Rerang, R. B. (2023). Media Komik Digital Berbasis Kearifan Lokal Tri Hita Karana. *Mimbar PGSD Undiksha*, *11*(1), 71–80. https://doi.org/10.23887/jjpgsd.v11i1.55580.

Efendi, B. M. S., & Insani, N. (2024). Implementasi E-Modul Berbantuan Google Sites dengan Model PBL dalam Pembelajaran IPS untuk Meningkatkan Minat dan Hasil Belajar Peserta Didik. *Jurnal Riset dan Inovasi Pembelajaran*, *4*(1), 402–416. https://doi.org/10.51574/jrip.v4i1.1406.

Failasufah, M., & Setyasto, N. (2023). Audio-Assisted Smartbox Learning Media in IPAS Content of Metamorphosis of Animals for Fourth-Grade Students. *Jurnal Penelitian dan Pengembangan Pendidikan*, *7*(3), 456–464. https://doi.org/10.23887/jppp.v7i3.65677.

H. P.S. Muttaqin, Sariyasa, & N.K. Suarni. (2021). Pengembangan Media Pembelajaran Interaktif Berbasis Android Pada Mata Pelajaran IPA Pokok Bahasan Perkembangbiakan Hewan Untuk Siswa Kelas VI SD. *Jurnal Teknologi Pembelajaran Indonesia*, *11*(1), 1–15. https://doi.org/10.23887/jurnal_tp.v11i1.613.

Hamda, F., & Azima, N. F. (2024). Pengembangan Media Audio Visual Menggunakan Aplikasi Canva Untuk Meningkatkan Kemampuan Penguasaan Kosakata Pada Pembelajaran Bahasa Indonesia di Sekolah Dasar Program Studi Pendidikan Guru Sekolah Dasar , Universitas Negeri Padang. *Jurnal Pendidikan Tambusai*, *8*, 11965–11971.

Hasanah, U., Sarjono, S., & Hariyadi, A. (2021). Pengaruh Model Problem Based Learning Terhadap Prestasi Belajar IPS SMP Taruna Kedung Adem. *Aksara: Jurnal Ilmu Pendidikan Nonformal*, *7*(1), 43. https://doi.org/10.37905/aksara.7.1.43-52.2021.

Hidayah, Y. F., Siswandari, S., & Sudiyanto, S. (2017). Pengembangan Media Komik Digital Akuntansi Pada Materi Menyusun Laporan Rekonsiliasi Bank Untuk Siswa SMK. *Jurnal Pendidikan Dan Kebudayaan*,

2(1), 135–146. https://doi.org/10.24832/jpnk.v2i2.588.

Isnaini, K. N., Sulistiyani, D. F., & Putri, Z. R. K. (2021). Pelatihan Desain Menggunakan Aplikasi Canva. *SELAPARANG Jurnal Pengabdian Masyarakat Berkemajuan*, *5*(1), 291. https://doi.org/10.31764/jpmb.v5i1.6434.

Jafar Adrian, Q., Putri, N. U., Jayadi, A., Sembiring, J. P., Sudana, I. W., Darmawan, O. A., Nugroho, F. A., & Ardiantoro, N. F. (2022). Pengenalan Aplikasi Canva Kepada Siswa/Siswi SMKN 1 Tanjung Sari, Lampung Selatan. *Journal of Social Sciences and Technology for Community Service (JSSTCS)*, *3*(2), 187. https://doi.org/10.33365/jsstcs.v3i2.2020.

Khairunnisa, A., & Apoko, T. W. (2023). Pengembangan Media Pembelajaran Digital Berbasis Aplikasi Canva Pada Mata Pelajaran Pendidikan Pancasila dan Kewarganegaraan Untuk Sekolah Dasar. *Jurnal Kewarganegaraan*, *20*(2), 191. https://doi.org/10.24114/jk.v20i2.48898.

Kwangmuang, P., Jarutkamolpong, S., Sangboonraung, W., & Daungtod, S. (2021). The development of learning innovation to enhance higher order thinking skills for students in Thailand junior high schools. *Heliyon*, *7*(6). https://doi.org/10.1016/j.heliyon.2021.e07309.

Maharani Zan, A., & Mardian, V. (2022). The Impact of Static Fluid E-Module by Integrating STEM on Learning Outcomes of Students. *Journal of Education Technology*, *6*(1). https://doi.org/10.23887/jet.v6i1.42458.

Mariyana, W., Setiawan, R., Sugiyanto, R., Asy'arie, B. F., & Fajar, A. H. Al. (2024). The Influence of Learning Interest and learning Motivation on Learning Outcomes in Economic Learning. *JIIP - Jurnal Ilmiah Ilmu Pendidikan*, *7*(2), 1507–1518. https://doi.org/10.54371/jiip.v7i2.3598.

Maryana, & Wulandari, D. (2024). Smart Box Learning Media Based on Problem Based Learning to Improve Science Environmental Learning Outcomes. *Jurnal Penelitian Pendidikan IPA*, *10*(6), 3141–3151. https://doi.org/10.29303/jppipa.v10i6.7244.

Maynard, A., Symonds, J. E., & Blue, T. (2023). Adolescent social innovation education: A scoping review. *International Journal of Educational Research*, *119*, 102184. https://doi.org/10.1016/j.ijer.2023.102184.

Nurhikmah, S., Sandy, S., Ali, R. Z., & Ruswandi, U. (2023). Desain Pembelajaran PAI dengan Model Addie pada Materi Beriman Kepada Hari Akhir di SMA Plus Tebar Ilmu Ciparay. *Al Qalam: Jurnal Ilmiah Keagamaan dan Kemasyarakatan*, *17*(2), 297. https://doi.org/10.35931/aq.v17i2.1988.

Nuryasana, E., & Desiningrum, N. (2020). Pengembangan Bahan Ajar Strategi Belajar Mengajar Untuk Meningkatkan Motivasi Belajar Mahasiswa. *Jurnal Inovasi Penelitian*, *1*(5), 967–974. https://doi.org/10.47492/jip.v1i5.177.

Panca Wahyu Kusumaningrum, Sjamsir, H., & Arbayah. (2021). Peningkatan Kemampuan Mengenal Keaksaraan Awal Anak Usia 5-6 Tahun Melalui Media Kotak Pintar Di TK Islam Terpadu Asiah Kecamatan Mentawa Baru Ketapang Kabupaten Kotawaringin Timur. *Bedumanagers Journal*, *2*(2), 30–41. https://doi.org/10.30872/bedu.v2i2.1599.

Parmiti, D. P., Wibawa, I. M. C., & Wulandari, K. S. (2023). Audio-Visual Learning Media Based on Digital Literacy on the Topic of the Water Cycle. *Journal of Education Technology*, *7*(3). https://doi.org/10.23887/jet.v7i3.64228.

Pratama, M. I., Arifin, S., & Puspitasari, I. (2023). Pengembangan Video Pembelajaran Menggunakan Aplikasi CapCut Pada Mata Pelajaran Pendidikan Agama Islam Kelas 8 SMP/MTS Tentang Sujud. *Kuttab*, *7*(1), 11–19. https://doi.org/10.30736/ktb.v7i1.1446.

Purba, Y. A., & Harahap, A. (2022). Pemanfaatan Aplikasi Canva Sebagai Media Pembelajaran Matematika Di SMPN 1 NA IX-X Aek Kota Batu. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, *6*(2), 1325–1334. https://doi.org/10.31004/cendekia.v6i2.1335.

Puspitasari, A. C. D. D. (2021). Aplikasi Tiktok Sebagai Media Pembelajaran Jarak Jauh Pada Mahasiswa Universitas Indraprasta PGRI. *Jurnal Educatio FKIP UNMA*, *7*(3). https://doi.org/10.31949/educatio.v7i3.1317.

Putri, A. F., Naila, I., & Afani, K. D. A. (2023). Pengembangan Media Google Sites Berbasis Ethno Sains pada Mata Pelajaran IPAS Sekolah Dasar. *SAP (Susunan Artikel Pendidikan)*, *7*(3), 433. https://doi.org/10.30998/sap.v7i3.16067.

Qona'ah, I., Puspitasari, D., Khobir, A., & Mahmudah, U. (2024). Bahan Ajar Interaktif dan Inovatif Berbasis Teknologi Google Sites. *JIIP - Jurnal Ilmiah Ilmu Pendidikan*, *7*(7), 6573–6580. https://doi.org/10.54371/jiip.v7i7.5231.

Roemintoyo, R., & Budiarto, M. K. (2021). Flipbook as Innovation of Digital Learning Media: Preparing Education for Facing and Facilitating 21st Century Learning. *Journal of Education Technology*, *5*(1), 8. https://doi.org/10.23887/jet.v5i1.32362.

Rohles, B., Backes, S., Fischbach, A., Amadieu, F., & Koenig, V. (2022). Creating positive learning experiences with technology: A field study on the effects of user experience for digital concept mapping. *Heliyon*,

8(4), e09246. https://doi.org/10.1016/j.heliyon.2022.e09246.

Ruiz-Bañuls, M., Gómez-Trigueros, I. M., Rovira-Collado, J., & Rico-Gómez, M. L. (2021). Gamification and transmedia in interdisciplinary contexts: A didactic intervention for the primary school classroom. *Heliyon*, *7*(6), e07374. https://doi.org/10.1016/j.heliyon.2021.e07374.

Rusdi, M. (2018). *Penelitian Desain dan Pengembangan Kependidikan*. Depok: PT Rajagrafindo Persada.

Rustandi, A., & Rismayanti. (2021). Penerapan Model ADDIE dalam Pengembangan Media Pembelajaran di SMPN 22 Kota Samarinda. *JURNAL FASILKOM*, *11*(2), 57–60. https://doi.org/10.37859/JF.V11I2.2546.

Safitri, W., Sumardi, S., & Muslihin, H. Y. (2020). Pengembangan Bahan Ajar Permainan Fun Outbound Mencari Harta Karun. *Jurnal Paud Agapedia*, *4*(1), 96–106. https://doi.org/10.17509/jpa.v4i1.27201.

Saputra, R., Diandita, Y. N., & Zulfiati, H. M. (2023). Pengembangan Media Pembelajaran Berbasis Web Google Sites Pada Pembelajaran IPS Sekolah Dasar. *Didaktik : Jurnal Ilmiah PGSD STKIP Subang*, *9*(2), 3327–3338. https://doi.org/10.36989/didaktik.v9i2.962.

Sari, P. M., & Yarza, H. N. (2021). Pelatihan Penggunaan Aplikasi Quizizz dan Wordwall pada Pembelajaran IPA Bagi Guru-Guru SD IT Al-Kahfi. *SELAPARANG: Jurnal Pengabdian Masyarakat Berkemajuan*, *4*(2), 195–199. https://doi.org/10.31764/jpmb.v4i2.4112.

Schneider, S., Nebel, S., Beege, M., & Rey, G. D. (2018). The autonomy-enhancing effects of choice on cognitive load, motivation and learning with digital media. *Learning and Instruction*, *58*(June), 161–172. https://doi.org/10.1016/j.learninstruc.2018.06.006.

Setyawan, B. (2019). Pengembangan Media Google Site dalam Bimbingan Klasikal di SMAN 1 Sampung. *Nusantara of Research : Jurnal Hasil-hasil Penelitian Universitas Nusantara PGRI Kediri*, *6*(2), 78–87. https://doi.org/10.29407/nor.v6i2.13797.

Shobri, M., & Rifqi, Q. (2023). Pelatihan Pembuatan Media Pembelajaran Berbasis Google Sites di UPT SMP Negeri 19 Gresik. *Jurnal Pengabdian Masyarakat Nusantara*, *3*(1). https://doi.org/10.55606/kreatif.v3i1.1208.

Sinta, T., Rasida Luisandrith, D., Yanuartuti, S., Seni Budaya, P., & Negeri Surabaya, U. (2020). Interdisiplin: Pembelajaran Seni Tari Melalui Aplikasi Tik Tok Untuk Meningkatkan Kreativitas Anak. *Jurnal Seni Tari*, *9*(2), 176.

Subroto, D. E., Supriandi, Wirawan, R., & Rukmana, A. Y. (2023). Implementasi Teknologi dalam Pembelajaran di Era Digital: Tantangan dan Peluang bagi Dunia Pendidikan di Indonesia. *Jurnal Pendidikan West Science*, *1*(07), 473–480. https://doi.org/10.58812/jpdws.v1i07.542.

Sulaedah, S., Utomo, S., & Ismaya, E. A. (2022). Development of Smart Box of ASEAN Learning Media in Social Science Learning for Class VI Elementary School Students. *Uniglobal Journal of Social Sciences and Humanities*, *1*(2), 54–59. https://doi.org/10.53797/UJSSH.V1I2.9.2022.

Susilawati, E. (2020). Penerapan Model Pembelajaran Inovatif yang Memanfaatkan Portal Rumah Belajar di SMP Pesat Bogor. *Jurnal Teknodik*, 41–54. https://doi.org/10.32550/teknodik.v0i0.367.

Tasmiyah, T., Rusmawati, R. D., & Suhari, S. (2023). Pengembangan Bahan Ajar Berbasis Web Google Sites Materi Stoikiometri dengan Model ADDIE. *JIIP - Jurnal Ilmiah Ilmu Pendidikan*, *6*(12), 9799–9805. https://doi.org/10.54371/jiip.v6i12.2889.

Tirtoni, F., Su'udiyah, F., & Susilo, J. (2019). Pengembangan Media Smart Exploding Box Berbasis Deep Dialogue Critical Thinking untuk Menghadapi Era Revolusi Industri 4.0. *Jurnal Pendidikan Dasar Nusantara*, *5*(1), 191. https://doi.org/10.29407/jpdn.v5i1.13589.

Tiwi, D. I., & Mellisa, M. (2023). Pengembangan Video Pembelajaran Berbasis Aplikasi Capcut pada Mata Kuliah Kultur Jaringan. *Jurnal Inovasi Pembelajaran Biologi*, *4*(1), 39–45. https://doi.org/10.26740/jipb.v4n1.p39-45.

Warburton, E. C. (2022). TikTok challenge: dance education futures in the creator economy. *Arts Education Policy Review*, 1–11. https://doi.org/10.1080/10632913.2022.2095068.

Widiastuti, L., Rusmawati, R. D., & Hartono, H. (2023). Pengembangan Media Short Video Berbagai Trik Cara Cepat Matematika Berbasis Tik Tok Pada Peserta Dididk Kelas VI Sekolah Dasar. *Jurnal Penelitian Tindakan Kelas dan Pengembangan Pembelajaran*, *6*(3), 394–412. https://doi.org/10.31604/PTK.V6I3.394-412.

Wijayanti, R., Hermanto, D., & Zainudin, Z. (2021). Efektivitas Penggunaan Aplikasi Quizizz Pada Matakuliah Matematika Sekolah Ditinjau dari Motivasi dan Hasil Belajar Mahasiswa. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, *5*(1), 347–356. https://doi.org/10.31004/cendekia.v5i1.470.

Yuliastri, N. A., Fitriyani, R., & Ilhami, S. B. (2021). Pengembangan Media Smart Box Dalam Meningkatkan Kemampuan Kognitif Anak Usia 5-6 Tahun. *Jurnal Care (Children Advisory Research and Education)*, *8*(2).