Pedagogika: Jurnal Pedagogik dan Dinamika Pendidikan
P-ISSN 2252-6676 E-ISSN 2746-184X, Volume 14, No. 2, Oktober 2026
doi: https://doi.org/10.30598/pedagogikavol14issue2year2026
https://ojs3.unpatti.ac.id/index.php/pedagogika
email: jurnalpedagogika@gmail.com

Designing Google Sites Through the Discovery Learning Model to Improve Self-Regulated Learning and Self-Authenticity

Alvina Adelia Putri[1*], Mohamad Fatih[2], Cindya Alfi[3]

[1*,2,3]Program Studi Pendidikan Guru Sekolah Dasar, Universitas Nahdlatul Ulama Blitar, Indonesia

ARTICLE INFO

Article history:
Received May 14, 2026
Revised October 13, 2026
Accepted October 14, 2026
Available online October 29, 2026

Keywords:
Google Sites; Discovery Learning; Self-Regulated Learning; Self-Authenticity; IPAS Learning

Kata Kunci:
Google Sites; Discovery Learning; Self-Regulated Learning; Self-Authenticity; Pembelajaran IPAS

Corresponding Author:
*alvinaadelia863@gmail.com

ABSTRACT

This study aims to design Google Sites-based learning media by applying the Discovery Learning model, testing the level of validity, feasibility, and its impact on students' self-regulated learning and self-authenticity. This study uses a mixed method with the Borg & Gall development model with seven stages. Some of the subjects in this study were material experts, media experts, linguists, teachers, and fifth-grade students of SDN 1 Tanjungsari, Blitar City. The study shows that the developed media is classified as very valid, with an assessment of material experts of 95%, media experts 94%, and linguists 98%, and is considered suitable for use by teachers with a percentage of 80%. However, the results of the hypothesis test show that the media has not provided a significant increase in self-regulated learning (Sig. 0.514), self-authenticity (Sig. 0.676), or both simultaneously (Sig. 0.889). This is influenced by affective characteristics that require long-term habituation as well as differences in the characteristics of the two variables, where self-regulated learning supports independent learning, while self-authenticity develops more through social interaction.

ABSTRAK

Penelitian ini bertujuan merancang media pembelajaran berbasis *Google Sites* dengan menerapkan model *Discovery Learning*, menguji tingkat kevalidan, kelayakan, serta dampaknya terhadap *self-regulated learning* dan *self-authenticity siswa*. Penelitian ini menggunakan metode campuran dengan model pengembangan Borg & Gall dengan tujuh tahapan. Beberapa subjek pada penelitian ini adalah ahli materi, ahli media, ahli bahasa, guru, dan siswa kelas V SDN 1 Tanjungsari Kota Blitar. Penelitian menunjukkan bahwa media yang dikembangkan tergolong sangat valid, dengan penilaian ahli materi sebesar 95%, ahli media 94%, dan ahli bahasa 98%, serta dinilai layak digunakan oleh guru dengan persentase 80%. Namun hasil uji hipotesis menunjukkan bahwa media belum memberikan peningkatan yang signifikan terhadap *self-regulated learning* (Sig. 0,514), *self-authenticity* (Sig. 0,676), maupun keduanya secara simultan (Sig. 0,889). Hal ini dipengaruhi oleh karakteristik afektif yang memerlukan pembiasaan jangka panjang serta perbedaan karakteristik kedua variabel, di mana *self-regulated learning* mendukung pembelajaran mandiri, sedangkan *self-authenticity* lebih berkembang melalui interaksi sosial.

INTRODUCTION

IPAS played an important role in developing students' curiosity, critical thinking skills, and scientific approaches (Kementerian Pendidikan Dasar dan Menengah, 2025). However, these conditions had not been fully achieved in the field. The results of an interview with fifth-grade students at SDN 1 Tanjungsari, Blitar City, conducted on November 13, 2025, showed that students' interest in learning IPAS was still low. Students considered the materials difficult because they contained many scientific terms that they did not yet understand, and the learning process was still dominated by the teacher without the support of varied digital media. This finding was consistent with Fatih et al. (2023), who stated that less innovative instructional media made students easily bored and tended to be passive during learning. This condition resulted in a lack of students' learning independence. Students tended to depend on the teacher's explanations, were not accustomed to seeking information independently, and still lacked confidence in expressing their opinions. However, students were already accustomed to using digital devices and were more interested in visual and interactive learning media.

Additionally, adequate school facilities and internet access supported the use of digital learning media, which was considered appropriate for supporting IPAS learning according to students' needs. One alternative that could be implemented was the use of web-based media through Google Sites. This platform was used by teachers to deliver materials in the form of videos, texts, and images that could be easily accessed through various digital devices without requiring programming skills and supported independent learning according to students' needs.

Furthermore, to the use of learning media, the selection of an appropriate learning model also played an important role in improving the quality of the learning process. An appropriate learning model could create an active and meaningful learning environment so that students did not merely receive information but were also involved in the process of acquiring knowledge and expressing their authenticity during learning.

According to Putra et al. (2025), the Discovery Learning model provided students with opportunities to develop critical thinking and problem-solving skills so that knowledge was not passively received but was constructed based on their learning experiences. Therefore, the Discovery Learning model was selected in this study because it enabled students to discover concepts independently through observation, exploration, and conclusion-drawing activities. In addition, this model was considered appropriate for the objectives of the study in developing students' Self-Regulated Learning and Self-Authenticity.

Based on Jerome Bruner in Diandita et al. (2023), Discovery Learning was a discovery-based learning model consisting of stimulation, problem statement, data collection, data processing, verification, and generalization. The use of this model encouraged students to learn independently through the processes of planning, integrating, and reflecting on their learning (Zimmerman, 2002). Self-authenticity emphasized the alignment between an individual's beliefs, feelings, and actions (Nartova-Bochaver et al., 2021). Authenticity consisted of three main aspects, namely Authentic Living, Accepting External Influence, and Self-Alienation. Self-authenticity emphasized the alignment between beliefs, feelings, and actions, enabling individuals to experience a sense of self-integrity and better psychological well-being.

In addition, The Google Sites design in this research was integrated with the Discovery Learning model to support the process of discovering concepts systematically, which would subsequently support the development of students' self-regulated learning and self-authenticity through reflection and independent learning activities. Thus, this

research was useful for designing Google Sites-based media using the Discovery Learning model to improve self-regulated learning and self-authenticity.

METHOD

The research employed a mixed-method approach combined with Research and Development (R&D) and a quantitative approach. The development model referred to Borg and Gall, which was simplified into seven stages. The following were the seven stages of the Borg and Gall development model:

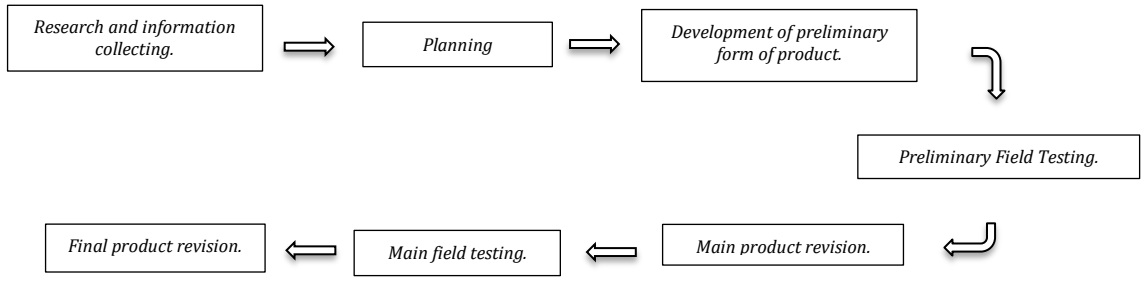


Figure 1. Research Procedure

The limitations of time, resources, and the scope of the research were the reasons why the researchers conducted seven stages. In line with Gustiani (2019), the Borg and Gall model could be modified according to the needs of the study as long as the core stages, such as needs analysis, design, validation, product testing, and revision, were maintained. The material, language, and media validators, 20 fifth-grade students of SDN 1 Tanjungsari, Blitar City, and the fifth-grade teacher served as the research subjects.

In the quantitative stage, a one-group pretest-posttest design was used as the basis of this research. The testing was conducted to examine the improvement of the variables both partially and simultaneously. The pre-questionnaire and post-questionnaire scores of the same subjects were compared using a paired sample t-test (S. Afifah et al., 2022). This test was applied to the self-regulated learning and self-authenticity variables.

$$t = \frac{\bar{D}}{SD / \sqrt{n}}$$

Description:

$\bar{D}$: mean difference (post-test – pre-test)

SD : standard deviation of the differences

n: number of samples

Decision Making Criteria**:**

1. If Sig. (2-tailed) was less than 0.05, H_0 was rejected, indicating a significant difference (an improvement)
2. If Sig. (2-tailed) was greater than or equal to 0.05, H_0 was accepted, indicating that there was no significant difference.

Furthermore, simultaneous testing was conducted using the MANOVA (Multivariate Analysis of Variance) test. This test was used to determine the effect of the treatment on the two dependent variables simultaneously. The use of the paired sample t-test and MANOVA provided a more comprehensive analysis, describing changes in each variable specifically as well as changes in both variables overall. This test produced multivariate

statistics, which were then converted into significance values (p-values) by statistical software. The Wilks' Lambda formula was as follows:

$$\lambda = \frac{|E|}{|H + E|}$$

Description:

$|E|$ = Error Matrix

$|H + E$ = Total Matrix

Test Decision:

1. If Sig. (p-value) was less than 0.05, H_0 was rejected, indicating a significant difference (an improvement).
2. If Sig. (p-value) was greater than or equal to 0.05, H_0 was accepted, indicating that there was no significant difference.

RESULTS AND DISCUSSION

Results

Research and Information Collecting Stage

Identifying the needs and problems as the basis for product development through literature studies, interviews, and analysis of facilities and infrastructure was the initial step. The results of interviews with fifth-grade students at SDN 1 Tanjungsari, Blitar City, showed that their interest in learning IPAS was still low. Students considered the materials difficult because they contained many scientific terms that they did not yet understand, and the learning process was still teacher-centered without the support of digital media. This condition resulted in low levels of students' self-regulated learning and self-authenticity.

Students were already accustomed to using digital devices and were interested in visual and interactive learning media, supported by the availability of internet access at the school. The results of the literature study also demonstrated that the Discovery Learning model assisted by Google Sites had an impact on students' learning abilities. Therefore, Google Sites-based instructional media through the Discovery Learning model was designed to improve students' self-regulated learning and self-authenticity.

Planning Stage

This step was conducted on December 8, 2025, to establish the basis for product planning based on the results of the needs analysis. At this stage, the learning outcomes (CP), learning objectives (TP), and development media plan were determined. The established learning outcome was that students were able to understand the human organ system and its relationship to maintaining health. The learning objectives included understanding the sequence of digestive organs, classifying types of nutrients, and analyzing eating habits through Google Sites-based media.

The learning was designed based on the Discovery Learning syntax integrated into Google Sites and was supported by videos, interactive worksheets, quizzes, and a discussion space. This stage produced a learning media plan that was aligned with the CP and TP and was directed toward maximizing students' self-regulated learning and self-authenticity.

Designing and Developing the Preliminary Product Stage

The designing and developing of the preliminary product stage was conducted on December 15, 2025, by developing Google Sites-based instructional media that could be accessed through a website link. The media consisted of a homepage, learning outcomes and objectives, human digestive system materials, and an evaluation section. The homepage was designed as the initial display containing the title and navigation to facilitate systematic access to the learning materials. The materials were presented sequentially according to the students' characteristics and were supported by videos, images, and simple explanations. In addition, the media was equipped with interactive worksheets based on Liveworksheets, quizzes using Quizwhizzer, and a discussion space through Padlet to increase student engagement.

Preliminary Field Testing Stage

The preliminary field testing was conducted on February 12, 2026, with the aim of determining the level of validity and feasibility of the preliminary product that had been designed before it was implemented in a broader-scale trial. The recapitulation of the language, material, and media validation results is presented below.

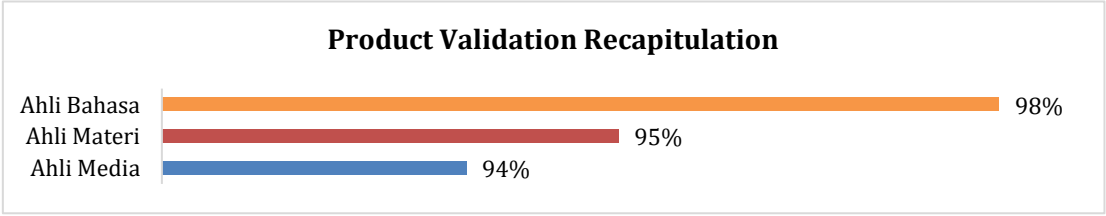


Figure 2. Product Validation Recapitulation

The product validation obtained assessments from several experts, namely: a) language, 98%, indicating that the language used in the media was in accordance with Indonesian language rules, easy to understand, and that the delivery of the materials was clear and communicative; b) material, 95%, indicating that the materials were consistent with the learning outcomes and objectives, the concepts presented were relevant, and the learning was systematically organized and supported Discovery Learning activities; and c) media, 94%, indicating that the Google Sites design was attractive, the navigation was easy to use, and the media features supported interactive and effective learning. The overall score reached 95% and was included in the very valid criterion; therefore, the product was considered feasible for trial.

The results of the teacher's feasibility assessment are presented in the following figure.

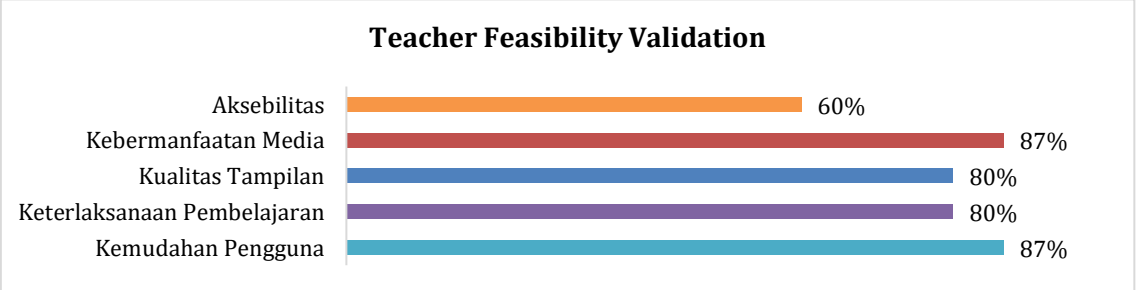


Figure 3. Teacher Feasibility Validation

The researchers conducted a media feasibility validation with the teacher and obtained the following assessment results: a) ease of use, 87%; b) learning

implementation, 80%; c) display quality, 80%; d) media usefulness, 87%; and e) accessibility, 60%, with an overall score of 80%, which was categorized as feasible. The high scores in the aspects of ease of use and media usefulness indicated that Google Sites-based media could help teachers deliver materials more effectively and could be easily accessed by students.

Main Product Revision Stage

Referring to the validation results, several improvements were made to the material, media, language, and teacher assessment aspects. In the material validation, the researchers added a glossary of scientific terms and improved the analytical questions by providing more contextual stimuli. In the media validation, a user manual was added to make media access and navigation easier for users to understand. Based on the language validation, improvements were made to punctuation, the writing of foreign terms in italics, and the emphasis of important sentences using boldface. Meanwhile, the results of the teacher's assessment indicated the need to adjust the media to the specifications of students' devices. Therefore, a version of the media with a smaller cache size was created so that it was lighter and easier to access.

Main Field Testing Stage

The main testing was conducted in the fifth grade of SDN 1 Tanjungsari, Blitar City, on March 12, 2026, for six lesson periods in one meeting. Before the learning process, students completed pre-questionnaires on self-regulated learning and self-authenticity to determine their initial conditions. The learning was conducted according to the Discovery Learning syntax, beginning with stimulation through videos and materials on Google Sites, identification, data collection using interactive worksheets, and data processing and verification through Educaplay games and Quizwhizzer quizzes. At the generalization stage, students formulated conclusions through Padlet.

At the end of the learning process, students conducted a reflection and completed the post-questionnaires to determine the changes after the treatment. In general, the learning process proceeded well, and students showed enthusiasm throughout the activities. The pre-questionnaire and post-questionnaire data were then used to analyze the improvement in self-regulated learning and self-authenticity using a paired sample t-test.

Table 1. Hypothesis Testing Results for the Improvement of Self-Regulated Learning

Paired Samples Test									
		Paired Differences							
		Mean	*Std. Deviation*	*Std. Error Mean*	*95% Confidence Interval of the Difference*		*t*	*df*	*Sig. (2-tailed)*
					Lower	*Upper*			
Pair 1	Pre_Angket - Post_Angket	-1.45000	9.74666	2.17942	-6.01158	3.11158	-.665	19	.514

As shown in the table, the Sig. value was 0.514 (>0.05). This indicated that there was no difference between the pre-questionnaire and post-questionnaire scores of Self-Regulated Learning. According to the researchers, this condition occurred because the improvement of Self-Regulated Learning required a gradual process and a relatively longer period of time. Nevertheless, throughout the learning process, students began to demonstrate the ability to organize and manage their learning activities through the implementation of Discovery Learning assisted by Google Sites.

Hypothesis testing for the improvement of self-authenticity was conducted using a paired sample t-test. The results are presented in the following table.

Table 2. Hypothesis Testing Results for the Improvement of Self-Authenticity

Paired Samples Test									
		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	*Std. Deviation*	*Std. Error Mean*	*Lower*	*Upper*	*t*	*df*	*Sig. (2-tailed)*
Pair 1	Pre_Angket_SA - Post_Angket_SA	-1.00000	10.54314	2.35752	-5.93434	3.93434	-.424	19	.676

Based on the test results, the Sig. (2-tailed) value was 0.676. This value was greater than 0.05, indicating that there was no difference between the pre-questionnaire and post-questionnaire scores of Self-Authenticity. According to the researchers, this condition occurred because the development of Self-Authenticity required an adaptation and habituation process that took place gradually over a longer period. In addition, the learning implemented had not fully involved collaborative activities that could encourage students to express themselves and communicate their opinions. Nevertheless, throughout the learning process, students began to demonstrate more active and confident attitudes through the implementation of Discovery Learning assisted by Google Sites.

Final Product Revision Stage

Based on the previous stage, improvements to the media were carried out on March 15, 2026. Technical problems were found when the QR Code was used in the learning media. Before the revision, the QR Code used had a limited active period, causing the link to become inaccessible after a certain period, which potentially hindered students from accessing the materials. After the revision, the QR Code was replaced using the generator on the Canva platform, which did not have an active-period limitation. This improvement made access more stable and allowed the media to be used continuously without time-related limitations.

Discussion

Research and information collecting Stage

Based on the results of interviews with five fifth-grade students at SDN 1 Tanjungsari, Blitar City, it was found that their interest in learning IPAS was still low because the materials were considered difficult and the learning process was still teacher-centered without the support of varied digital media. This condition was consistent with the finding that one-way learning could make students less interested in learning (N. Afifah et al., 2022). In addition, students were not accustomed to learning independently and therefore still depended on the teacher's explanations. This indicated that students' self-regulated learning was still inadequate because this ability was related to independence in managing the learning process (Fatih, 2025).

Students' self-confidence was also not optimal, as indicated by their lack of courage to express their opinions, which demonstrated low levels of self-authenticity. However, students were already familiar with digital devices and were interested in visual and interactive learning media, supported by adequate facilities and internet connectivity. The use of technology was known to improve students' learning experiences (Alfi et al., 2024). The use of appropriate learning models and digital media could maximize student

engagement and critical thinking skills (Fatih, 2025). In addition, learning activities involving discussions, group work, and interactive activities were proven to increase student participation and provide more meaningful learning experiences (Alfi et al., 2026). Discovery Learning assisted by digital media was also proven to improve students' self-regulated learning (Pinaruh & Atmaja, 2025). Therefore, the integration of Discovery Learning with Google Sites was considered relevant for addressing learning problems in the classroom.

Planning Stage

The planning process resulted in a Google Sites learning media plan that was developed in accordance with the CP and TP. The learning objectives included the abilities to understand (C2), classify (C3), and analyze (C4), indicating that the learning was designed gradually according to the students' level of thinking and was aligned with constructivist theory.

The implementation of Discovery Learning provided students with opportunities to discover concepts actively through systematic learning stages. This model was proven to improve Self-Regulated Learning because it encouraged students' independence and active participation (Pinaruh & Atmaja, 2025). In addition, the integration of Google Sites, Liveworksheets, Quizwhizzer, and Padlet was designed to make learning interactive and flexible. The use of interactive media was proven to increase interaction and students' interest in learning (Fatih & Alfi, 2021). The planning stage not only produced a product plan aligned with the CP and TP but also supported the development of students' self-regulated learning and self-authenticity.

Designing and Developing the Preliminary Product Stage

The designing and developing of the preliminary product stage was conducted by developing Google Sites-based media that could be accessed through a link. The media was packaged as a learning website containing a homepage, learning outcomes and objectives, human digestive system materials, and an evaluation section. The materials were presented sequentially and supported by videos, images, simple explanations, interactive worksheets based on Liveworksheets, Quizwhizzer quizzes, and a Padlet discussion space to increase student engagement.

This stage produced an initial learning media product that was ready to be tested. Student participation and ease of understanding the materials could be improved through the use of interactive and attractive technological media (Fatih, 2018).

Preliminary Field Testing Stage

The material validation showed that the Google Sites media was highly feasible and valid for testing because the materials were conceptually appropriate, relevant, and systematically presented. This finding was consistent with Tulljanah et al. (2025), who stated that high validity reflected the suitability of the materials with the curriculum and students' needs. The media and language validation also showed a very valid category with minor revisions. The media was considered attractive and interactive and was able to increase student engagement. The language used was considered clear and easy for students to understand. This was supported by Fatih (2023), who explained that the use of visual and interactive learning media could facilitate students' understanding of the materials while optimizing their interest in learning.

The recapitulation of the expert validation results obtained a very valid criterion. This result indicated that the media had met the feasibility criteria in terms of materials, display, and language and was feasible for testing. The teacher's assessment obtained a

feasible category because the media was considered helpful in delivering materials effectively and attractively (Adzkiya & Suryaman, 2021), although the accessibility aspect still needed to be adjusted to the conditions of the students' devices and internet networks.

Main Product Revision Stage

Based on the validation by language, material, and media experts, as well as the teacher's assessment, several improvements were made to refine the Google Sites-based media before further testing. In the material aspect, a glossary was added and the analytical questions were improved to make them more contextual. This was consistent with Bara et al. (2024), who stated that clear and contextual delivery of materials was very important. In the media aspect, user instructions were added so that students and teachers could more easily utilize the media features. This finding was reinforced by Adzkiya and Suryaman (2021), who stated that digital media required clear user guidelines.

In the language aspect, improvements were made to punctuation, the writing of foreign terms, and the emphasis of important sentences to make them easier to understand. Based on the teacher's assessment, the media size was adjusted to make it lighter and easier to access on devices with lower specifications. This was in line with Rismawati and Tyas (2025), who emphasized the importance of media suitability with users' device conditions.

Main Field Testing Stage

Based on the paired sample t-test, self-regulated learning obtained a significance value of 0.514 (>0.05), indicating that there was no significant difference between the pre-questionnaire and post-questionnaire scores. This indicated that the use of Google Sites had not been able to improve students' self-regulated learning. This condition could be influenced by the characteristics of self-regulated learning, which developed gradually and required continuous habituation (Sari & Fathurrahman, 2024). In addition, this variable belonged to the affective domain, which could not develop instantly and tended to be difficult to measure within a short period (Ayu Kusumawardani, 2025). Character education was implemented through habituation activities, exemplary behavior, and a supportive environment so that character development could take place optimally and continuously (Alfi et al., 2026).

The paired sample t-test results for self-authenticity also showed a significance value of 0.676 (>0.05), indicating that there was no significant improvement. Self-authenticity was related to the development of individual values, attitudes, and personality, which occurred continuously and influenced these aspects (Febriyanti et al., 2025). The study by Sa'adah et al. (2026) showed that self-authenticity developed more optimally through interactive and collaborative learning. Therefore, the limited social activities in this study also influenced the results. Students' character and self-identity could be optimally developed when they actively participated in meaningful and consistent activities that continuously supported the development of social skills (Alfi et al., 2025).

The MANOVA test obtained a significance value of 0.889 (>0.05), indicating that Google Sites-based media had not produced a significant effect on self-regulated learning and self-authenticity simultaneously. This result was influenced by the characteristics of both variables, which belonged to the affective domain, the limited duration of the study, and the lack of continuous and collaborative learning (Febriyanti et al., 2025; Sari & Fathurrahman, 2024). A supportive learning environment, habituation activities, and

students' active participation in continuous activities were important factors in the development of character and affective abilities (Alfi et al., 2026). The absence of a significant improvement was not caused by the ineffectiveness of the media, but rather by the complexity of the affective variables, the limited duration of the study, and the lack of continuous and collaborative learning.

Final Product Revision Stage

Improvements were made to the technical aspect of the QR Code. The previous QR Code had a limited active period, which potentially hindered students' access to the materials. After the revision, the QR Code was replaced using the Canva platform, which did not have an active-period limitation, making access more stable and sustainable. This improvement aimed to increase the accessibility and ease of use of the learning media. This was in line with Maulana (2025), who stated that QR Codes facilitated flexible access to learning materials and supported digital-based independent learning.

CONCLUSION

Based on the results and discussion of the study, it could be concluded that the Google Sites-based instructional media through the Discovery Learning model had been developed using the Borg and Gall model, which was simplified into seven stages. The resulting media was systematic, interactive, and appropriate to the characteristics of elementary school students. In terms of validity and feasibility, the learning media was categorized as very valid based on the assessments of the media expert (94%), material expert (95%), and language expert (98%), and was categorized as feasible based on the teacher's assessment (80%). The Google Sites-based media was feasible for use in the learning process with minor revisions.

The hypothesis testing results showed that the use of the media had not resulted in an improvement in Self-Regulated Learning (Sig. 0.514 > 0.05) or Self-Authenticity (Sig. 0.676 > 0.05). Simultaneously, the two variables also did not show a significant improvement (Sig. 0.889 > 0.05). Self-regulated learning was more supportive of independent learning because it emphasized students' ability to manage their learning processes independently, whereas self-authenticity developed more through social interaction and group learning, which allowed students to express themselves more openly. The limited duration of the study, as well as the learning design that had not fully balanced independent and collaborative activities, also influenced the results of the study. Although the media was valid and feasible for use, improvements in self-regulated learning and self-authenticity required continuous learning as well as the integration of independent and collaborative learning strategies.

REFERENCES

Adzkiya, D. S., & Suryaman, M. (2021). Penggunaan Media Pembelajaran Google Site dalam Pembelajaran Bahasa Inggris Kelas V SD. *Educate : Jurnal Teknologi Pendidikan*, *6*(2), 20–31. https://doi.org/10.32832/educate.v6i2.4891.

Afifah, N., Kurniaman, O., & Noviana, E. (2022). Pengembangan Media Pembelajaran Interaktif pada Pembelajaran Bahasa Indonesia Kelas III Sekolah Dasar. *Jurnal Kiprah Pendidikan*, *1*(1), 33–42. https://doi.org/10.33578/kpd.v1i1.24.

Afifah, S., Mudzakir, A., & Nandiyanto, A. B. D. (2022). How to Calculate Paired Sample t-Test using SPSS Software: From Step-by-Step Processing for Users to the Practical Examples in the Analysis of the Effect of Application Anti-Fire Bamboo Teaching

Materials on Student Learning Outcomes. *Indonesian Journal of Teaching in Science*, *2*(1), 81–92. https://doi.org/10.17509/ijotis.v2i1.45895.

Alfi, C., Fatih, M., Cholifah, N., & Iswan, M. (2024). Pengembangan Augmented Reality Book Sebagai Upaya Peningkatan Kemampuan Visual Spasial Siswa SD di Kabupaten Blitar. *Jurnal Pendidikan : Riset Dan Konseptual*, *8*(2), 331. https://doi.org/10.28926/riset_konseptual.v8i2.953.

Alfi, C., Fatih, M., Pratama, F. R. P., Arista, T., Jannah, L., & Sari, Y. W. (2026). Optimalisasi Karakter Berpikir Kritis Santri melalui Internalisasi Nilai Kepekaan Sosial di Pondok Pesantren Raudlatul Hanan, Kanigoro, Blitar. *Aksi Nyata : Jurnal Pengabdian Sosial Dan Kemanusiaan*, *3*(1), 266–279. https://doi.org/10.62383/aksinyata.v3i1.2925

Alfi, C., Kholida, N. M., Fauzi, F. I., & Putri, A. A. (2025). Membentuk Pribadi Hebat: Penguatan Nilai Karakter Anak Melalui Social Project Humanis. *Jurnal Pengabdian Masyarakat Bangsa*, *3*(5), 2157–2165.

Ayu Kusumawardani, F. (2025). Implementasi Penilaian Afektif pada Mata Pelajaran PAI di SMP Negeri 1 Palimanan Cirebon. *Risalah: Jurnal Pendidikan Dan Studi Islam*, *11*(2), 916–926. https://doi.org/10.31943/jurnal_risalah.v11i2.1381.

Bara, C. B., Yulianti, & Sulistyowati. (2024). Pengembangan Media Pembelajaran Berbasis Google Sites pada Muatan Pelajaran Pendidikan Pancasila Kelas IV SD. *Jurnal Basicedu*, *8*(4), 2672–2682. https://doi.org/10.31004/basicedu.v8i4.8185.

Diandita, Y. N., Saputra, R., & Zulfiati, H. M. (2023). Pengembangan Media Pembelajaran Berbasis Web Google Sites pada Pembelajaran IPS Sekolah Dasar. *Didaktik : Jurnal Ilmiah PGSD FKIP Universitas Mandiri*, *9*(2), 3339–3347.

Fatih, M., & Alfi, C. (2021). Pengembangan Monopoli Karakter Berbasis Permainan Simulasi sebagai Upaya Peningkatan Kecerdasan Sosioemosi Siswa Sekolah Dasar di Kota Blitar. *Jurnal Pendidikan : Riset Dan Konseptual*, *5*(1), 51. https://doi.org/10.28926/riset_konseptual.v5i1.315.

Fatih, M. (2018). Pengembangan Media Pembelajaran Saintifik berbasis Multimedia melalui Model Discovery Learning (Studi pada Tema Selamatkan Mahkluk Hidup Kelas 6 SDN Kepanjenkidul 2 Kota Blitar). *Jurnal Pendidikan : Riset Dan Konseptual*, *2*(2), 137. https://doi.org/10.28926/riset_konseptual.v2i2.42.

Fatih, M. (2023). Pengembangan Komik Narasi untuk Meningkatkan Keterampilan Menulis dan Membaca Siswa Kelas V SDN Sananwetan 3 Kota Blitar. *BRILIANT: Jurnal Riset Dan Konseptual*, *8*(3). https://doi.org/10.28926/briliant.v8i3.

Fatih, M. (2025). Interaction Problem Based Learning of AI Assisted on Digital Literacy and Critical Thinking Abilities. *Journal of Development Research*, *9*(1), 164–173. https://doi.org/10.28926/jdr.v9i1.452.

Fatih, M., Khomaria, A., Aswitama, L. D., Latif, N. Al, & Hidayat, M. M. (2023). Flip Book Digital Berbasis Aughmented Reality Materi Balok dan Kubus Siswa Kelas V SDN Sumberjo 01 Kabupaten Blitar. *Jurnal Pendidikan : Riset Dan Konseptual*, *7*(3), 524. https://doi.org/10.28926/riset_konseptual.v7i3.770.

Febriyanti, A., Fidinillah, A. F., Niswati, A. K., Zuhri, S., & Hidayat, W. (2025). Identifikasi Kesulitan Guru PAI dalam Pelaksanaan Penilaian Afektif di SDN Kahal Kota Cilegon. *Karakter: Jurnal Riset Ilmu Pendidikan Islam*, *2*(2), 1–10.

Gustiani, S. (2019). Research and Development (R&D) Method as a Model Design in Educational Research and its Alternatives. *Holistics Journal*, *11*(2), 12–22.

Kementerian Pendidikan Dasar dan Menengah. (2025). *Capaian Pembelajaran pada Pendidikan Anak Usia Dini, Jenjang Pendidikan Dasar, dan Jenjang Pendidikan Menengah*.

Maulana, A. R. (2025). Pengembangan Media Flashcard Terintegrasi Qr-Code pada Materi Keberagaman Budaya di Indonesia untuk Meningkatkan Hasil Belajar Siswa Kelas IV Sdi Surya Buana. *Jurnal Pendidikan Guru Madrasah Ibtidaiyah*, *4*(1), 49–57. http://urj.uin-malang.ac.id/index.php/ijpgmi

Nartova-Bochaver, S., Reznichenko, S., & Maltby, J. (2021). The Authenticity Scale: Validation in Russian Culture. *Frontiers in Psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.609617.

Pinaruh, I. G. A., & Atmaja, I. M. D. (2025). Upaya Meningkatkan Kemampuan Self-Regulated Learning Melalui Penerapan Discovery Learning Berbantuan Google Sites. *Pendas : Jurnal Ilmiah Pendidikan Dasar*, *10*(2), 211–222.

Putra, A. P., Muhisom, M., Pangestu, D., & Rapani, R. (2025). Pengaruh Model Discovery Learning Berbasis Media Aplikasi Wordwall terhadap Hasil Belajar Peserta Didik Kelas IV pada Mata Pelajaran IPAS di Sekolah Dasar. *PEDAGOGIKA: Jurnal Pedagogik Dan Dinamika Pendidikan*, *13*(2), 412–420. https://doi.org/10.30598/pedagogikavol13issue2page412-420.

Rismawati, D. A., & Tyas, D. N. (2025). Pengembangan Media Pembelajaran Interaktif Proses Sistem Pencernaan (Prosispen) Berbasis Google Sites untuk Meningkatkan Hasil Belajar Peserta Didik Kelas V SDN Tambangan 02 Kota Semarang. *JagoMIPA: Jurnal Pendidikan Matematika Dan IPA*, *5*(2), 324–337. https://doi.org/10.53299/jagomipa.v5i2.1376.

Sa'adah, S. A. K., Fatih, M., & Wafa, K. (2026). The Effect of the TGT Model Using the Snake and Ladder Game Using A Wordwall Quiz Application Energy Transformation Material Increasing Science Literacy and Self-Authenticity Fourth-Grade Students. *Journal of Practice Learning and Educational Development*, *6*, 225–234. https://doi.org/10.58737/jpled.v6i1.725.

Sari, G. K., & Fathurrahman, M. (2024). Pengembangan LKPD Berbasis Augmented Reality sebagai Media Pembelajaran IPAS untuk Meningkatkan Kemampuan Berpikir Kritis Kelas IV Sekolah Dasar. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, *9*(2), 2478–2491.

Tulljanah, R., Suhendra, Y., Ramadhini, K., Kharisma, A., Apfani, S., & Dahliana, D. (2025). Validitas Media Pembelajaran Video Interaktif Berbantuan Edpuzzle pada Mata Pelajaran Pendidikan Pancasila Kelas V SDN 20 Indarung. *Jurnal Pendidikan Tambusai*, *9*(2), 23344–23348.

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, *41*(2), 64–70. https://doi.org/10.1207/s15430421tip4102_2.