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DEVELOPMENT OF GOSI LEARNING MEDIA TO IMPROVE LEARNING INTEREST AND ACHIEVEMENT OF 8TH GRADE JUNIOR HIGH SCHOOL STUDENTS

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Abstrak
Minat dan prestasi belajar siswa pada mata pelajaran matematika di jenjang SMP masih belum maksimal dengan ketercapaian KKTP yang masih rendah. Hal ini diakibatkan oleh kurangnya media pembelajaran yang menarik, mudah digunakan, dan relevan dengan gaya belajar peserta didik. Selain itu, pembelajaran di dalam kelas juga masih bersifat satu arah dan kurang interaktif. Penelitian ini dilakukan unutk mengatasi rendahnya minat dan prestasi belajar siswa pada mata pelajaran matematika. Melalui model penelitian dan pengembangan ADDIE, dikembangkan media pembelajaran GOSI (Google Site Berdiferensiasi) yang diukur validitas, kepraktisan dan efektivitasnya dalam meningkatkan minat dan prestasi belajar siswa SMP kelas VIII. Penelitian ini menggunakan instrumen LORI, UEQ, angket minat belajar dan tes prestasi belajar matematika yang dikembangkan. Data dianalisis menggunakan statistik deskriptif dengan efektivitas media GOSI diukur menggunakan N-Gain Score. Hasil penelitian menunjukkan media GOSI. Penelitian ini menghasilkan media pembelajaran GOSI yang valid menurut ahli media, ahli materi, dan ahli pembelajaran. Berdasarkan pengujian bersama para siswa dan guru, media pembelajaran GOSI dinilai praktis dengan pemenuhan nilai above average pada setiap aspek UEQ. Hasil pengujian efektivitas dengan N-Gain Score menunjukkan media pembelajaran GOSI efektif dalam meningkatkan minat dan prestasi belajar matematika siswa SMP kelas VIII dengan rata-rata peningkatan sedang. Penelitian selanjutnya dapat mengeksplorasi pemanfaatan pendekatan pembelajaran berdiferensiasi ke dalam suatu media pembelajaran yang relevan dengan karakteristik dan kebutuhan siswa pada mata pelajaran lainnya.

Kata Kunci: Google Sites; Pembelajaran Berdiferensiasi; Minat Belajar; Prestasi Belajar

Abstract
Student interest and achievement in mathematics at the junior high school level are still not optimal, with low KKTP (National Competency-Based Curriculum) attainment. This is due to a lack of learning media that is interesting, easy to use, and relevant to the learning styles of students. In addition, classroom learning is still one-way and lacks interactivity. This study was conducted to address the low interest and achievement of students in mathematics. Through the ADDIE research and development model, GOSI (Google Site Berdiferensiasi) learning media was developed and measured for its validity, practicality, and effectiveness in increasing the interest and learning achievement of eighth-grade junior high school students. This study used LORI, UEQ, learning interest questionnaires, and mathematics achievement tests that were developed. The data were analyzed using descriptive statistics, with the effectiveness of the GOSI media measured using the N-Gain Score. The results showed that the GOSI media was valid according to media experts, subject matter, and learning experts. Based on joint testing with students and teachers, the GOSI learning media was considered practical, with above-average scores in every aspect of the UEQ. The results of the effectiveness test using the N-Gain Score showed that the GOSI learning media was effective in increasing the interest and achievement of 8-grade junior high school students in mathematics, with a moderate average increase. Further research can explore the use of differentiated learning approaches in learning media that are relevant to the characteristics and needs of students in other subjects.

Keywords*: Google Sites Differentiated Instruction; Learning Interest; Student Achievement*

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INTRODUCTION

The continuous development of technology cannot be separated from the field of education. This condition arises because technology has become an essential aspect that must be utilized by individuals to address the challenges of globalization, including efforts to improve the quality of education (Septian, 2022). The education sector is closely related to the concept of educational technology, which is defined as a combination of theoretical foundations and practical applications in designing, developing, and utilizing technology to support and enhance the effectiveness of the learning process (Heggart et al., 2025). In the 21st century, globalization, technological advancement, and the rapid growth of information demand higher levels of creativity from individuals, particularly teachers in carrying out their professional roles (Rahayu et al., 2022). One of the subjects most affected by technological development is mathematics education.

Within the current Indonesian curriculum, mathematics is the subject with the highest instructional hours compared to other subjects (Ningrum et al., 2025). Mathematics is a fundamental field of knowledge that continues to develop rapidly in terms of concepts, content, and applications in daily life. Therefore, mathematics learning occupies a strategic position and plays an important role in efforts to improve educational quality. Nevertheless, mathematics is still frequently perceived as a difficult and intimidating subject by many students. This perception becomes stronger when students are required to solve problems that demand conceptual understanding and the ability to relate mathematics to real-life contexts, which ultimately affects their interest in learning. Interest refers to an individual's acceptance of a relationship between oneself and something external, which influences students' level of understanding in mathematics (Suriarti, 2023). Learning interest reflects a sense of attraction or willingness to learn that is perceived as beneficial and satisfying for the learner (Widiati, 2022). Mathematics, in particular, requires a strong learning interest to achieve and improve academic performance (Yazid et al., 2020).

Observations conducted at SMP Negeri 2 Kuta Utara indicate that students' interest in mathematics learning remains relatively low. This condition is reflected in questionnaire data showing that 66.7% of students have low interest in learning mathematics, while only 33.3% demonstrate interest. Students tend to perceive mathematics as boring and unattractive due to the difficulty of understanding the material. In addition, during classroom learning activities, many students show a lack of focus on the material delivered by the teacher. This situation results in low motivation when students are assigned tasks, leading to a lack of enthusiasm and interest in solving mathematical problems. Other impacts are evident in discussion activities, where most students tend to be passive and less actively involved. Students also appear to give up easily when facing mathematical problems. These issues affect learning achievement, as only 23.3% of students have met the minimum competency criteria (KKTP), 45% occasionally meet the criteria, and 35% have not yet achieved the required standard. Interviews with a mathematics teacher of grade VIII at SMP Negeri 2 Kuta Utara revealed that increasing students' interest in mathematics remains a major challenge. Although the teacher has attempted to address this issue through group learning and the use of various instructional media to encourage student engagement, learning outcomes have not yet been optimal. Some students still fail to meet the school's minimum mastery criterion of 66. According to the teacher, one of the main challenges faced by students in learning mathematics is their low learning interest, as mathematics is perceived as a very difficult subject.

Based on the identified problems and conditions at SMP Negeri 2 Kuta Utara, there is a need for instructional media that utilize technology and align with curriculum development as well as the characteristics of students in the digital era. Innovative and adaptive learning media are expected to enhance the effectiveness of the learning process. The use of technology in learning enables material to be presented in more engaging visual formats and allows students to access learning resources anytime and anywhere without limitations of space and time (Parwati et al., 2018). One form of innovative and interactive instructional media is learning media based on Google Sites. Through Google Sites, teachers can organize and present various learning components, such as instructional materials, assignments, learning objectives, and learning pathways. Mathematics content can be delivered in multiple formats, including text, images, and audio. Furthermore, the integration of GeoGebra within Google Sites can support the visualization of mathematical concepts, making learning more engaging and easier for students to understand. This medium is also highly accessible, as students do not need to download any applications and only require a device connected to the internet (Adzkiya & Suryaman, 2021). In this study, a differentiated Google Sites-based learning media was developed, named "GOSI," which stands for Differentiated Google Sites. This media is designed to diagnose and accommodate diverse student learning styles, including visual, auditory, and kinesthetic preferences. The integration of differentiated learning principles is expected to foster students' learning interest and subsequently improve their academic achievement.

The Merdeka Belajar curriculum emphasizes differentiated learning. According to Tomlinson (2017), differentiation involves adjusting classroom learning processes to meet students' diverse learning characteristics. This approach is designed to address variations in students' readiness, profiles, learning styles, and interests (Faiz et al., 2022). Previous studies have shown that the development of instructional media using Google Sites has been rated as feasible for classroom implementation and has significantly improved student learning outcomes (Islanda & Darmawan, 2023). Other studies have also reported very high levels of increased learning interest following the use of Google Sites-based instructional media (Kuway et al., 2023). In addition, research related to differentiated learning indicates that instructional media integrating differentiated approaches have met feasibility standards and are considered attractive for students (Prabawati et al., 2024). Therefore, this study proposes the development of Google Sites-based instructional media integrated with a differentiated learning approach for mathematics learning among eighth-grade junior high school students. This approach is intended as an alternative effort to enhance students' learning interest and achievement while offering innovation in the learning process. Google Sites-based media provide various benefits and ease of use, including integration with other Google-developed applications. Moreover, media developed using the ADDIE model have received positive feedback from students (Pangesti & Rahayu, 2025). Based on this rationale, the present study aims to develop and evaluate the quality of Differentiated Google Sites (GOSI) learning media by examining its validity, practicality, and effectiveness in improving learning interest and academic achievement of eighth-grade junior high school students.

METHOD

The development of differentiated Google Sites–based learning media was conducted to enhance learning interest and academic achievement of eighth-grade students at the junior high school level by employing the ADDIE development model. The ADDIE model consists of five main stages, namely needs analysis, design, product development, classroom implementation, and evaluation to assess the quality of the developed media. This research and development study was carried out at SMP Negeri 2 Kuta Utara, located on Jalan Made Bulet Number 48, Dalung, North Kuta District, Badung Regency, Bali Province. The research activities were conducted over a four-month period,

from June 2025 to September 2025. The research subjects involved several key stakeholders who played important roles in the development process, including subject matter experts, media experts, and learning design experts who served as product validators. In addition, mathematics teachers and eighth-grade students of SMP Negeri 2 Kuta Utara were involved as media users during the implementation stage. The subjects were selected through randomization of student classes, resulting in an experimental group that was observed and given treatment through the implementation of Google Sites–based learning media (GOSI) in mathematics instruction.The study employed several research instruments, including the Learning Object Review Instrument (LORI) to assess media validity, learning design evaluation instruments, and practicality assessment instruments using the User Experience Questionnaire (UEQ) (Arimbawa et al., 2024). The effectiveness of the product in improving students' learning interest and academic achievement was measured using a learning interest questionnaire and mathematics achievement tests. The validity of the differentiated Google Sites learning media was categorized into content or material validity, visual or media validity, and instructional design validity. Validity assessments were conducted by experts, practicality was evaluated by teachers and students, and media effectiveness was assessed through implementation in one student class. The overall measurement results were analyzed using a Likert scale, and the obtained scores were converted into percentages. The feasibility of the developed media was determined by comparing the total percentage scores with the percentage criteria presented in Table 1.

Table 1. GOSI Media Validity Percentage Criteria

Percentage	Validity Level
90-100%	Very Valid
75-89%	Valid
60-74%	Fairly Valid
55-59%	Less Valid
0-54%	Not Valid

Data analysis of product practicality was conducted by collecting respondents' answers from the UEQ questionnaire and processing them using the UEQ Data Analysis Tool. The practicality of the product was indicated by each measured UEQ aspect achieving at least an above-average score. The effectiveness of the GOSI media was analyzed by comparing gain scores obtained from pre-test and post-test activities, as well as by comparing students' post-test achievement with the Learning Objective Achievement Criteria (KKTP). For Grade VIII Mathematics at SMP Negeri 2 Kuta Utara, the KKTP is set at 66. The learning media developed in this study were considered effective if at least 50% of students achieved mastery in the post-test results. Improvements in students' interest and learning achievement at the Grade VIII level were measured using the N-gain score. Gain scores were classified as high when the N-gain value was ≥ 0.7, low when it was < 0.3, and moderate when the N-gain value ranged between 0.3 and 0.7, in accordance with the criteria proposed by Hake (1998).

RESULT

The development of the GOSI (Differentiated Google Sites) learning media was carried out using the ADDIE development design, beginning with the analysis stage. The analysis of student characteristics indicated that most students already own personal smartphones. Students tend to prefer learning activities that are varied, simple, and flexible, allowing them to learn according to their individual readiness. These conditions support the importance of developing learning media based on a differentiated learning approach. Furthermore, the analysis of subject matter and learning resources provided an overview of the expected learning outcomes and the needs for mathematics learning resources in schools, which emphasized the necessity of developing learning

media that are easily accessible to all students. In the design stage, a prototype of the GOSI learning media was developed, along with an evaluation of the quality of the items used in the instruments for measuring the quality of the GOSI learning media. At this stage, the product was considered ready to be developed into a concrete form using Google Sites, supported by various additional software tools. The development stage was then conducted to execute and integrate all learning materials and content into the GOSI learning media in accordance with the design or storyboard prepared in the previous stage.

The GOSI learning media can be accessed through various internet-connected devices via the following link: https://bit.ly/gosimatematika. Figure 2 presents an example of the interface of the developed GOSI learning media.

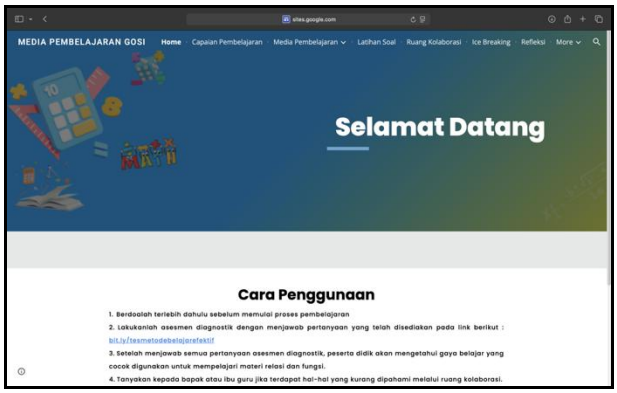

Figure 2. GOSI Learning Media

The learning media designed for visual-type students include an interactive flipbook feature enriched with numerous illustrations covering the topics of relations and functions, linear equations, and statistics (three chapters of material). Each topic and its subtopics are presented with enhanced visual support, incorporating more attractive designs and a wider combination of colors. The developed flipbook interface is also adaptive and provides a full-screen viewing option, allowing the content to appear more engaging and to deliver a more satisfying user experience. Figure 3 illustrates an example of the opening display of the visual-type learning media.

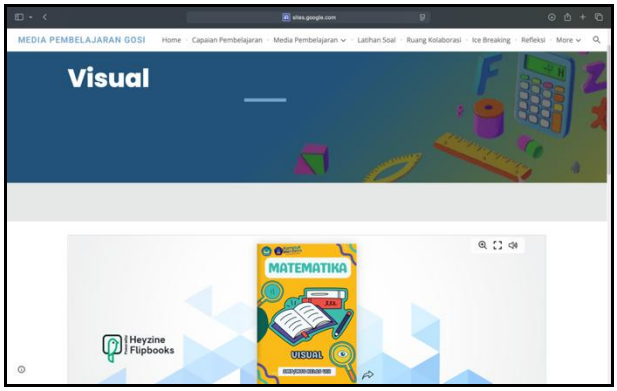

Figure 3. Visual Media Display

The learning media interface for auditory-type students is equipped with a flipbook that integrates background audio or voice-based explanations to support students' comprehension of the presented material. The flipbook display in the auditory learning media includes interactive buttons that, when activated, play recorded audio from the developer to provide guidance or explanations of the learning content. This feature enables students to listen to explanations similar

to those delivered by a teacher, aligning with their preferred and most effective learning style. An example of the auditory learning media interface is shown in Figure 4.

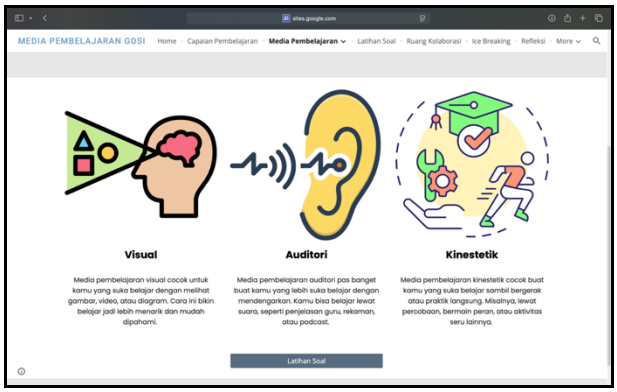

Figure 4 Auditory Media Display

Students with learning style assessment results that tend toward or are predominantly kinesthetic can access the kinesthetic learning media menu, which contains material packaged in an interactive flipbook. The advantage of kinesthetic media for students and users is the integration of interactive GeoGebra media, which can serve as a simulation tool for the material being studied. An example of the media display for kinesthetic students can be seen in Figure 5.

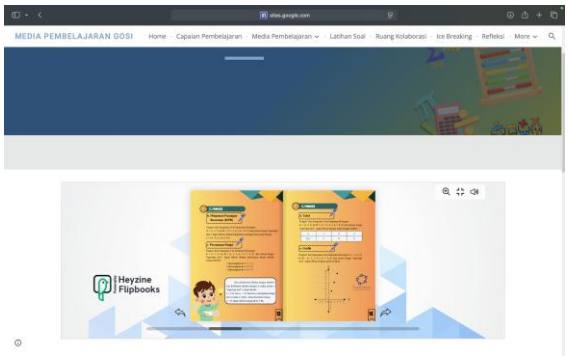

Figure 5. Kinesthetic Media Display

During the development phase, GOSI learning media products were tested in terms of visual or media, learning design, and content or materials with experts. This testing lasted one to two weeks and involved media, materials, and learning experts from Ganesha University of Education. Tables 4, 5, and 6 below show the results of the GOSI learning media validity testing.

Table 4. Validity of GOSI Learning Media

Aspect	Score	Percentage
Presentation Design	5	100%
Accessibility	10	100%
Reusability	5	100%
Standards Compliance	4	80%
Total	24	96%

Based on the data presented in Table 4, the media expert evaluated the GOSI learning media and found that the aspects of presentation design, accessibility, and reusability achieved the highest percentage scores, while the user interaction aspect obtained the lowest score, indicating the need for improvement in interactive features and providing direction for future media development. Overall, the total score reached 83%, which places the validity of the GOSI learning media in the valid category, meaning that it is feasible for use in the learning process with minor revisions. The media expert also provided several recommendations, including replacing Times

New Roman with sans-serif fonts such as Arial, improving the use of colors and images on the cover, and prioritizing video content in the auditory learning media.

Table 5. Validity of GOSI Learning Media Learning Design

Aspect	Score	Percentage
Competence	20	100%
Clarity	10	100%
Interactivity	9	90%
Evaluation	10	100%
Total	49	98%

The results presented in Table 5 indicate that most of the measured instructional design aspects achieved perfect percentage scores, with interactivity being the only aspect that obtained a score of 90%. These findings reflect an overall very high level of validity, leading to the conclusion that the GOSI learning media is highly feasible for use without requiring revisions from the instructional design perspective. The results of this study may serve as a reference for future research, as the use of Google Sites has been shown to provide excellent instructional design validity. In addition, the instructional design expert suggested ensuring the readability of all text elements in the GOSI media, as some texts, particularly those displayed in the learning objectives section, were not clearly legible.

Table 6. Validity of GOSI Learning Media Materials

Aspect	Score	Percentage
Quality of content/material	20	100%
Learning objectives	20	100%
Feedback and adaptation	5	100%
Motivation	5	100%
Total	50	100%

It can be observed that each aspect of material validity achieved a perfect percentage criterion. These results indicate an excellent level of material validity, meaning that the GOSI learning media is considered highly feasible for use without revision from the perspective of the evaluated content. The findings of this study may serve as a reference for other relevant research in the development of Google Sites–based learning media. The material expert provided several suggestions for improving the GOSI media, including refining the trigger questions, revising the conceptual explanation of surjective functions, adding ice-breaking activities at the beginning of new subtopics within the same meeting, and providing practice exercises at the end of each chapter. Therefore, future researchers are encouraged to consider these aspects for refinement, particularly regarding the accuracy of content concepts, the quality of trigger questions and ice-breaking activities, and the structured organization of learning materials.

Meanwhile, the practicality of the GOSI learning media was measured using the UEQ instrument completed by teachers and students as product trial subjects prior to its implementation in the effectiveness testing phase with Grade VIII students. The practicality test was conducted both individually and in group settings, and the analyzed results of the GOSI media practicality assessment are presented in Table 7.

Table 7. Results of the Practicality Test of GOSI Learning Media

Aspect	Average	Description
Attractiveness	2.14	Very good
Clarity	1.91	Good
Efficiency	1.80	Good
Accuracy	1.80	Very good
Stimulation	2.18	Very good
Novelty	2.11	Very good

It can be shown that all assessed aspects have met the minimum criteria above the average score, falling within the good to very good categories, with the stimulation aspect achieving the highest average score and the efficiency and dependability aspects obtaining the lowest average scores; however, the overall results indicate that the product is practical and suitable for use as a learning medium for both students and teachers at the junior secondary school level. The effectiveness testing of the Differentiated Google Sites learning media (GOSI) was conducted with 38 Grade VIII students at SMP Negeri 2 Kuta Utara and was determined through improvements in the measured variables based on comparisons between pre-test and post-test scores, which were further analyzed using gain scores, with the results of the effectiveness testing carried out during the implementation and evaluation stages presented in Table 8.

Table 8. Results of the GOSI Learning Media Effectiveness Test

Statistic	Variable	
	Learning Interest	**Learning achievement**
Minimum Pre-Test Score	53	54
Maximum Pre-Test Score	80	81
Minimum Post-Test Score	68	70
Maximum Post-Test Score	94	96
Average Pre-Test Score	67,24	70,39
Average Post-Test Score	82,34	86,78
Gain Score	0,454	0,529
Criteria	Moderate	Moderate

The gain scores for the average pre-test and post-test results were 0.454 for the learning interest variable and 0.529 for students' learning achievement. Both gain scores fall within the moderate category, indicating a moderate improvement in students' learning interest and learning achievement. In relation to the achievement of the Minimum Learning Achievement Criteria (KKTP), the results show that all students involved as subjects in the field trial obtained scores exceeding the minimum mastery criterion of 66. These findings indicate that the developed GOSI media has been evaluated as effective by the students. Based on the decision criteria established in the previous chapter, it can be concluded that the differentiated Google Sites learning media developed in this study is effective in improving learning interest and learning achievement in mathematics among Grade VIII students at SMPN 2 Kuta Utara.

DISCUSSION

GOSI developed through the ADDIE research and development procedure has been shown to improve both learning interest and mathematics achievement among Grade VIII students. These findings indicate that integrating differentiated learning into the design of digital learning media is able to create a more adaptive and meaningful learning experience. In the context of 21st-century education and the implementation of the Merdeka Curriculum, these results affirm the relevance of personalization approaches and technology-based learning.

The media validity testing indicates that the developed media meets most of the quality criteria for digital learning media (Arsyad et al., 2024). Media experts assessed that the validity of GOSI fulfills the principles of visual clarity and ease of access, which are important indicators in the development of digital-based learning media (Mayer, 2020). In addition, the high score in the reusability aspect shows that this product has flexibility and can be utilized in various learning conditions according to students' needs (Sitaman, 2023). The high accessibility percentage indicates that GOSI enables learners to adjust their learning experiences, including material selection, equal access, content repetition, and preferred modes of participation in learning activities (Afonso et al., 2025). Meanwhile, the high presentation design score reflects the quality

of the displayed content, which is consistent with similar studies that report strong results in presentation design aspects (Romero-Hall, 2020).

Similar developments using the ADDIE model have also produced Google Sites–based media with a differentiated learning approach in cultural education, which were validated as appropriate by content experts (Mahendra & Rachmadyanti, 2024). Previous studies also provided relevant suggestions, particularly regarding font size and type to improve text readability. Other studies reported high content validity in Google Sites–based media, indicating that the materials were structured according to established theories and aligned with the developed instructional devices (Lukum et al., 2022). High content validity has also been found in Google Sites learning media developed for different subjects (Aprilianto & Sulistiyo, 2025; Muliani et al., 2023). Furthermore, content validity testing in other Google Sites–based media that examined content quality aspects showed that such media were appropriate for use and presented materials that were relevant to diverse student characteristics (Andriani & Junaedi, 2025). Therefore, the content validity results of GOSI are consistent with previous studies and can be considered valid from the perspective of subject-matter experts.

The practicality of the GOSI learning media shows that the aspects of attractiveness, stimulation, and novelty achieved high scores in the very good category. Practicality is considered essential because even a valid and well-designed medium may be ineffective if it is difficult for users to operate (Fatmasari & Sodiq, 2023; Husain et al., 2025). The practicality test results of GOSI are in line with theories emphasizing the benefits of attractiveness, stimulation, and novelty in learning media, which positively influence student development. Appropriate stimulation has been shown to positively affect students' learning interest and attitudes, leading to constructive learning behaviors (Rassameethes et al., 2025). The novelty aspect, which was rated very highly by GOSI users, is also associated with positive impacts, as continuous exposure to new learning experiences is important for fostering motivation and learning interest (Schmidt & Huang, 2022). Likewise, the high attractiveness score aligns with studies reporting that appealing learning media positively affect students' academic achievement (Syifa et al., 2023). Other research has also shown that Google Sites–based learning media were perceived very positively by students and teachers, resulting in high attractiveness ratings (Widyawati & Rindrayani, 2025). Thus, the practicality results indicate that GOSI is suitable for use as a supporting learning medium for both teachers and students.

The effectiveness of GOSI in improving students' learning interest is supported by various studies related to differentiated learning and its influence on student motivation. Differentiation is commonly implemented through content, process, and product, as well as through integration with other instructional models (Achmad et al., 2024). Differentiated learning is also recognized as an approach in which teachers adapt, modify, organize, and adjust instructional methods to address the diverse needs of students in heterogeneous classrooms (Magableh & Abdullah, 2022). Implementation results often show that students demonstrate positive attitudes toward differentiated learning (Jose & Mathew, 2025). In relation to Google Sites, previous studies have reported that Google Sites–based media positively influence students' learning interest, as they make learning more engaging and encourage active participation (Aprilia et al., 2025). Other literature reviews in mathematics education also indicate that Google Sites increases students' attention and interest, thereby enhancing their motivation to learn mathematics (Ubaidi et al., 2023).

The use of Google Sites combined with differentiated learning principles also has a positive impact on students' learning achievement (Iskandar, 2025). The application of differentiated

learning in instructional media has been recommended in previous studies due to its influence on academic outcomes (Nurlaili et al., 2023). Differentiated instruction is grounded in constructivist theory and considers individual student characteristics. In addition, the concepts of the zone of proximal development (ZPD) and scaffolding are highly relevant, as differentiated learning seeks to optimize students' potential while accounting for individual abilities (Wibowo et al., 2025). Other studies have similarly reported that differentiation principles significantly improve students' mathematics achievement (Rijal et al., 2025). Teachers have also noted higher academic performance supported by increased learning independence and enthusiasm (Kalinowski et al., 2024). Further studies indicate that experimental groups exposed to differentiated learning achieved higher learning outcomes compared to control groups at the junior secondary level (Mohamed et al., 2025; Rajeh Alsalhi et al., 2021). Research focusing on the development of Google Sites media through the ADDIE model has likewise demonstrated improvements in student achievement, attributed to the platform's ease of use and high flexibility (Ni Made Dina Rahmawati et al., 2024). Additionally, Google Sites has been found to enhance students' critical thinking skills, which contribute to improved learning achievement across educational levels (Kori Sundari et al., 2024; Susanti et al., 2023). Therefore, the GOSI learning media developed in this study is consistent with existing research and supports its effectiveness in improving students' learning interest and achievement.

Although the findings indicate that differentiated Google Sites media (GOSI) is effective in improving learning interest and achievement with moderate gain scores, this study has several limitations. The research design and ADDIE development model were implemented only within a single school involving a limited number of teachers and experts, which may restrict broader generalization. In addition, the study focused solely on learning interest and learning achievement as indicators of media effectiveness, while other influencing factors may exist and warrant further exploration. Moreover, not all expert suggestions for improving the GOSI media could be fully implemented, which may serve as a reference for future development of similar learning media..

CONCLUSION

The Differentiated Google Sites learning media, abbreviated as GOSI, developed in this study serves as a supporting tool for mathematics learning activities aimed at addressing the issues of low learning interest and achievement among Grade VIII junior secondary school students. Through the integration of differentiated learning principles, the developed media aligns with students' characteristics, while the engaging content presentation contributes to improving the quality of mathematics learning at the junior secondary level. The results of expert evaluations involving media experts, subject-matter experts, and instructional design experts indicate that GOSI meets the criteria of very high validity. The practicality of the media, measured using the User Experience Questionnaire (UEQ), falls into the practical category, with the aspects of attractiveness, dependability, stimulation, and novelty rated as very good, while the aspects of clarity and efficiency are rated as good. In terms of students' learning interest, the average pre-test score was 67.24 and increased to an average post-test score of 82.34, with an N-Gain score of 0.529, which falls into the moderate improvement category. Similarly, for learning achievement, the average pre-test score of 70.39 increased to an average post-test score of 86.67, with an N-Gain score of 0.529, also categorized as moderate. These findings indicate that the developed GOSI learning media is effective in improving both learning interest and learning achievement of Grade VIII junior secondary school students in mathematics. Future studies are expected to further explore and consider differentiated learning as an effective pedagogical approach to be integrated into the development of learning media.

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