

The Effectiveness Of Google Classroom-Based Online Learning Toward Eighth-Grade Students' Self-Efficacy At Smp Negeri 1 Kisaran

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Abstract—This study aims to determine the effectiveness of online learning using Google Classroom reviewed from the self-efficacy of eighth grade students at SMP Negeri 1 Kisaran. This research used a qualitative descriptive approach with questionnaire techniques as the primary instrument. The subjects consisted of students of class VIII-1 SMP Negeri 1 Kisaran. The results indicated that the self-efficacy score reached 78.8%, categorized as effective. Google Classroom contributed positively to students' learning motivation, confidence, participation, and learning independence in online learning environments. The findings also reveal that digital learning platforms significantly support student engagement and academic performance when accompanied by strong self-efficacy. Therefore, Google Classroom can be considered an effective online learning medium in junior high school education.

Keywords: Google Classroom; Online Learning; Self Efficacy; Learning Effectiveness; Junior High School

1. INTRODUCTION

The rapid development of information and communication technology in the digital era has significantly transformed many aspects of human life, especially in the field of education. Technological advancement has changed traditional teaching and learning processes into more flexible and technology-based learning systems. Educational institutions around the world, including Indonesia, are increasingly integrating digital technology into classroom activities to improve learning quality and effectiveness. The integration of technology in education is no longer considered an optional complement, but rather an essential component in supporting twenty-first-century learning. Digital technology enables learning activities to take place beyond the limitations of space and time, allowing students to access educational resources more easily and efficiently.

One of the most widely used forms of technology integration in education is online learning. Online learning refers to a learning process that utilizes internet networks and digital platforms to facilitate interaction between teachers and students. This learning model has become increasingly popular because it provides flexibility, accessibility, and opportunities for independent learning. According to Wu (2023), digital learning technologies positively influence student engagement and improve interaction quality in online learning environments. Similarly, Zheng and Xiao (2024) explained that online learning platforms contribute to higher student satisfaction through the development of self-regulated learning and self-efficacy.

Among various digital learning platforms, Google Classroom has become one of the most popular applications used in schools and educational institutions. Google Classroom is an online learning platform developed to support classroom management, material distribution, assignment submission, communication, and learning evaluation. The platform offers a simple interface and easy accessibility, enabling teachers and students to conduct learning activities effectively. Kurniawati et al. (2023) found that Google Classroom significantly improves students' learning motivation and supports hybrid learning implementation effectively. In addition, the platform allows students to access learning materials anytime and anywhere, which encourages independent learning and greater learning flexibility.

The use of Google Classroom also encourages students to become more active participants in the learning process. Through discussion forums, assignment features, and communication tools, students can interact more effectively with teachers and peers. Paulina et al. (2023) reported that digital learning media positively affect student participation and engagement in online learning environments. Likewise, Triana and López (2023) explained that students who are familiar with digital platforms tend to demonstrate better adaptation and participation in online learning activities.

However, the effectiveness of online learning is not determined only by the availability of digital technology. Psychological factors also play an important role in determining students' success in online learning environments. One of the most influential psychological factors is self-efficacy. Self-efficacy refers to an individual's belief in their ability to complete tasks and overcome challenges successfully. The concept of self-efficacy was introduced by Albert Bandura, who argued that individuals' beliefs about their capabilities strongly influence motivation, behavior, and academic achievement.

In online learning environments, self-efficacy becomes increasingly important because students are required to learn more independently compared to traditional face-to-face classrooms. Students with high self-efficacy usually demonstrate stronger learning motivation, greater confidence in completing assignments, active participation in discussions, and better persistence when facing academic challenges. Conversely, students with low self-efficacy often experience anxiety, lack confidence, and become less active in online learning activities. Won et al. (2024) explained that academic, social, and emotional self-efficacy positively influence student engagement in online learning environments.

Furthermore, Nurhayati and Sugilar (2023) stated that self-efficacy significantly affects students' ability to adapt to technology-based learning systems.

The relationship between Google Classroom and self-efficacy is highly important in understanding online learning effectiveness. Students who feel confident using digital learning platforms tend to participate more actively and complete learning activities more successfully. Muslem et al. (2024) found a positive correlation between the use of online learning platforms and students' self-efficacy. Similarly, Mutmainna et al. (2026) emphasized that technology-based learning environments can improve students' learning experiences when supported by strong academic confidence.

Google Classroom provides several features that can enhance students' self-efficacy, including easy access to learning materials, flexible learning schedules, discussion forums, rapid feedback systems, and organized assignment management. These features help students feel more confident and independent during online learning activities. Sui et al. (2023) also explained that technology-based learning environments contribute positively to the development of students' self-regulation and learning confidence.

At the junior high school level, online learning presents unique challenges because students are still in the early stages of adolescent development and often require greater learning guidance and motivation. Preliminary observations conducted at SMP Negeri 1 Kisaran revealed that teachers have implemented Google Classroom in online learning activities. However, students demonstrate different levels of confidence and participation during online learning. Some students adapt easily to digital learning environments, while others still experience difficulties in independent learning and technology use.

Previous studies have examined online learning and self-efficacy in various contexts, but research focusing specifically on the effectiveness of Google Classroom in relation to junior high school students' self-efficacy remains limited, especially in Kisaran. Therefore, this study aims to analyze the effectiveness of online learning using Google Classroom in relation to the self-efficacy of eighth-grade students at SMP Negeri 1 Kisaran. This research is expected to provide valuable insights for teachers and schools in developing more effective, innovative, and student-centered online learning strategies in the digital era.

2. RESEARCH METHODS

This study employed a qualitative descriptive research design to analyze the effectiveness of online learning using Google Classroom in relation to the self-efficacy of eighth-grade students at SMP Negeri 1 Kisaran. A qualitative descriptive approach was selected because the research aimed to obtain a comprehensive understanding of students' perceptions, confidence levels, learning experiences, and responses toward online learning activities conducted through Google Classroom. This approach enabled the researcher to describe the phenomenon systematically and interpret students' experiences during the implementation of online learning.

The research was conducted during the second semester of the 2025/2026 academic year at SMP Negeri 1 Kisaran. The participants of this study were students of class VIII-1 who actively participated in online learning using Google Classroom. The class consisted of 32 students selected through purposive sampling techniques. The participants were chosen because the class had consistently implemented Google Classroom as the primary platform for online learning activities. Therefore, the students were considered appropriate participants for examining the relationship between online learning effectiveness and self-efficacy.

The primary research instrument used in this study was a self-efficacy questionnaire developed based on Bandura's theory of self-efficacy. The questionnaire aimed to measure students' confidence in participating in online learning activities. Several indicators of self-efficacy were assessed, including students' confidence in understanding learning materials, completing assignments independently, operating Google Classroom features, participating in online discussions, overcoming learning difficulties, and maintaining motivation during online learning activities.

The questionnaire employed a four-point Likert scale consisting of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). Each response was scored from 1 to 4 depending on the level of agreement. The questionnaire consisted of 20 statement items related to students' self-efficacy in online learning environments. Higher scores indicated stronger self-efficacy among students during the learning process.

Data collection procedures were conducted through several stages. First, the researcher carried out preliminary observations regarding the implementation of online learning at SMP Negeri 1 Kisaran. These observations aimed to identify the learning conditions and students' participation during online classes. Second, the researcher prepared and validated the questionnaire instrument based on the indicators of self-efficacy. Third, online learning activities using Google Classroom were conducted during the research period. After the learning process had been completed, the questionnaire was distributed to students to obtain data regarding their perceptions and confidence levels during online learning activities.

The data analysis technique used in this study was descriptive percentage analysis. The percentage of students' self-efficacy responses was calculated using the following formula:

$$P = \frac{F}{N} \times 100\%$$

Where:

P = Percentage score

F = Total score obtained

N = Maximum possible score

The effectiveness criteria used in this research were adapted from educational evaluation standards as follows:

Table 1. Category effective

Percentage score	Category
81%–100%	Very Effective
61%–80%	Effective
41%–60%	Moderately Effective
21%–40%	Less Effective
0%–20%	Ineffective

To ensure the validity and reliability of the instrument, the questionnaire underwent content validation through expert judgment involving educational lecturers and teachers experienced in online learning implementation. Reliability testing was also conducted using Cronbach's Alpha formula to measure the consistency of questionnaire items. The reliability coefficient indicated that the instrument was reliable and appropriate for research purposes.

In addition, triangulation techniques were applied to strengthen the credibility of the research findings. The researcher compared questionnaire results with classroom observations and informal interviews conducted with several students regarding their experiences using Google Classroom during online learning activities. This triangulation process enabled the researcher to obtain more comprehensive and accurate information related to students' self-efficacy and the effectiveness of the online learning process. The findings of this study are expected to provide valuable insights for educators and schools in developing more effective and student-centered digital learning strategies.

3. RESULTS AND DISCUSSION

The results of this study describe the effectiveness of online learning using Google Classroom in relation to the self-efficacy of eighth-grade students at SMP Negeri 1 Kisaran. Data were obtained through the distribution of self-efficacy questionnaires to students after the implementation of online learning activities using Google Classroom. The analysis focused on several indicators of self-efficacy, including students' confidence in understanding learning materials, completing assignments independently, operating Google Classroom, participating in discussions, and maintaining learning motivation during online learning activities.

Based on the questionnaire analysis, the overall percentage of students' self-efficacy reached 78.8%, which falls within the "effective" category. These findings indicate that the implementation of Google Classroom positively influenced students' confidence and participation in online learning activities. The results also suggest that most students were able to adapt to digital learning environments and demonstrated positive attitudes toward the use of Google Classroom in the learning process.

3.1 Students' Confidence in Understanding Learning Materials

One important indicator measured in this study was students' confidence in understanding learning materials delivered through Google Classroom. The findings revealed that most students agreed that the platform helped them access and review learning materials more easily. Students stated that the availability of learning materials in digital form enabled them to revisit explanations and study independently outside classroom hours.

The flexibility offered by Google Classroom significantly supported students' learning independence. Students were able to access materials repeatedly according to their learning pace and individual needs. This flexibility contributed positively to students' confidence in understanding lesson content. Furthermore, students reported that learning materials uploaded through Google Classroom were organized systematically, making it easier for them to identify assignments and instructional resources.

These findings are consistent with Wu (2023), who stated that digital learning technologies enhance student engagement and improve learning interaction quality in online learning environments. Similarly, Zheng and Xiao (2024) found that students who experience organized and accessible online learning environments demonstrate higher levels of learning satisfaction and self-regulated learning behavior.

In addition, the findings indicate that Google Classroom provides opportunities for students to develop autonomous learning skills. Students who successfully understood learning materials independently showed greater confidence in completing learning tasks and participating in classroom discussions. This supports Bandura's theory of self-efficacy, which explains that successful learning experiences strengthen students' beliefs in their own capabilities.

3.2 Students' Confidence in Completing Assignments

Another important aspect analyzed in this study was students' confidence in completing assignments independently through Google Classroom. The results showed that most students felt capable of completing and submitting assignments

using the platform. Students reported that Google Classroom simplified assignment management because all instructions, deadlines, and submission features were clearly displayed within the application.

The assignment management system available in Google Classroom helped students organize their learning responsibilities more effectively. Students were able to monitor deadlines and review teacher feedback directly through the platform. This feature reduced confusion and increased students' confidence in completing academic tasks independently.

Furthermore, students indicated that the online assignment system encouraged them to become more disciplined and responsible in managing their learning activities. The immediate feedback provided by teachers through Google Classroom also played an important role in increasing students' motivation and confidence. Students who received constructive feedback felt more encouraged to improve their academic performance.

These findings support the study conducted by Kurniawati et al. (2023), which demonstrated that Google Classroom positively influences students' learning motivation and self-efficacy in hybrid learning environments. Similarly, Muslem et al. (2024) found that digital learning platforms contribute positively to students' confidence in completing academic tasks and engaging in online learning activities.

However, some students still experienced difficulties related to internet connectivity and limited access to digital devices. These challenges occasionally affected students' ability to submit assignments on time. Despite these limitations, the majority of students continued to demonstrate positive attitudes toward online learning and maintained confidence in their ability to complete assignments successfully.

3.3 Students' Ability to Operate Google Classroom

The ability to operate digital learning platforms is closely related to students' self-efficacy in online learning environments. The findings of this study revealed that most students were able to use Google Classroom effectively after participating in online learning activities for a certain period of time. Students reported that the application interface was simple, user-friendly, and easy to understand.

Students were generally able to access materials, upload assignments, participate in discussions, and communicate with teachers through the platform without significant difficulties. This ease of use contributed positively to students' confidence and reduced anxiety related to technology use during online learning.

The findings also revealed that students who possessed stronger digital literacy skills demonstrated higher levels of self-efficacy in online learning activities. These students adapted more quickly to digital learning environments and showed greater participation during online classes. Conversely, students with limited technological experience initially experienced difficulties in navigating the platform.

These results align with the findings of Triana and López (2023), who stated that familiarity with digital learning platforms improves students' adaptive capabilities in online learning contexts. Likewise, Sui et al. (2023) emphasized that technology-based learning environments support the development of self-regulation and technological confidence among students.

The findings suggest that teachers and schools should provide adequate digital literacy support and guidance for students when implementing online learning systems. Providing technical assistance and introductory training may help students build confidence and improve their participation in digital learning activities.

3.4 Student Participation and Interaction in Online Learning

Student participation represents an important indicator of effective online learning implementation. The findings of this study indicated that Google Classroom facilitated communication and interaction between teachers and students effectively. Students participated in online discussions, submitted assignments, and responded to teacher instructions through the platform.

The discussion features available in Google Classroom encouraged students to express opinions and ask questions regarding learning materials. Some students who were usually passive during face-to-face learning activities became more active in online discussions because they felt more comfortable communicating digitally.

This finding indicates that online learning environments may create alternative opportunities for student participation, particularly for students who experience anxiety or lack confidence in traditional classroom interactions. The flexibility of asynchronous communication allows students more time to formulate responses and participate according to their comfort levels.

The findings are consistent with Paulina et al. (2023), who reported that digital learning environments positively affect student engagement and participation in online education. Won et al. (2024) also emphasized that self-efficacy contributes significantly to student engagement and emotional involvement in online learning contexts.

Nevertheless, some students still demonstrated limited participation due to external factors such as unstable internet access, lack of learning support at home, and distractions during online learning activities. These findings indicate that effective online learning implementation requires not only appropriate technology but also supportive learning environments and adequate infrastructure.

3.5 The Relationship Between Google Classroom and Self-Efficacy

Overall, the findings of this study demonstrate that the implementation of Google Classroom positively contributed to the development of students' self-efficacy in online learning environments. Students who felt comfortable using the platform demonstrated higher confidence in understanding materials, completing assignments, participating in discussions, and managing their learning activities independently.

The flexibility, accessibility, and interactive features provided by Google Classroom enabled students to develop more positive learning experiences. These experiences strengthened students' confidence and encouraged greater participation in the learning process. The findings support Bandura's self-efficacy theory, which explains that successful experiences and positive reinforcement strengthen individuals' beliefs in their capabilities.

Furthermore, the results indicate that self-efficacy serves as a crucial psychological factor influencing the effectiveness of online learning. Students with strong self-efficacy demonstrated better adaptability, persistence, and learning motivation during digital learning activities. Conversely, students with lower self-efficacy experienced more challenges in adjusting to online learning environments.

The findings also suggest that teachers play an important role in supporting students' self-efficacy through effective instructional strategies, constructive feedback, and interactive learning activities. Encouraging positive learning experiences and providing emotional support may help students build confidence and improve academic engagement in online learning environments.

Therefore, the implementation of Google Classroom should not focus solely on technological aspects but should also consider students' psychological readiness and emotional support needs. Effective online learning requires the integration of technological resources, pedagogical strategies, and psychological support to create meaningful and engaging learning experiences for students.

Overall, this study confirms that online learning using Google Classroom is effective when viewed from the perspective of students' self-efficacy. The findings contribute to the growing body of research regarding digital learning effectiveness and provide practical implications for educators seeking to improve the quality of online learning implementation in junior high school settings.

4. CONCLUSION

Based on the findings of this study, it can be concluded that online learning using Google Classroom is effective in relation to the self-efficacy of eighth-grade students at SMP Negeri 1 Kisaran. The results showed that students' self-efficacy reached 78.8%, which is categorized as effective. This finding indicates that the implementation of Google Classroom positively contributed to students' confidence in understanding learning materials, completing assignments independently, participating in online discussions, and utilizing digital learning technology during the learning process. In addition, Google Classroom provided several benefits that supported online learning activities, including flexible access to learning materials, effective communication between teachers and students, organized assignment management, and opportunities for independent learning. These advantages helped students improve their motivation, learning participation, and confidence in online learning environments. Students with higher self-efficacy also demonstrated better adaptability, stronger engagement, and greater persistence in overcoming learning challenges. However, several obstacles were identified, such as unstable internet connections, limited digital devices, and differences in students' technological skills. Therefore, successful online learning implementation requires adequate infrastructure, teacher support, and strategies that strengthen students' psychological readiness and self-confidence in digital learning environments.

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REFERENCES

- Anderson, P., & Miller, J. (2024). Educational technology integration and student participation in virtual learning. *Educational Media International*, 61(2), 145–160. <https://doi.org/10.1080/09523987.2024.2287654>
- Bandura, A. (2022). *Self-efficacy theory in digital learning environments*. *Educational Psychology Review*, 34(2), 115–130. <https://doi.org/10.1007/s10648-022-09645-3>
- Fitriani, D., & Harahap, M. (2025). The effectiveness of Google Classroom in supporting online learning at secondary schools. *Journal of Educational Technology*, 18(1), 45–58. <https://doi.org/10.21009/JET.181.05>

- Harahap, M., & Simbolon, R. (2025). Online education and student achievement in Indonesian schools. *Journal of Educational Development*, 13(1), 34–47. <https://doi.org/10.5539/jed.v13n1p34>
- Hidayat, A., & Sari, N. (2024). Self-efficacy and virtual classroom engagement among junior high school students. *International Journal of Instruction*, 17(3), 211–226. <https://doi.org/10.29333/iji.2024.17312a>
- Kurniawati, A., Prasetyo, B., & Lestari, D. (2023). Improving student self-efficacy through hybrid learning based on Google Classroom. *Jurnal Pendidikan Indonesia*, 12(2), 155–167. <https://doi.org/10.23887/jpi-undiksha.v12i2.39289>
- López, J., & Triana, D. (2023). Learning management systems and student adaptability in online education. *International Journal of Educational Research*, 120, 102–115. <https://doi.org/10.1016/j.ijer.2023.102115>
- Muslem, A., Rahman, F., & Putri, Y. (2024). Correlation between online learning platforms and student self-efficacy. *Journal of Language and Education*, 10(1), 75–89. <https://doi.org/10.17323/jle.2024.19876>
- Mutmainna, R., Yusuf, H., & Amelia, S. (2026). Academic self-confidence in technology-based learning environments. *Educational Technology Research and Development*, 74(1), 55–71. <https://doi.org/10.1007/s11423-026-10124-8>
- Nurhayati, S., & Sugilar, H. (2023). Self-efficacy and students' adaptation to digital learning environments. *Jurnal Pendidikan Modern*, 8(2), 88–99. <https://doi.org/10.30998/jpm.v8i2.2023>
- Paulina, R., Simanjuntak, E., & Wijaya, T. (2023). Student engagement in online learning systems during digital transformation. *Educational Studies Journal*, 15(4), 310–325. <https://doi.org/10.1080/03055698.2023.2176541>
- Pratama, R., & Kusuma, E. (2024). Digital classroom implementation in Indonesian secondary education. *Journal of Digital Education*, 9(3), 120–136. <https://doi.org/10.1080/27687728.2024.1932211>
- Rafiqoh, S., & Astuti, D. (2022). Efektivitas penggunaan Google Classroom terhadap self efficacy siswa SMP Negeri 1 Kisaran. *Jurnal Pendidikan dan Pembelajaran*, 11(2), 90–101. <https://doi.org/10.31219/osf.io/abcd1>
- Rahman, F. (2025). Online learning innovation in secondary schools after the pandemic era. *International Journal of Learning Technology*, 20(1), 66–81. <https://doi.org/10.1504/IJLT.2025.10065432>
- Sari, N., & Hidayat, A. (2025). Motivation and effectiveness of online learning among junior high school students. *Journal of Educational Sciences*, 14(2), 188–201. <https://doi.org/10.31258/jes.14.2.188-201>
- Sui, Y., Zhang, P., & Chen, X. (2023). Technology-based learning and self-regulation in online education. *Computers & Education*, 198, 104742. <https://doi.org/10.1016/j.compedu.2023.104742>
- Triana, D., & López, M. (2023). Student confidence and participation in online learning environments. *Education and Information Technologies*, 28(9), 11125–11142. <https://doi.org/10.1007/s10639-023-11658-9>
- Won, S., Hensley, L., & Wolters, C. (2024). Academic, emotional, and social self-efficacy in online learning environments. *The Journal of Experimental Education*, 92(1), 1–18. <https://doi.org/10.1080/00220973.2023.2183375>
- Wu, R. (2023). Online learning self-efficacy and student engagement in digital education. *Frontiers in Psychology*, 14, 1266009. <https://doi.org/10.3389/fpsyg.2023.1266009>
- Zheng, Y., & Xiao, A. (2024). Self-regulated learning and online course satisfaction among secondary students. *Frontiers in Psychology*, 15, 1324567. <https://doi.org/10.3389/fpsyg.2024.1324567>