



Effectiveness of flipped classroom model in improving students' learning

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ABSTRACT

The learning process faces many challenges in its implementation, including low student participation and a lack of independent learning. Many students tend to be passive and rely solely on teacher explanations, resulting in a relatively low understanding of the material. This condition requires innovative learning strategies that can activate students' roles. This study aims to evaluate the effectiveness of the flipped classroom learning model in increasing the participation of eighth-grade students at MTs Al-Wasliyah Tembung in Social Studies. The study employed a qualitative descriptive approach, utilizing a case study method, with data collected through observation, interviews, and documentation. The results showed that the implementation of the flipped classroom significantly improved students' learning readiness, as evidenced by the increasing number of students actively participating in class discussions. Additionally, this model had a positive impact on learning motivation, self-confidence, and the ability to collaborate in groups. Thus, the study concluded that the flipped classroom model can be an effective alternative learning strategy to improve the quality of Social Studies teaching and learning in Islamic Junior High Schools (Madrasah Tsanawiyah).

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ABSTRAK

Pembelajaran di Madrasah Tsanawiyah masih menghadapi tantangan berupa rendahnya partisipasi peserta didik dan kurangnya kemandirian belajar. Banyak peserta didik cenderung pasif serta hanya bergantung pada penjelasan guru, sehingga pemahaman materi yang diperoleh relatif rendah. Kondisi ini menuntut adanya inovasi strategi pembelajaran yang mampu mengaktifkan peran peserta didik. Penelitian ini bertujuan mengevaluasi efektivitas model pembelajaran kelas terbalik (flipped classroom) dalam meningkatkan partisipasi peserta didik kelas VIII MTs Al-Wasliyah Tembung pada mata pelajaran Ilmu Pengetahuan Sosial. Penelitian dilaksanakan dengan pendekatan deskriptif kualitatif menggunakan metode studi kasus, dengan data dikumpulkan melalui observasi, wawancara, dan dokumentasi. Hasil penelitian menunjukkan bahwa penerapan flipped classroom mampu meningkatkan kesiapan belajar peserta didik secara signifikan, terlihat dari semakin banyaknya peserta didik yang aktif terlibat dalam diskusi kelas. Selain itu, model ini juga berpengaruh positif terhadap motivasi belajar, rasa percaya diri, serta kemampuan kolaborasi dalam kelompok. Dengan demikian, penelitian menyimpulkan bahwa model flipped classroom dapat menjadi alternatif strategi pembelajaran yang efektif untuk meningkatkan kualitas proses belajar mengajar IPS di Madrasah Tsanawiyah.

Kata Kunci: aktivitas belajar; efektivitas belajar; model kelas terbalik

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INTRODUCTION

Education can be defined as the collective influences exerted by schools upon children and adolescents throughout their developmental stages, with the primary objective of fostering intelligence and robust mental capabilities (Chen, Allen *et al.*, 2023). The National Education System (Sistem Pendidikan Nasional) is defined as an organized and directed endeavor with the primary objective of creating a conducive learning environment. This educational setting is designed to encourage and facilitate the development of latent potential in each student. The facets of potential to be cultivated encompass the formation of a resilient personality, the capacity for self-control, the development of intellectual intelligence, the fostering of noble character, and the mastery of diverse skills and competencies that provide significant utility to both the individual and society at large (Bestari & Nurhayati, 2023). This comprehensive concept of education indicates that the instructional process does not focus solely on academic aspects; rather, it integrates the development of character and moral values as the foundation for forming high-quality individuals who are capable of contributing effectively to the nation and the state.

Social Studies (Ilmu Pengetahuan Sosial/IPS) instruction ideally necessitates the active engagement of students, both mentally and socially, to enable them to think critically, comprehend interpersonal interactions, and correlate instructional material with the realities of daily life (Kozanitis & Nenciovici, 2023). Learning engagement in Social Studies instruction can be measured through nine primary indicators: the ability to listen with focus, critically observe social phenomena, read and comprehend information sources, record essential points, answer questions accurately, pose relevant inquiries, summarize instructional material, demonstrate the courage to express opinions, and exhibit the capacity for independent learning. These indicators serve as vital parameters in assessing the effectiveness of the implemented instructional models (Ocakci & Samanci, 2024).

Observations of 39 Grade VIII students at MTs Al-Wasliyah Tembung indicate that the instructional methods currently employed do not adequately support independent learning. Students exhibit a tendency toward passivity, relying heavily on teacher explanations and demonstrating a lack of active engagement within the learning process. The observational data reveal that a mere 12.90% of students possess a genuine comprehension of the material, suggesting that the vast majority encounter significant difficulties in assimilating the lessons provided by the instructor. Recent research further substantiates the urgency of instructional innovation. The implementation of the discovery learning model has been proven to enhance independent learning and student comprehension within Social Studies subjects for Grade V at SDN 192 Pekanbaru. This Classroom Action Research confirms the effectiveness of such strategies within the Social Studies (Ilmu Pengetahuan Sosial/IPS) context (Arrahmah *et al.*, 2024). Furthermore, research concerning guided inquiry within chemistry instruction demonstrates that this method significantly enhances student engagement and independent learning capabilities (Liyanage *et al.*, 2021). Actual conditions in schools, including limited facilities and supporting infrastructure, the use of unengaging, noninteractive instructional methods, and low student participation, necessitate innovation in learning strategies. By utilizing approaches such as discovery learning and guided inquiry, it is anticipated that student engagement and comprehension of Social Studies (IPS) material can be significantly enhanced (Nkeiruka, 2024).

The flipped classroom model constitutes an instructional approach that synthesizes face-to-face interaction with online activities, thereby integrating synchronous and asynchronous learning processes (Cevikbas & Kaiser, 2022). In this model, students study new material independently outside the classroom through videos, readings, or online modules, while class time is redirected toward more interactive activities such as discussions, problem solving, and collaboration among students (Chang *et al.*, 2022).

The implementation of the flipped classroom model is capable of enhancing student engagement in learning, strengthening their comprehension of the material, and developing the ability to collaborate more effectively (Sachan, 2025). This model is capable of enhancing the quality of the instructional process, satisfaction in course development, and student academic performance, as well as fostering participation and communication (Gondal *et al.*, 2024). The implementation of the flipped classroom model in history instruction demonstrates significant effectiveness; however, that research has not yet explored in depth its application within the Social Studies (IPS) subject, which possesses interdisciplinary characteristics (Listianti, 2022). Furthermore, the integration of problem-based learning and the flipped classroom is proven capable of enhancing argumentation skills and self-directed learning among students, as demonstrated through experimental research on high school students in Maluku Province with ANOVA analysis results indicating significant improvements in both skill aspects (Kurniawati *et al.*, 2025). In alignment with those findings, a comprehensive study conducted on secondary level EFL (English as a Foreign Language) students within the context of the Profil Pelajar Pancasila (P5) project confirms that the flipped-based learning approach is not only capable of strengthening the quality of classroom interaction through more meaningful discussions but also substantially increases student autonomy in organizing and directing their own learning processes (Fassya *et al.*, 2025).

Consequently, this research will be focused on the implementation of the flipped classroom model in IPS instruction at the Madrasah Tsanawiyah (MTs) level with the objective of enhancing independent learning and conceptual understanding among students, while simultaneously contributing to the development of innovative instructional strategies that are relevant to the needs and characteristics of students at the junior high school level.

This research is conducted to broaden understanding of current instructional conditions, the level of readiness among teachers and students, and the instructional strategies previously implemented. Furthermore, this study aims to examine the effectiveness of the flipped classroom model in enhancing the quality of IPS instruction, specifically in developing independent learning and conceptual understanding among students.

LITERATURE REVIEW

Concept of Effective Learning

Effective learning is an educational process that optimally achieves instructional objectives through appropriate strategies, involves students actively, and produces positive changes in their knowledge, attitudes, and skills. This concept is grounded in the principles of constructivism, which emphasize that students construct knowledge through interaction with their environment and meaningful learning experiences (Do *et al.*, 2023). In this regard, it can be understood that the learning process of students can be influenced by external factors, such as the environment and experiences gained in daily life. Effective learning also integrates various student learning styles and provides opportunities for students to develop critical and creative thinking abilities (Supratman *et al.*, 2021). Student cognitive abilities can enhance academic outcomes. Within the context of IPS instruction, the effectiveness of learning is measured not only by academic achievement but also by the ability of students to connect studied concepts with social reality and to develop awareness as responsible citizens (Moreno *et al.*, 2020). In this regard, the effectiveness of classroom instructional activities is related to student learning outcomes achieved within their learning environment, including the classroom.

Adaptive Learning Methods

Adaptive learning is an instructional approach that utilizes digital technology, particularly artificial intelligence and online cloud-based systems, to adjust material, pacing, and instructional delivery styles in accordance with the individual needs and abilities of students (Contrino *et al.*, 2024). This approach enables the system to recommend relevant content in real-time or on a just-in-time basis, provides immediate feedback, and supports continuous development through modules that can be updated. Adaptive learning methods can also be understood as methods that adapt or implement instructional tools available from the results of technological advancements. The diversity of methods used in instructional activities can provide students with new perspectives and help prevent boredom that may arise when they rely on a single method. As a result, learning becomes more personalized and effective, significantly enhancing student motivation and academic achievement (Marienko *et al.*, 2020). Students also possess a diverse range of characteristics that cannot be generalized. In its implementation, adaptive learning considers individual student characteristics, such as cognitive abilities, learning preferences, and levels of comprehension, to provide a tailored learning experience. The flipped classroom model becomes highly relevant in the current digital era. Personalization of learning constitutes the key to educational success (Major *et al.*, 2021).

Flipped Classroom Instructional Model

The flipped classroom model constitutes a pedagogical innovation that inverts the traditional learning paradigm by shifting instructional activities from the classroom to the home and vice versa. The fundamental concept of the flipped classroom involves moving the delivery of instructional content outside the classroom through technology, while class time is utilized for activities that are more interactive and meaningful (Rahmah, 2025). The flipped classroom is defined as an instructional approach that integrates two primary components: computer-based instruction conducted outside the classroom and interactive learning activities that take place within the classroom (Verleger, 2023). Theoretically, this model is grounded in Vygotsky's social constructivism theory, which emphasizes the significance of social interaction in learning, as well as active learning theory, which prioritizes student engagement in the construction of knowledge (Siregar *et al.*, 2024).

The implementation of the flipped classroom in IPS instruction possesses unique characteristics tailored to the interdisciplinary nature of this subject. Effective IPS instruction requires an approach capable of integrating various social science disciplines and relating them to the real lives of students (Helzi *et al.*, 2024). The flipped classroom model provides a broader space for discussion, case analysis, simulations, and collaborative projects that are highly essential in Social Studies (IPS) instruction. In its implementation, the pre-class stage involves students studying fundamental concepts through instructional videos, digital readings, or podcasts regarding Social Studies (IPS) materials such as geography, history, economics, and sociology (Howell, 2021).

Student motivation and engagement constitute crucial factors in instructional success, and the flipped classroom model is proven to provide a positive impact on both aspects. Students in flipped classrooms demonstrate higher levels of intrinsic motivation because they possess greater control over their own learning processes (Wang *et al.*, 2025). The effectiveness of the flipped classroom model in enhancing student academic achievement has become the focus of various empirical studies with diverse yet generally positive results. A meta-analysis of 46 studies regarding the flipped classroom indicates that this model exerts a significant positive effect on student academic achievement (Buhl-Wiggers *et al.*, 2023). The implementation of the flipped classroom model encounters various challenges that must be anticipated and addressed with appropriate strategies to ensure success. Primary challenges identified in the literature encompass technological aspects, teacher preparation, and student characteristics. Regarding technological aspects, the availability of technological infrastructure and adequate internet access are essential prerequisites for implementing the flipped classroom (Aidoo *et al.*, 2022).

Indicators of Learning Activity

Learning activity constitutes a condition in which students are mentally, physically, and emotionally engaged in the instructional process. Indicators of learning activity can be measured through several aspects, namely active participation in class discussions characterized by the frequency with which students ask questions, answer inquiries, and express opinions (Sormunen *et al.*, 2020). The second aspect pertains to engagement in instructional activities, such as presentations, group work, and the completion of assignments through self-initiative. The third aspect encompasses the ability to interact with classmates and teachers constructively, as well as demonstrating a positive attitude toward the learning process (Hailikari *et al.*, 2022). Fourth, activity can be observed through student readiness to participate in learning, which is reflected in the preparation of materials before class and the timely completion of assignments. Fifth, the ability of students to analyze, evaluate, and apply acquired knowledge within real-life contexts serves as a significant indicator of learning activity. In Social Studies (IPS) instruction, student activity is paramount because this subject demands critical thinking skills regarding social phenomena and the ability to correlate concepts with the realities of daily life (Banaag, 2024).

METHODS

This research employs a descriptive qualitative case study to examine the implementation of the flipped classroom model at MTs Al-Wasliyah Tembung among grade VIII students in the Social Studies (IPS) subject. The case study design was selected because it allows for an in-depth exploration of instructional phenomena within a real and bounded context, thereby providing a comprehensive understanding of the implementation of the learning model within a specific educational setting.

The subjects of this research comprise grade VIII students at MTs Al-Wasliyah Tembung, involving the subject matter teacher as the key informant. The study examines how the flipped classroom model influences student learning experiences, perceptions of instructional methods, motivation levels, classroom interaction dynamics, and the shift in learning patterns from traditional to student-centered learning.

The research procedures encompass the following stages:

1. **Preparatory Phase:** This phase includes the determination of research subjects, the formulation of observation and interview instruments, and coordination with school authorities.
2. **Data Collection:** Information is gathered through participant observation to monitor instructional activities and the implementation of flipped classroom stages. Furthermore, in-depth interviews are conducted with students and teachers to explore their experiences and perceptions, and a documentation study is conducted of lesson plans and digital materials.
3. **Data Analysis:** The study utilizes an interactive analysis model consisting of three components: data reduction (the selection and transformation of raw data), data display in the form of descriptive narratives and matrices, and the gradual drawing of conclusions through continuous verification to produce valid and credible findings.

The process of data reduction is conducted by selecting and identifying essential information pertinent to the enhancement of student learning activity. Data obtained from observations and interviews are subsequently classified systematically based on nine indicators of learning activity: listening, observing, reading, note-taking, answering, questioning, concluding, expressing opinions with confidence, and demonstrating learning readiness. Research data are categorized into five primary aspects: 1) student readiness prior to instruction; 2) activity in questioning and answering; 3) group discussion and

collaboration; 4) motivation and self-confidence; and 5) the roles of educators and parents. Each category demonstrates a significant increase compared to the conditions existing prior to the implementation of the Flipped Classroom model.

RESULTS AND DISCUSSION

Based on the results and findings obtained in the field, it was determined that grade VIII students at MTs Al-Wasliyah Tembung encountered significant challenges regarding IPS learning activities. Students demonstrated a tendency toward passivity during the instructional process, with only 5 to 6 out of 39 students possessing the confidence to pose questions or provide answers throughout the learning sessions. This condition reflects the low level of student engagement in conventional instruction, which still relies upon the lecture method as the primary approach. Furthermore, students demonstrate inadequate preparation prior to participating in classroom learning activities. The majority of students arrive in the classroom without possessing prior knowledge regarding the subject matter to be studied; consequently, the instructional process focuses exclusively on the transfer of information from the teacher to the students. This dynamic results in classroom instructional time not being utilized optimally for activities that could enhance the critical thinking and collaborative abilities of the students.

Results of Learning Activity Observations

The implementation of the flipped classroom model was conducted with 39 grade VIII students at MTs Al-Wasliyah Tembung. Observation results indicate a significant transformation in the patterns of student learning activities compared to the previous conventional instructional methods. In terms of student readiness prior to instruction, observation data indicate that approximately 82% of students, or 32 out of 39 individuals, performed preparatory tasks by accessing IPS subject matter through digital modules and instructional videos provided by the teacher. Students demonstrated enhanced readiness during face-to-face instructional sessions, which was reflected in their proficiency in answering preliminary questions posed by the teacher at the commencement of the lesson.

The enhancement of student activity in questioning and answering constitutes a significant finding from the observation results. Subsequent to the implementation of the flipped classroom model, the number of students actively posing questions increased substantially to an average of 17 to 18 individuals per session, representing nearly a threefold increase compared to the prior condition. Similarly, the activity of answering questions, whether posed by the teacher or classmates, increased to a range of 20 to 22 students per session.

Group discussion and collaborative activities exhibited a marked improvement. Students who arrived in the classroom equipped with prior knowledge were able to engage more actively in group deliberations. The teacher noted that student cohorts encountered less difficulty in completing IPS case analysis assignments, specifically regarding the discussion of social interaction topics within the surrounding environment. Students demonstrated an enhanced capacity to correlate theoretical material with the realities of daily life.

Students reported positive transformations regarding motivation and self-confidence. A significant majority of the participants indicated a heightened sense of confidence in following the instructional process, as they had already achieved a fundamental understanding of the core subject matter before the commencement of the face-to-face sessions. Students articulated that they felt better prepared to participate in discussions and no longer harbored a fear of posing questions or offering opinions. Furthermore, the participants demonstrated a greater preference for the interactive instructional atmosphere in comparison to conventional pedagogical methods. Students reported that the instructional

process became more engaging because they were no longer required to listen passively to teacher explanations. Instead, they could actively participate in various learning activities, such as discussions, problem-solving exercises, and group presentations.

Analysis of Student Learning Activity

Based on the data analysis conducted, a significant increase was observed across all indicators of student learning activity. The most prominent enhancement was identified within the questioning activity aspect, which rose from only 5 to 6 students to an average of 17 to 18 students per session. Similarly, the activity of answering questions increased to a range of 20 to 22 students per meeting.

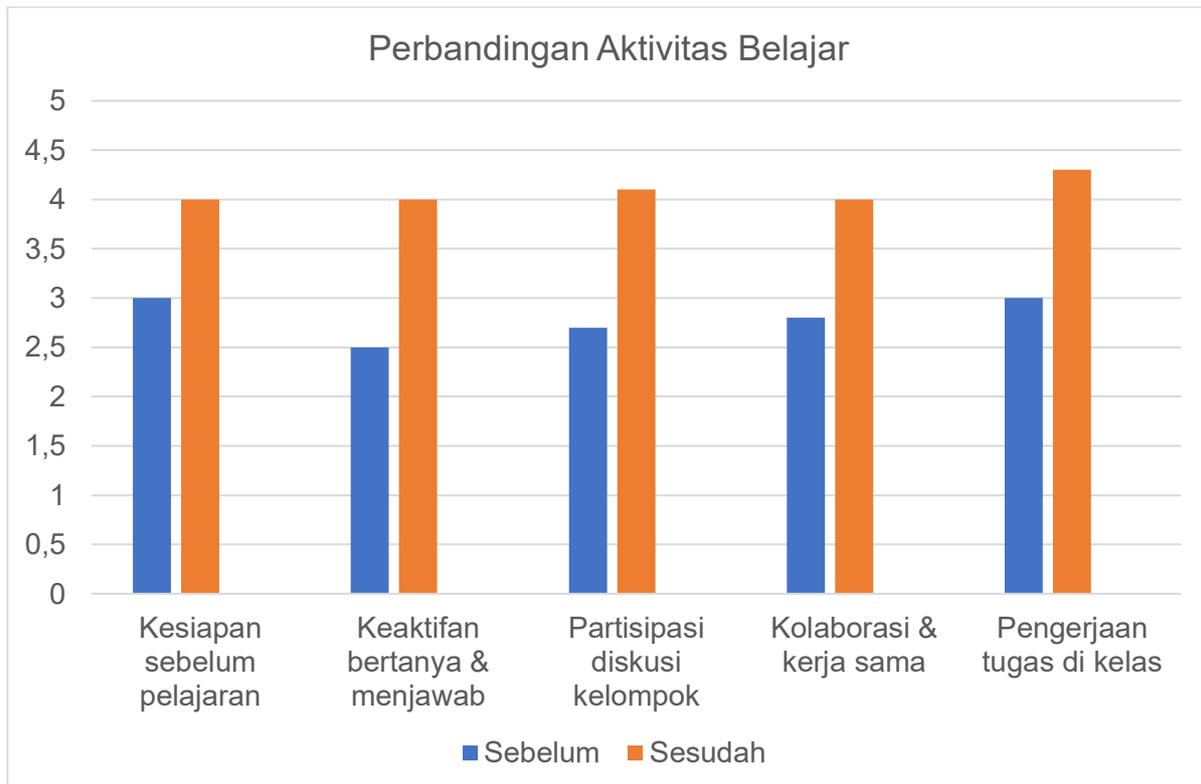


Figure 1. Comparison of Learning Activities
Source: Research Results 2025

Figure 1 illustrates the comparison of student learning activities prior to and following the implementation of the flipped classroom model. A consistent enhancement is observed across all dimensions of learning activity, with the most significant increases occurring in questioning activities and group collaboration.

Outcomes of the Flipped Classroom Model Implementation

Based on the research conducted, the implementation of the flipped classroom model in grade VIII IPS instruction at MTs Al-Wasliyah Tembung has successfully enhanced student learning activity in a comprehensive manner. This instructional model enables students to prepare themselves by studying materials through videos and digital modules prior to face-to-face sessions, thereby allowing classroom time to be optimized for more interactive and collaborative activities. Within this framework, the role of the educator shifts from a mere purveyor of information to a facilitator of learning. The teacher assumes the responsibility of developing high-quality digital content and managing classroom discourse effectively.

Concurrently, the role of parents becomes vital in supporting and supervising students during home study to ensure they access and comprehend the provided materials.

Discussion

Overall, the implementation of the flipped classroom model in IPS instruction successfully enhanced nine indicators of student learning activity, namely listening, observing, reading, note-taking, answering, questioning, concluding, expressing opinions with confidence, and demonstrating learning readiness. This improvement is evident not only through quantitative aspects, such as the number of active participants, but also through qualitative dimensions, specifically the quality of participation and student comprehension of the instructional material. Observation data indicate a significant transformation in the patterns of IPS instruction. Students who were previously predisposed toward passivity and dependence upon teacher explanations are now capable of demonstrating learning initiative and engaging actively in classroom discourse (Nirwana *et al.*, 2025). The capacity of students to attend to pre-learning materials improved as they were afforded the opportunity to replay instructional videos according to their individual needs. Concurrently, the ability to observe and analyze social phenomena developed through interactive classroom activities that enabled them to synthesize theoretical frameworks with the realities of daily existence.

The findings of this research indicate that grade VIII students at MTs Al-Wasliyah demonstrated high levels of engagement and enjoyment in IPS instruction through the implementation of the flipped classroom model. The efficacy of this model resides in the paradigm shift regarding material delivery, transitioning from face-to-face classroom sessions to individual study activities conducted outside the traditional instructional environment (Cevikbas & Kaiser, 2022). Classroom instructional time can be utilized maximally for more meaningful activities, such as in-depth discussions, complex problem-solving, and collaborative group work. Student preparation prior to instruction constitutes the primary key to the success of the flipped classroom model. When students have studied foundational material via instructional videos or digital modules, they arrive in the classroom with adequate prior understanding. This condition facilitates a face-to-face instructional process focused directly on high-level conceptual mastery, knowledge application, and the development of critical thinking skills, rather than the mere transfer of information from the educator to the learner. This is consistent with findings asserting that the implementation of the flipped classroom is capable of enhancing active engagement, motivation, and student critical thinking through a more student-centered pedagogical approach (Milovanović *et al.*, 2022; Nirwana *et al.*, 2025). Furthermore, the flipped classroom serves as a compelling and effective alternative approach in the execution of instructional processes (Kuswidayani *et al.*, 2024).

Gagne's theory elucidates pre-class learning by emphasizing the significance of student preparation prior to engaging in formal instruction. The theory asserts that adequate preparation enables students to achieve higher levels of learning because they have established a foundational base of prior knowledge. In the context of this research, instructional videos and digital modules serve as supplementary media that assist students in constructing a foundational understanding prior to engaging in more complex learning activities within the IPS classroom. Furthermore, the enhancement of interaction and cooperation among students emphasizes that collaborative learning is capable of cultivating social skills, communication proficiency, and problem-solving abilities (Hailikari *et al.*, 2022). The flipped classroom model provides more extensive space for the development of such skills, as the educator no longer dominates instructional time with prolonged lecturing. Instead, the teacher functions as a facilitator who encourages the occurrence of interaction, discourse, and active collaboration among students (Chen, Luo *et al.*, 2023). The implementation of the flipped classroom at MTs Al-Wasliyah has demonstrable implications for the enhancement of student motivation, active engagement, and academic achievement within IPS instruction (Wang *et al.*, 2025; Wu *et al.*, 2025).

The success of the flipped classroom implementation within IPS instruction in this study was determined by several factors. The readiness of the educator to develop high-quality digital materials and the capacity to manage the classroom effectively served as the primary determinants of instructional success. The availability of supporting facilities, such as technological hardware and stable internet access, constitutes an absolute prerequisite for students to access digital learning materials without impediment. Furthermore, the motivation and discipline of students in engaging with pre-class materials are highly influential, as students who fail to conduct such preparation will encounter difficulties in participating in classroom activities and may hinder the collective instructional process.

CONCLUSION

Based on the results of the research conducted, it can be concluded that the implementation of the flipped classroom model in grade VIII IPS instruction at MTs Al-Wasliyah Tembung is effective in enhancing instructional quality while simultaneously developing student learning autonomy. This model facilitates a transformation in instructional patterns, transitioning from a teacher-centered paradigm to a student-centered approach. This shift is reflected in the enhancement of learning activities across various indicators, including readiness, participation, the confidence to express opinions, and the ability to synthesize instructional material. The preparation of students through pre-learning content enables classroom activities to focus on discourse, problem-solving, and group collaboration. Consequently, conceptual understanding deepens, supporting the development of critical thinking and collaborative skills relevant to 21st-century requirements. In addition to providing a positive impact on student motivation and self-confidence, this model renders IPS instruction more meaningful and contextual. These findings may serve as a foundation for subsequent research to examine the implementation of the flipped classroom in different subjects or educational levels, while simultaneously considering supporting factors such as technological readiness, teacher competency, and student learning motivation to ensure optimal implementation.

AUTHOR'S NOTE

The author asserts that no conflict of interest occurred throughout the entire process of writing and publishing this article. All data, information, and content of the article constitute the original work of the author and do not originate from other parties.

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