



Effects of mind mapping on PAI dan Budi Pekerti learning motivation and outcomes

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ABSTRACT

Learning methods play an important role in encouraging student motivation; therefore, innovative, student-focused methods are needed. This study aims to examine the effect of the mind-mapping method on the motivation and learning outcomes of Pendidikan Agama Islam (PAI) dan Budi Pekerti students in grade XI at SMAN 9, Bengkulu City. This study used a quantitative experimental design involving 61 students as samples divided into experimental and control groups. Data were collected through tests and questionnaires, then analyzed using t-tests and linear regression. The results showed that the mind-mapping method significantly increased student motivation and learning outcomes compared to conventional methods. The experimental group that implemented mind mapping obtained a higher average score. These findings confirm that mind mapping is effective in facilitating structured information processing, increasing cognitive engagement, and shifting the learning paradigm toward a student-centered approach. Mind mapping is recommended as an effective pedagogical strategy to deepen understanding of complex PAI dan Budi Pekerti material and improve student academic outcomes at the secondary school level.

ARTICLE INFO

Article History:

Received: 30 Oct 2025

Revised: 15 Apr 2026

Accepted: 28 Apr 2026

Publish online: 9 May 2026

Keywords:

learning motivation; learning outcomes; mind mapping method

Open access

Curricula: Journal of Curriculum Development is a peer-reviewed open-access journal.

ABSTRAK

Metode pembelajaran berperan penting dalam mendorong motivasi belajar murid, maka dari itu, diperlukan metode pembelajaran inovatif dan berfokus pada murid. Penelitian ini bertujuan menguji pengaruh metode mind mapping terhadap motivasi dan hasil belajar Pendidikan Agama Islam (PAI) dan Budi Pekerti murid kelas XI di SMAN 9 Kota Bengkulu. Penelitian ini menggunakan desain eksperimen kuantitatif dengan melibatkan 61 murid sebagai sampel yang dibagi ke dalam kelompok eksperimen dan kontrol. Data dikumpulkan melalui tes dan kuesioner, kemudian dianalisis menggunakan uji t dan regresi linier. Hasil penelitian menunjukkan bahwa penggunaan metode mind mapping berpengaruh signifikan terhadap peningkatan motivasi dan hasil belajar murid dibandingkan dengan metode konvensional. Kelompok eksperimen yang menerapkan mind mapping memperoleh skor rata-rata yang lebih tinggi. Penemuan ini mengonfirmasi bahwa mind mapping efektif dalam memfasilitasi pemrosesan informasi secara terstruktur, meningkatkan keterlibatan kognitif, serta mengubah paradigma pembelajaran menjadi berpusat pada murid. Mind mapping direkomendasikan sebagai strategi pedagogis yang efektif untuk memperdalam pemahaman materi PAI dan Budi Pekerti yang kompleks serta meningkatkan hasil akademik murid di tingkat sekolah menengah.

Kata Kunci: hasil belajar; metode mind mapping; motivasi belajar

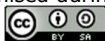
How to cite (APA 7)

Yusilafita, A., Lubis, M., & Dewi, D. E. C. (2026). Effects of mind mapping on PAI dan Budi Pekerti learning motivation and outcomes. *Curricula: Journal of Curriculum Development*, 5(2), 533-544.

Peer review

This article has been peer-reviewed through the journal's standard double-blind peer review, where both the reviewers and authors are anonymised during review.

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INTRODUCTION

Based on the definition in Undang-Undang Republik Indonesia Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional, it can be understood that through education, students' skills develop, their thinking abilities become more refined, and the potential to shape a better personality is realized. This aligns with the view that the lecture method remains the dominant strategy because it can convey information directly to many students simultaneously (Annisa et al., 2025). Although effective for systematically explaining basic concepts, reliance on this method tends to make learning one-sided and less engaging for students. This situation often leads students to become passive, so a major challenge for PAI dan Budi Pekerti teachers today is selecting methods that can encourage active participation to achieve these national educational goals. The foundations for implementing education are the Quran and Hadith. If education is likened to a building, then the contents of the Quran and Hadith are its foundation, as stated in (Q.S An-Nahl (16): 125):

أَدْعُ إِلَى سَبِيلِ رَبِّكَ بِالْحِكْمَةِ وَالْمَوْعِظَةِ الْحَسَنَةِ وَجَادِلْهُمْ بَالَّتِي هِيَ أَحْسَنُ
إِنَّ رَبَّكَ هُوَ أَعْلَمُ بِمَنْ ضَلَّ عَنْ سَبِيلِهِ وَهُوَ أَعْلَمُ بِالْمُهْتَدِينَ

"Call (people) to the way of your Lord with wisdom and good instruction, and argue with them in the best manner. Indeed, your Lord knows best who has strayed from His path, and He knows best who is rightly guided." (Q.S An-Nahl (16): 125)

Education plays a vital role in shaping the quality of human resources, particularly by developing individuals' full potential across their physical, intellectual, emotional, social, and spiritual aspects. In the Indonesian context, this goal extends beyond academic intelligence to include fostering devout individuals who possess noble character, are self-reliant, and productive, in accordance with each student's developmental stage. One method is mind mapping, a visual learning strategy developed by Tony Buzan. This method organizes information in a radial pattern using keywords, colors, and images to make it easier to understand. Various studies indicate that mind mapping has been applied across diverse fields of study and yields positive results, both in enhancing motivation and academic achievement (Munawwarah & Cahyani, 2025).

Mind mapping can also improve learning outcomes and boost students' creativity, as the process of creating a mind map involves using symbols, images, lines, and colors that stimulate creative thinking, leading students to view it as a fun note-taking technique (Acesta, 2020). Given the characteristics of PAI dan Budi Pekerti material, which tend to be visual and interrelated, such as concepts in theology, *fiqh*, and ethics, mind mapping is well-suited to deepen understanding and increase student engagement in the learning process. To achieve these goals, the teacher's role in selecting teaching methods is crucial. The teaching-learning process is not merely a transfer of information but an active interaction between teacher and student that influences both parties. Teachers are expected to select and apply appropriate methods to ensure learning is effective and meaningful.

Well-designed methods not only create a more interactive learning environment but also encourage active student participation, develop critical thinking skills, and deepen

understanding of the spiritual and moral values that underpin education itself (Adiningrat & Albina, 2024). Teaching methods are tools to motivate students to learn the lessons being taught. Teachers should be able to understand their students' psychological, motor, and mental development. A good teacher understands students' desires and is skilled at igniting their intrinsic motivation. If students develop a strong motivation to learn, they will enjoy the learning process, achieve optimal and satisfying results, and meet the competency standards set out in the curriculum. To address this issue, innovative, student-centered learning methods are needed. One such method is mind mapping, a visual learning strategy developed by Tony Buzan that organizes information using keywords, colors, and images in a radial structure. This method is believed to enhance students' comprehension and memory by engaging both the logical and visual aspects of the brain.

By visually structuring information, mind mapping effectively reduces cognitive load and allows students to externalize their thinking, which is crucial for deep understanding and long-term memory retention (Munawwarah & Cahyani, 2025). Furthermore, employing mind mapping as a primary cognitive tool has been empirically proven to significantly elevate students' higher-order learning outcomes, bridging the gap between abstract concepts and practical comprehension (Siregar et al., 2026). Previous research has shown that mind mapping can improve motivation to learn and academic achievement across various subjects (Evayanti & Sumantri, 2017). This improvement is particularly notable in religious and moral education, where mind mapping helps students connect complex theological principles, resulting in measurable improvements in both formative and summative academic achievement (Apriyanti & Rahayu, 2024; Mutaqin, 2024).

Recent empirical studies have consistently demonstrated the efficacy of the mind-mapping method in fostering student motivation and self-regulation across various educational settings. For instance, integrating mind mapping with cooperative learning significantly improves both motivation and cognitive learning outcomes by providing a structured yet creative approach to education (Mahdi & Junaedi, 2025). Similarly, the use of innovative mind-mapping techniques has been shown to enhance students' self-regulated learning and comprehension of core ideas, which are crucial components of intrinsic motivation (Satar et al., 2025). This method's adaptability is further evidenced in civic and character education, where it effectively shifts the learning dynamic from teacher-centered to student-centered, resulting in substantial improvements in both learning motivation and cognitive mastery (Tunny et al., 2025).

In the specific context of PAI dan Budi Pekerti and Islamic history, mind mapping has shown promising results in overcoming the limitations of conventional rote learning. Collaborative strategies based on mind mapping in PAI dan Budi Pekerti lessons significantly boost students' concentration, active participation, and the internalization of religious character (Apriliani et al., 2025). Furthermore, the application of visual mapping techniques has been proven highly effective in improving learning outcomes in narrative-heavy subjects such as Islamic history. It helps students visually organize complex historical events, thereby improving memory retention and systematic understanding (Cahyaningsih et al., 2025).

Based on the results of observations conducted by researchers at SMAN 9 Bengkulu City in the subject of PAI dan Budi Pekerti, teachers are accustomed to teaching by applying lecture and assignment methods or using conventional methods in the learning process, namely the

teacher explains the material in front and students listen, and also the teacher only uses whiteboard markers and printed books as media., students are less active, creative and lack motivation in following the process of learning PAI dan Budi Pekerti which leads to students' lack of understanding, another problem is that during the learning process, there are still many students who feel bored in receiving the material and are classified as passive in class. This also leads to low student learning outcomes.

However, most existing research on mind mapping has been conducted in the context of general education or at the elementary school level, with limited focus on its application in PAI dan Budi Pekerti at the high school level. Furthermore, few studies have simultaneously examined its impact on learning motivation and learning outcomes within the same research design. Despite the growing body of literature on mind mapping in general education, empirical evidence regarding its effects in the specific context of senior high school PAI dan Budi Pekerti instruction in Indonesia remains limited. This study, therefore, aims to examine: 1) The effect of the mind mapping method on the learning motivation of 11th-grade students at SMAN 9 Bengkulu City; and 2) The effect of the mind mapping method on the learning outcomes of 11th-grade students at SMAN 9 Bengkulu City.

LITERATURE REVIEW

Learning Motivation

Motivation in learning is a drive within students that stimulates learning activities to achieve desired goals (Urhahne & Wijnia, 2023). In learning activities, motivation can be defined as the overall driving force within students that generates learning, sustains it, and provides direction, enabling the achievement of desired learning goals (Harahap et al., 2021). Learning motivation plays a unique role in fostering passion, enjoyment, and enthusiasm for learning (Lutfiwati, 2020). Students with strong motivation will have ample energy for learning activities. In an educational context, motivation can be understood as a theoretical concept that explains how a person's learning behavior is initiated, directed, reinforced, and sustained to achieve specific goals (Filgona et al., 2020). Essentially, motivation serves as a driving force that helps students persevere in the face of various difficulties and challenges in the learning process. The relationship between motivation and the learning process is very close, as motivation serves as the foundation for both the emergence of aspirations and students' learning achievements (Lutfiwati, 2020).

The level of motivation students possess is evident in how actively they engage, participate, and contribute within the learning environment (Felea & Roman, 2023). Motivation in learning is a drive within students that stimulates learning activities to achieve desired goals. Motivation serves as a driving force that drives someone to perform a specific task to achieve the desired goal (Erita et al., 2023). Students who are motivated to learn will pay attention to the teacher's lesson, read the material to understand it, and use specific learning strategies to support it. Besides motivating students to learn, it can also increase their enthusiasm for participating in the learning process. When students are provided with dynamic, student-centered learning tools such as visual maps, their intrinsic drive to explore broader subjects increases significantly (Suhariami et al., 2026). This transition from a

passive learning state to active engagement is crucial for sustaining long-term academic enthusiasm across various disciplines.

Learning Outcomes

Learning outcomes are the results achieved by students after participating in learning activities (Rahman, 2022). Learning outcomes are essentially changes in a person's behavior resulting from the learning process. These changes can include knowledge, understanding, skills, and attitudes, and are usually expressed numerically or letter grade according to predetermined criteria. Student learning outcomes can provide information about their ability to understand the material presented by the teacher during classroom instruction (Irawati et al., 2021). Moreover, integrating visual methodologies not only enhances immediate comprehension but also effectively reduces student misconceptions, leading to more robust cognitive learning outcomes over time (Sani et al., 2025). Incorporating creative and collaborative learning frameworks further solidifies these outcomes by naturally encouraging students' higher-order thinking skills (Supena & Hariyadi, 2021). Many internal and external factors influence a person's learning success or failure. Learning motivation influences student learning outcomes, with higher motivation associated with better outcomes. Given the significant influence of learning motivation on learning outcomes, students can demonstrate that learning motivation influences their outcomes (Rahman, 2022).

Mind Mapping Methods

Previous research revealed that learning by applying the mind mapping method has a great influence on creative thinking skills because in the learning process students are very enthusiastic to follow it, the results obtained after this learning are very satisfying and the formation of students' creative thinking patterns where students can think and find something new, create new ideas, and can view a problem from various points of view (Acesta, 2020). Mind mapping is a note-taking technique that develops a visual learning style. Mind maps enhance a person's cognitive capacity. When both hemispheres are engaged, it is easier to organize and remember all types of information, both written and spoken. Mind mapping leverages the brain's ability to recognize visual material for optimal results.

With its combination of color, images, and curved branches, mind maps are more visually stimulating than traditional note-taking methods, which tend to be linear and monochromatic (Ridho & Imron, 2023). This dynamic visual display intuitively mimics natural brain functions, enabling students to grasp abstract and complex concepts more easily. Consequently, it serves as an excellent tool for procedural learning and systematically organizing information retrieval, which is highly beneficial for subjects with dense theoretical content (Kefalis et al., 2025; Jabade & Nadaf, 2024). The mind mapping method can be applied to all subjects, including PAI dan Budi Pekerti. This is because PAI dan Budi Pekerti are among the subjects that require students to study diligently and to be highly motivated.

The broad scope of these subjects often leaves students struggling to keep up with the material due to the sheer volume they must cover. PAI dan Budi Pekerti are subjects in the Kurikulum Merdeka for Senior High Schools. At the high school level, PAI dan Budi Pekerti

aim to enhance students' understanding, faith, appreciation, and practice of Islam, enabling them to become faithful and pious Muslims who uphold God Almighty and possess noble character in their personal, family, and community lives. Learning PAI dan Budi Pekerti requires students not only to understand what they are taught but also to set a good example in their community.

METHODS

The research uses a quantitative descriptive research design. The research location is SMAN 9 Bengkulu City, located at Tugu Hiu, Bentiring Village, Muara Bangkahulu District, Bengkulu City. The type of research is Experimental. The population in this study consisted of all grade XI students (182 students), and the sample comprised students of Class XI IPS 2 as the experimental class and XI MIPA 2 as the control class (61 students). Data collection techniques were tests, questionnaires, and documentation. Data analysis used data quality tests, namely validity and reliability tests, basic assumption tests, namely normality tests, homogeneity tests, and linearity tests. Hypothesis testing used simple linear regression equation tests, partial tests (t-tests), and coefficient-of-determination tests.

RESULTS AND DISCUSSION

The results of the study indicate that the use of mind mapping techniques has a statistically significant impact on both variables under investigation. Regarding learning motivation, the independent samples t-test yielded a Sig. (2-tailed) value of 0.000, well below the 0.05 threshold, indicating a significant difference between the experimental and control groups. Furthermore, the analysis of cognitive learning outcomes found a Sig. (2-tailed) value of 0.001 below the 0.05 threshold, further indicating that this method effectively improves students' academic achievement.

Overall, these results provide sufficient statistical evidence to reject the null hypothesis (H₀) and accept the alternative hypothesis (H_a). In other words, the mind-mapping method not only serves as a supplementary learning tool but also plays a substantive role in fostering motivational engagement and improving the academic achievement of 11th-grade students in PAI dan Budi Pekerti at SMAN 9 in Bengkulu City. This dual impact suggests that when students are actively engaged in constructing visual representations of the knowledge they are learning, they are simultaneously encouraged to engage more deeply with the material, which, in turn, contributes to improved learning outcomes.

The Effect of the Mind Mapping Method on Learning Motivation

Learning motivation is one of the key factors in determining students' academic success, because without motivation, the learning process cannot proceed optimally. Students with high learning motivation tend to demonstrate better learning outcomes (Kurnia et al., 2024). Based on this, this study aims to examine whether applying the mind-mapping method can significantly affect the learning motivation of 11th-grade students at SMAN 9 in Bengkulu City. Data on learning motivation were collected via a 25-item questionnaire. The results indicate a difference in average scores between the two groups. The experimental class (XI

IPS 2) using the mind-mapping method achieved an average score of 76.68, while the control class (XI MIPA 2) using conventional methods scored 72.79. This difference indicates that applying the mind-mapping method increases student learning motivation compared to conventional learning methods.

Before proceeding to hypothesis testing, the data were subjected to normality and homogeneity checks to ensure the validity of the analysis. The Kolmogorov-Smirnov normality test yielded an Asymp. Sig. value of 0.191 for the experimental class and 0.178 for the control class, both of which exceeded the 0.05 threshold, confirming that the data were normally distributed. Similarly, the homogeneity test produced a Sig. value of 0.775 > 0.05, indicating that the variance between the two groups was homogeneous. With these prerequisites fulfilled, hypothesis testing was conducted using simple linear regression and an independent-samples t-test. The analysis yielded a Sig. (2-tailed) value of 0.000 < 0.05, leading to the acceptance of H_a and the rejection of H_0 . This result provides strong statistical evidence that the mind-mapping method has a positive, significant effect on learning motivation in Islamic Education and Character Education among 11th-grade students.

This pattern is consistent with what previous research has observed about the link between student motivation and learning behavior, students with high motivation tend to demonstrate greater perseverance, a refusal to give up easily, and a proactive attitude toward seeking out resources to improve their understanding, while those with low motivation often struggle to stay focused and are more susceptible to discouragement (Rahman, 2022). These findings are also supported by previous research showing that the mind mapping method not only improves the quality of learning but is also effective in boosting students' motivation to learn. This is because the method positions students as active participants in the learning process, thereby facilitating a deeper understanding of the material and increasing student participation in learning activities (Maryam et al., 2021).

The Effect of Using the Mind Mapping Learning Method on the Learning Outcomes

The learning outcome data in this study were obtained through post-instructional tests administered to the experimental and control classes. The measurement of learning outcomes focused on the cognitive domain, covering levels C1-C6 of Bloom's taxonomy. This range was selected based on the consideration that the sequentially arranged cognitive stages, ranging from remembering, understanding, applying, analyzing, evaluating, and creating, can provide a more comprehensive picture of students' learning achievements (Komara et al., 2025; Sudirtha et al., 2022). Thus, assessment does not merely focus on recall but also evaluates higher-order thinking skills that reflect a deep understanding of the material.

Data analysis results show a Sig. (2-tailed) value of 0.001 < 0.05, meaning H_0 is rejected, and H_a is accepted. This finding indicates that the use of the mind mapping method has a significant effect on student learning outcomes. More broadly, this indicates that students' active engagement in organizing and connecting concepts through mind mapping helps them understand the material more deeply and in a more structured manner, thereby positively impacting their cognitive achievement. Therefore, it can be concluded that the application of

the mind mapping method is effective in improving the learning outcomes of dan Budi Pekerti 11th-grade students at SMAN 9 in Bengkulu City.

The results of this study can be understood through the fundamental advantages of the mind mapping method in the learning process. Mind mapping is known to be effective in helping students remember and retain information for longer periods. This is due to the characteristics of mind mapping, which encourage active learning: students do not merely passively receive information. However, they are directly involved in the process of discovering and constructing knowledge. In practice, students are encouraged to discuss, solve problems, and seek information from various sources, including books and the internet, making the learning process more meaningful and contextual (Tunny et al., 2025).

The findings of this study become clearer when considering the role of mind mapping in enhancing students' active engagement during the learning process. Through this method, students no longer merely listen passively to the teacher's explanations but actively participate in various activities such as discussions, brainstorming, and presenting their ideas (Fadliyah, 2026). This engagement makes the learning process more dynamic, as students are directly involved in constructing understanding rather than merely receiving information. Through discussion and idea exploration, students are encouraged to think more critically and connect the material to their existing knowledge. Meanwhile, presentation activities help them organize and communicate their ideas more effectively.

The combination of these activities creates a more interactive and meaningful learning environment, making students more focused and motivated. These findings align with previous research on the influence of the mind-mapping method combined with comic book media on students' reading interest and cognitive learning outcomes. The results of their study demonstrated that students in the experimental class outperformed those in the control class, with average posttest scores of 77.93 and 68.96, respectively. Statistical analysis using the t-test further confirmed this difference, yielding a calculated t-value that exceeded the t-table value ($4.33 > 2.00$) at a 5% significance level, thus establishing a statistically significant distinction between the two groups.

The superior outcomes observed in the experimental class may be attributed to the inherent characteristics of mind mapping as a structured yet creative approach to recording and organizing information. Through branching visual frameworks complemented by color, imagery, and spatial connections, mind mapping simultaneously activates both hemispheres of the brain. As a result, students are not only better equipped to capture information efficiently but also to analyze it. However, they also support a deeper understanding of the subject matter, consolidate long-term memory, and facilitate the retrieval of previously acquired knowledge with greater ease (Pramana et al., 2022).

These findings are further supported by research examining the effect of the mind mapping learning model on students' learning outcomes in PAI dan Budi Pekerti at the Muhammadiyah Junior High School (UPTS) in Parepare. The study revealed a significant improvement in students' learning outcomes following the implementation of mind mapping, as evidenced by an increase in the average score from 55 on the pretest to 76 on the posttest. Furthermore, the results of inferential statistical analysis showed a t-value of 3.251 with a significance level of $0.036 < 0.05$, confirming that the mind mapping learning model has a positive and significant effect on student learning outcomes (Muis & Krisno, 2023).

Discussion

This study examines the effect of the mind-mapping method on two key aspects of PAI dan Budi Pekerti student motivation and learning outcomes. Overall, the findings indicate a significant effect on both aspects, suggesting that the use of the mind-mapping method can make a tangible contribution to improving the quality of the learning process and its outcomes.

Interpretation of Statistical Results

The independent-samples t-test on the learning motivation variable yielded a p-value of 0.000, which is below the 0.05 threshold. These results indicate that the mind mapping method has a significant effect on students' learning motivation. This is also evident in the difference in average scores between the experimental and control classes, with the mind-mapping class achieving higher scores. Although the difference is not large, it still indicates an increase in learning motivation attributable to the application of the mind-mapping method. This finding reinforces the view that learning strategies that actively involve students tend to be more effective in building learning motivation. This study is also consistent with various previous studies. The mind mapping method has been proven to enhance learning motivation by positioning students as active participants in the learning process, thereby fostering greater engagement and a more dynamic learning environment (Maryam et al., 2021).

Furthermore, students with high learning motivation tend to be more diligent, less likely to give up, and more proactive in seeking and understanding information, which ultimately leads to improved learning outcomes (Rahman, 2022). These empirical results directly corroborate the theoretical claims established earlier in the literature review, which state that visual, student-centered tools significantly elevate students' intrinsic drive and foster self-regulated learning (Satar et al., 2025; Suhariami et al., 2026). Furthermore, this study confirms that shifting from traditional teacher-centered lectures to mind mapping in PAI dan Budi Pekerti subjects successfully mitigates passive learning habits, mirroring similar findings in other character-building subjects (Tunny et al., 2025). This proves that the motivational benefits of mind mapping are highly transferable and effective in religious education at the senior high school level, directly addressing the research gap identified in the introduction.

Discussion in Relation to Previous Studies

This study also aligns with research showing that mind mapping can significantly improve students' academic achievement. Students who learn using this method tend to achieve better results than those using conventional methods, as they find it easier to understand and retain the material (Pramana et al., 2022). Similar findings were reported in another study, indicating a significant improvement in learning outcomes following the implementation of the mind-mapping method, particularly in Islamic Education (Muis & Krisno, 2023). The effectiveness of the mind-mapping method in improving learning outcomes can be explained by its mechanism, which involves multiple cognitive processes.

This method combines visual elements, colors, and organized structures, thereby activating both hemispheres of the brain simultaneously. This allows students not only to memorize information but also to understand, connect, and apply it in a broader context (Ridho & Imron, 2023). This cognitive mechanism aligns perfectly with recent assertions that visually structuring information effectively reduces cognitive load and minimizes misconceptions (Munawwarah & Cahyani, 2025; Sani et al., 2025). In the context of PAI dan Budi Pekerti, which often involves complex theological principles and dense historical narratives, this reduction in cognitive load is crucial for consolidating long-term memory and achieving higher-order cognitive outcomes. Therefore, the improvement in learning outcomes in the experimental class can be understood as the result of a deeper and more structured thinking process.

Finally, the success of this method in elevating both motivation and learning outcomes simultaneously validates recent preliminary studies in religious and character education. As hypothesized in the introduction, collaborative visual mapping not only aids cognitive mastery but also deeply internalizes religious character and improves systematic understanding of narrative-heavy materials such as Islamic history (Apriliani et al., 2025; Cahyaningsih et al., 2025). By providing robust statistical evidence from a senior high school setting, this study extends previous elementary-focused research. It solidifies mind mapping as a comprehensive pedagogical tool capable of meeting the holistic goals of national education outlined in the literature review.

CONCLUSION

Based on these findings, it can be concluded that the mind mapping method is effective in enhancing both learning motivation and learning outcomes in PAI dan Budi Pekerti at the senior high school level, as evidenced by statistically significant results. These findings suggest that the mind-mapping method not only fosters greater student engagement throughout the learning process but also contributes meaningfully to overall academic achievement. By presenting material in a structured, visually organized manner, the mind-mapping method enables students to process and connect concepts more effectively, transforming the learning experience from a passive, teacher-centered activity into an active, meaningful, and intellectually engaging one. In light of these findings, the mind-mapping method is strongly recommended as a viable and practical alternative to conventional instructional approaches, particularly for PAI dan Budi Pekerti teachers seeking to cultivate a more interactive, student-centered learning environment.

AUTHOR'S NOTE

The author expresses his gratitude to all readers. The authors declare that there is no conflict of interest regarding the publication of this article. The authors also declare that the data and content of this article are free from plagiarism.

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