International Journal of Research in Education

Volume 6, Issue 1, January 2026, pp. 46 – 61

e-ISSN: 2745-3553

DOI: https://doi.org/10.26877/ijre.v6i1.3169

Islamic Education Learning Motivation: How the STAD Cooperative Model Impacts Students

Hauzzan Felgiansyah*, Sunarto, Erni Yusnita

Universitas Islam Negeri Raden Intan Lampung, Indonesia

*Corresponding author's email: hauzzanflg@gmail.com

ARTICLE INFO

Received: Dec 17, 2025

Revised: Jan 10, 2026

Accepted: Jan 28, 2026

This is an open access article under the CC–BY-SA license.

Keywords:

Learning Motivation, Islamic Religious Education, Muhammadiyah Senior High School, STAD

ABSTRACT

This study aims to analyze the effect of the Student Teams Achievement Division (STAD) cooperative learning model on students' learning motivation in Islamic Religious Education (Pendidikan Agama Islam/PAI) at SMA Muhammadiyah 2 Bandar Lampung. The research employed a quantitative approach using a quasi-experimental design involving two groups: an experimental class implementing the STAD model and a control class receiving conventional instruction. The research instrument was a PAI learning motivation questionnaire consisting of 20 items. The validity test indicated that 18 items were valid, while the reliability test yielded a Cronbach's Alpha coefficient of 0.848, indicating high reliability. The result of data analysis was preceded by the Shapiro–Wilk normality test, which demonstrated that the data were normally distributed (Sig. experimental class = 0.140; control class = 0.752). However, the homogeneity test revealed that the data variances were not homogeneous (Sig. < 0.05). Consequently, hypothesis testing was conducted using the Mann–Whitney U test. The results of the Mann–Whitney U test showed an Asymp. Sig. (2-tailed) value of 0.000 (< 0.05), indicating a statistically significant difference in learning motivation between the experimental and control classes. The novelty of this study lies in the application of the STAD model in Islamic Religious Education by integrating cooperative group work with Islamic values to enhance students' learning motivation. These findings underscore the importance of employing innovative instructional models in PAI learning to foster a conducive, student-centered learning environment. Theoretically, this study contributes to the enrichment of cooperative learning literature within the context of Islamic education.

Introduction

Learning motivation is a crucial determinant of the success of the instructional process, as it significantly influences students' enthusiasm for learning and enhances teachers' effectiveness in delivering instruction(Nahid, 2023; Szőköl, 2021; Weiler & Murad, 2022). Motivation arises from internal energy changes, accompanied by affective states and behavioral responses directed toward the attainment of specific goals(Michaelsen & Esch, 2023; Rivera et al., 2021; Urhahne & Wijnia, 2023). Its characteristics include perseverance in completing tasks, resilience in overcoming difficulties, a strong interest in various issues,

a preference for independent work, a tendency to become quickly disengaged with routine activities, the ability to firmly maintain one's viewpoints, a high level of persistence, and a strong inclination toward seeking effective solutions(Amelia et al., 2021; Dinapoli, 2023; Wang, 2022). Motivation can emerge from both internal dispositions and external environmental factors, including support from parents, teachers, and peers (Asadpour et al., 2025; Gao et al., 2024; Wiangga & Febriyanto, 2025). With this impetus in place, students are motivated to engage in sustained, goal-oriented learning until the intended learning objectives are achieved(Muthik et al., 2022; Singh et al., 2022; Suharnadi & Nirwana, 2024).

In addition to internal factors, learning motivation is also significantly influenced by the appropriateness of instructional methods, facilities, and learning media (Mindo & Paglinawan, 2025; Noresda & Kosasi, 2023; Parinsi et al., 2024). A teacher who is able to select instructional methods aligned with students' needs will foster an engaging learning environment, enhance learners' interest, and facilitate deeper understanding (Lubis et al., 2023; Yudha & Mandasari, 2021). Adequate learning facilities and instructional media also contribute to enhancing students' focus, while the appropriate and interactive use of media can foster engaging and meaningful learning experiences(Daryanes et al., 2023; Nursaid et al., 2024). With strong motivation derived from both internal and external factors, complemented by appropriate instructional media, students are more likely to engage actively in the learning process, resulting in more optimal learning outcomes(Meşe & Sevilen, 2021; Ryanto1 et al., 2025; Suardin et al., 2023).

The Student Teams Achievement Division (STAD) learning model is a form of cooperative learning that emphasizes collaboration within small groups of 4–5 students to promote shared understanding of instructional content through collective discussion, peer interaction, and joint task completion(Ayu et al., 2025; Ikhsan & Esser, 2025). This model is considered capable of replacing traditional, predominantly passive teaching methods by providing students with opportunities to engage in both independent and collaborative learning, thereby enhancing interaction, responsibility, and learning motivation. (Zahra et al., 2023). With the support of peers, students are encouraged to engage in mutual assistance, collaborate effectively, and further develop critical thinking skills, creativity, and social competencies. This assertion is substantiated by several empirical studies, including: (Damayanti et al., 2024; Erawati et al., 2024; Ferdinal et al., 2025; Maulana et al., 2023; Winarni et al., 2022) which underscores that the implementation of the STAD model is capable of fostering a learning environment that is more active, innovative, and engaging.

Furthermore, the implementation of the STAD model not only enhances students' motivation and engagement in the learning process but also fosters a collaborative culture of mutual encouragement aimed at achieving shared academic success (Khalilullah & Mardhiah, 2025; Marina Arjeni et al., 2024; Safanora & Putra, 2024). The reward system granted to the best-performing groups has been empirically proven to enhance students' motivation, as articulated by (Faqih et al., 2025) and further supported by (Ariningsih et al., 2023). Furthermore, the motivation and collaborative engagement fostered through the implementation of the STAD model play a crucial role in supporting the improvement of students' academic achievement (Ardiansyah et al., 2025; Sofiya et al., 2025). This is consistent with the findings of (Kinasih et al., 2025) which confirms that motivation exerts a

substantial influence on learning achievement. Accordingly, the STAD model can be regarded as a relevant instructional strategy for fostering students' active engagement, creativity, and academic achievement, including within the context of Islamic Religious Education (Fatimah et al., 2024; Munazar, 2025).

Numerous studies have demonstrated that the Student Teams Achievement Division (STAD) cooperative learning model exerts a positive effect on students' learning motivation, as evidenced by (Ginting & Sidebang, 2023) in the context of Indonesian language education at the primary school level (Halawulang & Nuhamara, 2024), in junior high school mathematics, (Munawar et al., 2024) in Biology at vocational high schools, (Hastuti & , Yusuf, 2024), in the economic domain, as well as (Wahyuni & Febriani, 2023) in senior high school sociology. Nevertheless, these studies reveal a research gap, as they have not specifically examined the effect of the Student Teams Achievement Division (STAD) model on students' learning motivation in Islamic Religious Education (IRE), a subject characterized by an emphasis on cognitive, affective, and spiritual dimensions. Therefore, the novelty of this study lies in its focus on implementing the STAD model in IRE learning by integrating cooperative learning strategies with Islamic values to enhance students' learning motivation in a holistic manner.

The urgency of this study lies in the fact that Islamic Religious Education (IRE) instruction at SMA Muhammadiyah 2 Bandar Lampung remains predominantly lecture-based, with limited utilization of instructional media, which in turn contributes to students' low learning motivation. This study is expected to make a substantive contribution by offering innovative and varied instructional strategies that are aligned with students' learning needs. The implications of this research suggest that its findings may serve as a reference for teachers in developing more engaging teaching methods, encouraging the optimal use of school facilities, and fostering a more conducive learning environment. Consequently, this study has the potential to enhance students' motivation, participation, and understanding of PAI content, while simultaneously supporting the overall improvement of educational quality at the school.

Therefore, the research question posed in this study examines how the implementation of the Student Teams Achievement Division (STAD) cooperative learning model influences senior high school students' learning motivation in Islamic Religious Education (IRE).

Research Methods

This study was conducted at SMA Muhammadiyah 2 Bandar Lampung using a quantitative approach with a quasi-experimental design. Experimental research is employed to examine the effect of an instructional treatment by comparing a group that receives the intervention with a comparison group. According to Cohen, a quasi-experimental design is particularly appropriate in educational research when full randomization of participants is not feasible, while the rigor and validity of the research findings are still maintained(Fadillah et al., 2025; Mansour & Wardat, 2025; Mardati et al., 2025). The research subjects consisted of two eleventh-grade classes: an experimental group that implemented the Student Teams Achievement Division (STAD) cooperative learning

model in class XI C, and a control group that employed conventional instructional methods in class XI A. The study commenced with the preparation of instructional materials and the development of a IRE learning motivation questionnaire, with particular emphasis on indicators of the dependent variable, especially the aspect of a conducive learning environment.

The implementation of the STAD model in the experimental class was carried out systematically in accordance with the predetermined instructional procedures. The teacher assumed the role of a facilitator, guiding students to work collaboratively in heterogeneous groups and engage in active discussions. The learning process emphasized cooperation and interaction among students, supported by instructional materials, worksheets, and other learning resources. This implementation was expected to enhance students' mastery of Islamic Religious Education (IRE) content as well as foster positive attitudes toward cooperation and responsibility.

The research instrument, a learning motivation questionnaire, was piloted prior to its administration. The results of the validity test indicated that out of 20 items, 18 items were valid, while 2 items were invalid and subsequently excluded from further analysis. Meanwhile, the reliability test yielded a Cronbach's Alpha coefficient of 0.848, indicating a high level of reliability. The collected data were then analyzed using assumption tests and hypothesis testing to examine the effect of the STAD model on students' motivation to learn IRE.

Findings

This study aims to analyze the effect of implementing the Student Teams Achievement Division (STAD) cooperative learning model in Islamic Religious Education at the senior high school level. The research involved two classes as samples, namely an experimental class and a control class. The experimental class received instructional treatment through the application of the STAD learning model, while the control class was taught using conventional instructional methods without any specific treatment. Each class consisted of 36 students.

Based on a preliminary study conducted at SMA Muhammadiyah 2 Bandar Lampung through classroom observations, interviews with the Islamic Religion Education (IRE) teacher, Mrs. Nirmalina, S.Pd.I, and several eleventh-grade students, several issues were identified in the PAI learning process. These issues include the continued dominance of lecture-based instruction and rote memorization, the underutilization of instructional facilities such as projectors, discrepancies between teachers' and students' perspectives regarding instructional methods, and low levels of student learning motivation—particularly in relation to engaging learning activities, recognition or rewards, and the availability of a supportive and conducive learning environment.

Figure 1. Summary of Learning Motivation Questionnaire Distribution Results at SMA Muhammadiyah 2 Bandar Lampung

Based on the pie chart, the most dominant factor motivating students to learn is the desire and determination to succeed (32%), followed by learning-related drives and needs (17%) and students' expectations and aspirations (16%). In contrast, the three indicators with the lowest proportions are recognition in learning, a conducive learning environment, and engaging learning activities, each accounting for only 11–13%. These findings indicate that students perceive limited environmental support, insufficient recognition, and a lack of engaging instructional practices. The primary issue that warrants serious attention is the weak role of the learning environment and the absence of enjoyable learning methods, as students' intrinsic motivation may diminish when it is not reinforced by supportive external factors.

Learning motivation refers to the drive that arises both from within learners and from external factors, which encourages them to be more enthusiastic, persistent, and focused in participating in the learning process so that learning objectives can be achieved(Fernando et al., 2024; Suharni, 2021). In this study, the researchers selected the topic of *"free social interaction"* for Grade XI students to examine differences in learning outcomes between classes implementing the Student Teams Achievement Division (STAD) cooperative learning model and those employing conventional instructional methods. The study was conducted over three instructional sessions. The first stage was carried out in Class XI F as a pilot group to test the validity of the questionnaire developed by the researchers. The second stage was conducted in Class XI A as the control group. The final stage took place in Class XI C as the experimental group, during which the questionnaire was administered after the completion of the learning activities.

This study commenced with the development of a questionnaire instrument designed to measure students' learning motivation in the subject of Islamic Religious Education (IRE), with a particular emphasis on indicators of a conducive learning environment. The construction of the learning motivation questionnaire involved the adoption of previously developed instruments from several relevant prior studies, including established motivation scales, which were subsequently adapted to align with the specific characteristics of IRE learning. Prior to its implementation in both the control and experimental groups, the instrument was pilot-tested on eleventh-grade students of class XI F to ensure its appropriateness and clarity.

The pilot testing phase aimed to ensure that respondents could clearly understand each questionnaire item without difficulty, as well as to estimate the time required for

completion so that it was neither excessively long nor overly brief. This process also sought to evaluate the effectiveness of the measurement technique and to determine whether the questionnaire items were appropriate to field conditions, thereby preventing potential confusion among respondents. Furthermore, the pilot test was conducted to ensure the reliability and validity of the instrument before its application in the actual study (Nasution, 2019; Zayrin et al., 2025).

The validity test conducted using SPSS version 25 indicated that, of the 20 questionnaire items, 18 items were deemed valid, as their Corrected Item–Total Correlation values exceeded the critical r-table value of 0.329 based on responses from 36 participants. Meanwhile, two items were identified as invalid and were subsequently removed to ensure that the instrument accurately measured the indicators of learning motivation.

Reliability test

After determining the valid items, the researcher proceeded to the reliability testing stage to examine the internal consistency of the research instrument. Reliability refers to the process of assessing whether a measurement instrument can be used accurately and consistently. This test evaluates the consistency of the data, specifically whether the obtained data remain stable when measurements are repeatedly conducted on the same subjects using the same instrument (Dewi et al., 2022). The results indicated that the instrument demonstrated a high level of reliability, as evidenced by the following Cronbach's Alpha values:

Table 1. Reliability test of students' learning motivation.

Reliability Statistics

Cronbach's Alpha	N of Items
,848	18

The Cronbach's Alpha value of 0.848 indicates that the research instrument falls within the category of highly reliable. A questionnaire is considered reliable if respondents' answers to the statements are consistent or stable over time(Sugiarta et al., 2023). This implies that each item in the instrument demonstrates good internal consistency, ensuring that the collected data are stable and trustworthy.

Based on the data analysis conducted with 11th-grade students at SMA 2 Muhammadiyah Bandar Lampung, concerning the variable of students' learning motivation in Islamic Religious Education, the interpretation of the results is as follows.

Normality Test

The Normality Test is conducted to determine whether the collected data follow a normal distribution. Data are considered normally distributed if the significance value (sig.) > 0.05 (Difinubun et al., 2023). The results of the Normality Test are presented in Table 2 below.

Table 2. Normality test of students' learning motivation.

Tests of Normality							
		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Kelas	Statistic	df	Sig.	Statistic	df	Sig.
hasil motivasi belajar	kelas kontrol	,136	36	,088	,954	36	,140
	kelas eksperimen	,087	35	,200*	,980	35	,752

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on the significance values for both groups, the control and experimental classes each exhibited a significance level greater than 0.05. The table indicates that the significance value for the experimental class was 0.140, exceeding 0.05, while the control class had a significance value of 0.752, also greater than 0.05. These results indicate that the data are normally distributed. Therefore, the data for both classes follow a normal distribution, as the significance values for both groups surpass the 0.05 threshold according to the Shapiro-Wilk test.

Homogeneity Test

The homogeneity test is a statistical technique employed to determine whether two or more sample groups are drawn from populations with equivalent variance levels (Aulia & Ratmono, 2022). Data are considered homogeneous if the significance value exceeds 0.05, whereas they are categorized as heterogeneous if the significance value is below 0.05. The data analysis process was conducted using SPSS version 25 for Windows, and the test results are presented in Table 3 below."

Table 3. Homogeneity Test Analysis Of Students' Learning Motivation

Test of Homogeneity of Variance					
		Levene Statistic	df1	df2	Sig.
hasil motivasi belajar	Based on Mean	17,563	1	69	,000
	Based on Median	13,070	1	69	,001
	Based on Median and with adjusted df	13,070	1	49,909	,001
	Based on trimmed mean	16,606	1	69	,000

Based on the analysis results, the significance values (Sig.) for all approaches were below 0.05. Specifically, the significance value was 0.000 for the Mean, 0.001 for the Median, 0.001 for the Median with adjusted df, and 0.000 for the Trimmed Mean. These results consistently indicate that the data variance between the control and experimental groups is not homogeneous.

Given this lack of homogeneity, the researcher recognizes that differences in the number of students across groups contribute to unequal score distributions, resulting in non-homogeneous variance. Additionally, student attendance during lessons and assessments also plays a role in shaping the variability of learning outcomes between groups. Consequently, the researcher employed the Mann–Whitney U Test, which is appropriate for comparing two independent groups when data variance is unequal or parametric assumptions are not met. The use of the Mann–Whitney test ensures that the analysis remains statistically valid and unbiased despite differences in variance (Mabizela, 2025).

Table 4. The Mann–Whitney U Test was conducted to examine students' learning motivation.

Test Statistics[a]

	Hasil Motivasi Belajar
Mann-Whitney U	,000
Wilcoxon W	630,000
Z	-7,252
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: Kelas

Based on the table above, the results of the Mann–Whitney U test indicate a significance value (Asymp. Sig. 2-tailed) of 0.000, which is less than 0.05. This signifies a significant difference in learning motivation between the control and experimental classes. Consequently, the implementation of the Student Teams Achievement Division (STAD) cooperative learning model has a positive effect on students' learning motivation.

The observed difference in learning motivation between the control and experimental classes suggests that the application of the STAD cooperative learning model can create a more conducive learning environment through group collaboration, active engagement, and shared responsibility. This approach enhances motivation, self-confidence, individual competence, and social interaction among students, fosters mutual respect and

trust, and encourages students to take on the role of peer tutors to support the success of group learning. (Lencana et al., 2024).

Discussion

This study demonstrates that the implementation of the STAD (Student Teams Achievement Division) learning model has a significant effect on enhancing students' motivation in Islamic Religious Education (IRE) at SMA Muhammadiyah 2 Bandar Lampung. This finding aligns with the fundamental assumptions of cooperative learning theory, which suggest that interactions among students in heterogeneous groups can create more meaningful learning experiences compared to unidirectional lecture methods Nurhayati & , Langlang Handayani, (2024); Yurisma et al., (2022). The results confirm that STAD effectively addresses the previously low student engagement in learning activities dominated by rote memorization and lecture-based approaches.

When compared to previous research, these results are consistent with the findings of Nababan & Pratiwi, (2023) and Putra, (2023) who emphasized the influence of STAD in enhancing both motivation and active student engagement. However, this study offers a novel contribution by focusing specifically on the IRE context, a subject often perceived as prioritizing cognitive and memorization aspects. Through the STAD approach, PAI can be repositioned as a collaboratively learned subject, thereby shifting the learning paradigm from a dogmatic to a more dialogical framework.

The success of STAD in increasing learning motivation in Reward systems have been shown to provide additional incentives for students to demonstrate diligence and responsibility in learning, as also observed in the studies of Dwi Anjani (2023) and Siahaan (2024). This simultaneously challenges the notion that purely religious motivation is sufficient to drive enthusiasm in IRE. rather, social motivation in the form of group recognition emerges as a significant driving factor.

Moreover, the study indicates that the most developed indicators of motivation were students' curiosity and perseverance. This is consistent with who found that intrinsic motivation strengthens when students are provided with opportunities for interaction and questioning. Therefore, STAD not only fosters extrinsic motivation through rewards but also cultivates intrinsic motivation, supporting long-term engagement in IRE learning (Arsil et al., 2025; Merdiaty, 2024).

The novelty of this study lies in its application within a religiously based school context. Literature review indicates that most STAD research has focused on subjects such as Science, Mathematics, or Languages Munawar et al., (2024); Wahyuni & Febriani, (2023). By examining STAD's effectiveness in PAI, this study expands the scope of cooperative learning applications and provides empirical evidence that STAD is compatible with subjects integrating cognitive, affective, and spiritual dimensions simultaneously.

The implications of these findings are substantial, particularly for PAI teachers who have relied heavily on conventional methods (Fitria et al., 2025; Mukarramah et al., 2024). STAD can serve as a strategic alternative to enhance student engagement, while optimizing school resources that have previously been underutilized (Aminah, 2025; Matona, 2024). More broadly, the implementation of STAD is expected to foster a student-centered,

conducive learning environment aligned with 21st-century competencies emphasizing collaboration and critical thinking(Awwalina, 2023; Prayogi et al., 2024).

This study not only reinforces previous findings regarding the effectiveness of STAD but also contributes new insights to the field of religious education. The novelty lies in demonstrating that STAD can enhance learning motivation in the PAI context, which has been relatively underexplored. This also opens avenues for further research to explore alternative cooperative learning models that may be more adaptive to students' spiritual characteristics, thereby further improving the quality of IRE learning.

Conclusion

Based on the analysis results, the research instrument was confirmed to be reliable, with a Cronbach's Alpha coefficient of 0.848. Although the data were normally distributed, they did not meet the assumption of homogeneity. Consequently, the Mann–Whitney U test revealed a significance value of 0.000 ($p < 0.05$), indicating a statistically significant difference in learning motivation between the control and experimental groups. These findings demonstrate that the implementation of the Student Teams Achievement Divisions (STAD) cooperative learning model is effective in enhancing students' learning motivation by fostering a more supportive and conducive learning environment. The implication of this study suggests that the STAD model represents a viable alternative instructional strategy for improving the quality of the learning process. Therefore, future research is recommended to extend the application of the STAD model across different educational levels and subject areas, as well as to incorporate additional variables such as academic achievement or social skills in order to strengthen the study's contribution and novelty.

References

Amelia, I., Nugraha, M. A., & Yulianto, S. W. (2021). AN ANALYSIS OF STUDENTS' MOTIVATION IN LEARNING ENGLISH. *ELTIN JOURNAL*, *12*(1), 73–84.

Aminah. (2025). Efektivitas Model Pembelajaran STAD (Student Team Achievement Division) terhadap Kemampuan Pemecahan Masalah Matematika Siswa SMA. *Jurnal Pendidikan Matematika Dan Ilmu Pengetahuan Alam*, *3*(1), 1–9.

Ardiansyah, S. A., Fadilah, Q., Fatha, S. A., Hasanah, M., Zakia, N. M., Anisa, N., & Pratikno, A. S. (2025). Analisis Efektivitas Model Pembelajaran Kooperatif Tipe Stad pada Materi Bangun Datar dalam Meningkatkan Antusiasme Siswa. *AL-IRSYAD Journal of Education Science*, *4*(2), 561–573.

Ariningsih, N. L. T., Fitriani, H., & Safnowandi. (2023). Pengaruh Model Pembelajaran Student Teams Achievement Division (Stad) terhadap Motivasi dan Hasil Belajar Kognitif Siswa. *Educatoria : Jurnal Ilmiah Ilmu Pendidikan*, *3*(4), 248–261.

Arsil, Hamengkubowono, & Rahman, A. (2025). The Effect of the Implementation of the Cooperative Learning Model Type Student Teams Achievement Division (STAD) on Creativity, Initiative, Motivation and Student Learning Outcomes. *JURNAL IQRA'*, *10*(1), 55–75.

Asadpour, M., Hashemi, M., & Pegah, B. (2025). The motivational role of teachers : A systematic review of key factors influencing students ' academic motivation. *European Journal of Psychology of Education*, *0*(40), 133.

Aulia, F. A., & Ratmono. (2022). Pengaruh Disiplin Kerja, Kepuasan Kerja, Lingkungan Kerja, Dan Profesionalisme Terhadap Kinerja Perangkat Desa Banjarrejo Kec.Batanghari Kab.Lampung Timur. *Jurnal Manajemen Diversifikasi*, *2*(2), 320–332.

Awwalina, L. S. (2023). Strategi Pembelajaran Kooperatif : Mengungkap Pembelajaran Aktif pada Mata Pelajaran Pendidikan Agama Islam. *Epistemic: Jurnal Ilmiah Pendidikan*, *2*(1), 74–93.

Ayu, L., Savitri, T., Ngurah, G., Agustika, S., Agung, A., & Dewi, A. (2025). Student Teams Achievement Division (STAD) Learning Model Assisted by Whole Number Puzzle Media to Enhance Mathematical Knowledge Competence. *Jurnal Mimbar Ilmu*, *30*(2), 232–239.

Damayanti, L., Setiawan, B. A., & Putra, D. W. (2024). Pengaruh Model Student Teams Achievement Division terhadap Hasil Belajar PAI di SMP IT Al-Ghozali Jember. *PJPI: Jurnal Pendidikan Islam*, *1*(2), 1–14.

Daryanes, F., Darmadi, D., Fikri, K., & Sayuti, I. (2023). Heliyon The development of articulate storyline interactive learning media based on case methods to train student ' s problem-solving ability. *Heliyon*, *9*(4), e15082. https://doi.org/10.1016/j.heliyon.2023.e15082

Dewi, F., Anggraini, P., Ana, V., Setyawati, V., Dian, U., & Semarang, N. (2022). Pembelajaran Statistika Menggunakan Software SPSS untuk Uji Validitas dan Reliabilitas Fitria. *JURNAL BASICEDU*, *6*(4), 6491–6504.

Difinubun, S. H., Nara, O. dominggus, & Abdin, M. (2023). Analisis Pengaruh Sumber Daya Manusia terhadap Aspek Kinerja Pekerja pada Proyek Pembangunan Gedung Laboratorium Terpadu Pendukung Blok Masela Universitas Pattimura. *Journal Agregate*, *2*(1), 76–86.

Dinapoli, J. (2023). education sciences Distinguishing between Grit , Persistence , and Perseverance for Learning Mathematics with Understanding. *Education Sciences*, *13*(402), 1–27.

Dwi Anjani, A., Senjayawati, E., & Suciati, O. (2023). Penerapan Model Problem-Based Learning Dengan Pembelajaran Kooperatif Tipe Stad Untuk Meningkatkan Motivasi Belajar Siswa Kelas VII. *JPMI Jurnal Pembelajaran Matematika Inovatif*, *6*(2), 879–888. https://doi.org/10.22460/jpmi.v6i2.17523

Erawati, N. K., Setyawan, I. K. A., Putu, I. G., & Permana, P. (2024). Application of a Cooperative Learning Model of Student Teams Achievement Division Type to Improve Student Achievement in Mathematics Lessons. *IJESS : International Journal of Education And Social Science*, *5*(1), 112–117.

Fadillah, R., Susanto, F., & Efrizal, D. (2025). The Effect Of Educational Video-Based Multimedia Toward Students' English Vocabulary Mastery (A Quasi Experimental on 7. *Jurnal Penelitian Ilmu Pendidikan Indonesia*, *4*(3), 1295–1303.

Faqih, M. K., Aziz, I., & Hayati, R. M. (2025). The Use of Learning Models Cooperative Learning Type Student Teams Achivement Division (STAD) in Islamic Education Subjects to Increase Learning Motivation. *International Journal on Advanced Science, Education,*

and Religion (IJoASER), *8*(2), 204–217.

Fatimah, N., Sianipar, R. L., Amalia, P., Br Sipayung, S., Nainggolan, J., Putri, D. A., Harahap, S., & Azizah, N. (2024). Penerapan Model Pembelajaran Kooperatif untuk Meningkatkan Kemampuan Siswa dalam Pembelajaran Drama di SMA Swasta Istiqlal Delitua. *Jurnal Pendidikan Agama Dan Katolik*, *1*(4), 75–87.

Ferdinal, H. P., Indrawati, T., Ladiva, H. B., & Anita, Y. (2025). Enhancing Student Learning Achievement in Pancasila Education through the Implementation of Student Teams Achievement Division Model. *Indonesian Journal of Educational Science*, *7*(2), 289–298.

Fernando, Y., Andriani, P., & Syam, H. (2024). Pentingnya Motivasi Belajar Dalam Meningkatkan Hasil Belajar Siswa. *Jurnal Inspirasi Pendidikan (ALFIHRIS)*, *2*(3), 61–68. https://doi.org/https://doi.org/10.59246/alfihris.v2i3.843

Fitria, R., Saputra, D., Putri, M. R. A., Khajar, R., & Sari, T. P. (2025). Dampak Metode Pembelajaran PAI Terhadap Motivasi Belajar Siswa di SMPN 12 Kota Bengkulu. *DIDAKTIKA : Jurnal Pemikiran Pendidikan*, *31*(1), 55. https://doi.org/10.30587/didaktika.v31i1.9428

Gao, Y., Wang, X., & Fan, P. (2024). Exploring male English major's motivation trajectory through complex dynamic systems theory. *Current Psychology*, *43*(10), 9089–9100. https://doi.org/10.1007/s12144-023-05062-6

Ginting, R. N., & Sidebang, R. (2023). Pengaruh Model Pembelajaran Kooperatif Tipe STAD terhadap Motivasi Belajar Siswa pada Mata Pelajaran Bahasa Indonesia Kelas V SDN 060936 Medan Johor. *Seminar Nasional PSSH*, *2*, 1–10.

Halawulang, L. L., & Nuhamara, Y. T. I. (2024). Pengaruh Model Pembelajaran Kooperatif Tipe STAD terhadap Motivasi Belajar Siswa SMPTK Hanggaroru. *Jurnal Semnasdik*, *2*(1), 121–127. https://doi.org/10.69552/taklim.v3i2.2776

Hastuti, & , Yusuf, I. B. (2024). Pengaruh Model Pembelajaran Kooperatif Tipe Student Teams Achievement Division Terhadap Motivasi Belajar Siswa. *BEGIBUNG: Jurnal Penelitian Multidisiplin*, *2*(2), 284–292.

Ikhsan, M., & Esser, B. R. N. L. (2025). The Influence of Learning Cooperative Models STAD (Student Teams Achievement Division) on Student Cognitive Learning Outcomes. *Jurnal Ilmiah Mandala Education (JIME)*, *11*(1), 190–201. https://doi.org/10.58258/jime.v

Khalilullah, H., & Mardhiah, A. (2025). Penerapan Metode Pembelajaran Student Teams Achievement Devisions (Stad) untuk Meningkatkan Motivasi Belajar Fikih di Mas Ruhul Islam Anak Bangsa Aceh Besar. *Almubin: Islamic Scientific Journal*, *6*(1), 1–15. https://doi.org/https://doi.org/10.51192/almubin.v6i01.436 PENERAPAN

Kinasih, A., Mariana, E., Wardany, K., & Khoirudin, M. (2025). Implementasi Model Pembelajaran Student Teams Achievement Divisions (STAD) Dalam Meningkatkan Motivasi Belajar Mata Kuliah Pembelajaran IPA di SD Implementation of the Student Teams Achievement Divisions (STAD) Learning Model in Increasing Learning Mo. *Jurnal Penelitian Pendidikan Fisika*, *10*(2), 43–49.

Lencana, D., Ronalia, V. B., Anita, T., Silaban, H., Nabila, H. P., & Neza Agusdianita, Y. (2024). Penerapan Model Kooperatif Tipe Stad Untuk Meningkatkan Motivasi Belajar Siswa Dalam Pembelajaran Pendidikan Pancasila Di Kelas Vi A SDN 42 Kota Bengkulu. *JURNAL MULTIDISIPLIN*, *1*(2), 109–114. https://doi.org/10.70963/jm.v1i2.131

Lubis, L. H., Febriani, B., Yana, R. F., Azhar, & Darajat, M. (2023). The Use of Learning Media and its Effect on Improving the Quality of Student Learning Outcomes. *IJESSM*, *3*(2), 7–14.

Mabizela, S. (2025). *Navigating parametric and non-parametric statistical analyses : A practical guide in health sciences research*. *7*(1), 41–44.

Mansour, O., & Wardat, Y. (2025). The effect of the flipped classroom strategy on motivation to learn mathematics among 9th-grade female students : a quasi-experimental study in Amman. *FEDUCT*, *September*, 1–7. https://doi.org/10.3389/feduc.2025.1579358

Mardati, A., Dzikro, A., Machbub, Z., & Febrilia, Y. (2025). Effects of differentiated instruction on primary students ' mathematics achievement : *Al-Jabar*, *16*(02), 569–579. https://doi.org/10.24042/ajpm.v16i2.27541

Marina Arjeni, Titi Falahiyah, & Oman Farhurohman. (2024). Penerapan Model Pembelajaran Kooperative Learning Tipe Stad Terhadap Hasil Belajar IPS Siswa Sekolah Dasar. *Jurnal Nakula : Pusat Ilmu Pendidikan, Bahasa Dan Ilmu Sosial*, *3*(1), 66–73. https://doi.org/10.61132/nakula.v3i1.1449

Matona, A. B. T. (2024). Implementasi Strategi Cooperative Learning Tipe Stad Untuk Meningkatkan Delapan Indikator Motivasi Belajar Pada Materi Hari Akhir Pada Siswa Kelas V Sd Negeri 17 Wonosari. *Al-Mihnah: Jurnal Pendidikan Islam Dan Keguruan*, *2*(5), 1945–1965.

Maulana, S., Fierna, M., & Lusie, J. (2023). Model Pembelajaran Kooperatif Tipe Student Teams Achievement Division (STAD) Terhadap Hasil Belajar Peserta Didik. *Jurnal Pendidikan Kewarganegaraan Dan Politik (JPKP)*, *1*(1), 1–10.

Merdiaty, N. (2024). Empowering Learning : The Mediating Role of Teachers in Enhancing Students ' Intrinsic Motivation. *Al-Ishlah: Jurnal Pendidikan*, *16*(4), 5163–5172. https://doi.org/10.35445/alishlah.v16i4.6430

Meşe, E., & Sevilen, Ç. (2021). Factors influencing EFL students ' motivation in online learning : A qualitative case study. *JETOL*, *4*(1), 12–22.

Michaelsen, M. M., & Esch, T. (2023). Understanding health behavior change by motivation and reward mechanisms : a review of the literature. *Frontiersin*, *19*(June), 1–16. https://doi.org/10.3389/fnbeh.2023.1151918

Mindo, A. J., & Paglinawan, J. L. (2025). The Relationship between Classroom Environment and Learners ' Motivation in Science. *IJRISS*, *VIII*(2454), 1046–1052. https://doi.org/10.47772/IJRISS

Mukarramah, A. N., Nurfahimah, Hasana, U., Jannah, R., Syamsinar, Meilani, A., Ramadhani, A., Amal, N., Fausi, A. A., & Kholifatun, U. N. (2024). Penerapan Metode Konvensional dan Inovatif pada Pembelajaran Pendidikan Agama Islam di Jenjang Sekolah Menengah Atas. *Didaktik : Jurnal Ilmiah PGSD FKIP Universitas Mandiri*, *10*(04), 231–

240. https://doi.org/https://doi.org/10.36989/didaktik.v10i04.5276

Munawar, S., Andres, J., & Marsaoly, N. (2024). Penerapan Model Pembelajaran Kooperatif (Cooperatif Learning) Tipe Student Teams Achievement Devision (Stad) untuk Meningkatkan Motivasi Belajar Siswa Kelas X pada Mata Pelajaran Biologi Smk Bpd Tomara. *Jurnal JBES: Journal Of Biology Education And Science*, *4*(3), 37–46.

Munazar, H. (2025). Penerapan model pembelajaran kooperatif tipe student teams achievement divisions (stad) untuk meningkatkan aktivitas belajar peserta didik. *Jurnal Pendidikan Dan Pembelajaan Ekoomi Akuntasi*, *8*(9), 10903–10915. https://jiip.stkipyapisdompu.ac.id/jiip/index.php/JIIP/article/view/9326/6321

Muthik, A., Muchyidin, A., & Persada, A. R. (2022). The Effectiveness Of Students ' Learning Motivation On Learning Outcomes Using The Reciprocal Teaching Learning Model. *Journal of General Education and Humanities*, *1*(1), 21–30.

Nababan, T. M. B., & Pratiwi, L. (2023). Pengaruh Media Pembelajaran Berbasis Kimia Komputasi Menggunakan Model Pembelajaran Kooperatif Tipe STAD terhadap Motivasi Belajar pada Pokok Bahasan Ikatan Kimia. *Pediaqu : Jurnal Pendidikan Sosial Dan Humaniora*, *2*(1), 497–501.

Nahid, S. (2023). Impact of Teachers ' Motivation on Students ' Performance. *GESR*, *VIII*(II), 444–453. https://doi.org/10.31703/gesr.2023(VIII-II).40

Nasution, H. F. (2019). Instrumen Penelitian dan Urgensinya dalam Penelitian Kuantitatif. *Al-Masharif*, 1–9.

Noresda, E., & Kosasi, L. P. (2023). The Influence of Learning Motivation , Parental Support and Facilities and Infrastructure on Student Learning Achievement Mediated by Online Learning Models (Study at SMPN 5 Tanta , Tabalong Regency During the Covid 19 Pandemic). *Jurnal Multidisiplin Sahombu*, *2*(02), 107–122.

Nurhayati, H., & , Langlang Handayani, N. W. (2024). Peningkatan Motivasi Belajar Siswa dengan Menggunakan Model Pembelajaran Problem Based Learning pada Mata Pelajaran IPAS Kelas IV. *Jurnal Basicedu*, *8*(4), 2411–2419. https://journal.uii.ac.id/ajie/article/view/971

Nursaid, N., Nuraini, S., & Novitasari, D. R. (2024). How " influence " do media , facilities , and learning interests influence students ' economic learning outcomes ? *AJME*, *1*(1), 42–49.

Nursamsiyah, P., & Sujarwo. (2024). Systematic Literature Review : Penggunaan Metode Talking Stick Dalam Meningkatkan Hasil Belajar IPS di SMP. *DIAJAR: Jurnal Pendidikan Dan Pembelajaran*, *3*(1), 22–28.

Parinsi, M. T., Ratumbuisang, Y. F., & Francis, K. (2024). The Influence of Teacher Readiness and Learning Facilities on Student Learning Motivation : Blended Learning as a Mediating Variable. *Didaktika*, *13*(1), 497–506.

Prayogi, S., Sukaisih, R., Muhali, M., & Asy'ari, M. (2024). Dampak Penerapan Pembelajaran Kooperatif Tipe STAD terhadap Keterampilan Kolaborasi dan Hasil Belajar Siswa dalam Mata Pelajaran Fisika. *Journal of Authentic Research*, *3*(2), 156–173. https://doi.org/10.36312/jar.v3i2.2126

Putra, A. (2023). Penerapan Model Pembelajaran Student Team Achievement Division dalam Upaya Meningkatkan Kemampuan Siswa di Indonesia. *AL - MIKRAJ Jurnal Studi Islam Dan Humaniora*, *3*(2), 47–54. https://doi.org/: https://doi.org/10.37680/almikraj.v3i2.2215

Rivera, E. S., Louise, C., Garden, P., Rivera, E. S., Louise, C., & Garden, P. (2021). Gamification for student engagement : a framework. *Journal of Further and Higher Education*, *45*(7), 999–1012. https://doi.org/10.1080/0309877X.2021.1875201

Ryanto1, R., Wijayanti, A. T., Widiastuti, A., & Riadi, A. (2025). The Effectiveness of Learning Media in Overcoming Learning Difficulties : Student Perceptions. *Jurnal Pemberdayaan Masyarakat*, *4*(1), 169–182. https://doi.org/10.46843/jpm.v4i1.413

Safanora, F. A., & Putra, L. V. (2024). Pengaruh Model Pembelajaran STAD (Student Teams Achievement Division) Berbantuan Media Monopoli Terhadap Pemahaman Konsep Siswa Kelas I SDN Kalongan 02. *Pendas : Jurnal Ilmiah Pendidikan Dasar*, *09*(September), 334–343.

Siahaan, P. A., Aritonang, O. T., Tobing, L. L., Simanjuntak, W., & Simorangkir, N. (2024). Pengaruh Model Pembelajaran Cooperative Learning Tipe STAD (Student Teams Achievement Divisions) terhadap Motivasi Belajar Pendidikan Agama Kristen Dan Budi Pekerti Siswa Kelas X SMA Negeri 5 Pematang Siantar Tahun Pembelajaran 2023/2024. *Pediaqu : Jurnal Pendidikan Sosial Dan Humaniora*, *3*(3), 2884–2898.

Singh, M., James, P. S., Paul, H., & Bolar, K. (2022). Heliyon Impact of cognitive-behavioral motivation on student engagement. *Heliyon*, *8*(7), e09843. https://doi.org/10.1016/j.heliyon.2022.e09843

Sofiya, A. P., Khoiri, A., & Lailliyah, S. (2025). Efektivitas Model Pembelajaran STAD (Student Teams Achievement Divisions) terhadap Hasil Belajar dan I ' timad Siswa pada Mata Pelajaran PAI. *Jurnal Sains Student Research*, *3*(4), 559–572. https://doi.org/https://doi.org/10.61722/jssr.v3i4.5395

Suardin, Yusnan, M., Tarno, Saputra, L., & Omar, S. (2023). Enhancing Student Motivation to Learn Using Self-Determination Theory as a Framework An Exploration of Internal and External Factors in the Context of Sekolah Dasar Negeri 1 Kapoa, Buton Selatan. *Buletin Edukasi Indonesia (BEI)*, *2*(03), 113–120. https://doi.org/10.56741/bei.v2i03.240

Sugiarta, R. D., Arofiati, F., & Rosa, E. M. (2023). Validity and Reliability of Research Instruments on the Effect of Motivation on Nurse Perfomance in Moderation with Nurse Credentials. *(Jurnal Medicoeticolegal Dan Manajemen Rumah Sakit) JMMR*, *12*(1), 46–55.

Suharnadi, P., & Nirwana, H. (2024). The Role and Function of Learning Motivation in Improving Student Academic Achievement. *Manajia*, *2*(1), 1–8.

Suharni. (2021). Upaya Guru dalam Meningkatkan Motivasi Belajar Siswa. *G-COUNS: Jurnal Bimbingan Dan Konseling*, *6*(1), 172–184.

Szőköl, I. (2021). Learning motivation and quality of the educational process. *International Conference on Interactive Collaborative Learning*, 199–209.

Urhahne, D., & Wijnia, L. (2023). Theories of Motivation in Education : an Integrative. In *Educational Psychology Review* (Vol. 35, Issue 2). Springer US. https://doi.org/10.1007/s10648-023-09767-9

Wahyuni, L., & Febriani, E. A. (2023). Pengaruh Model Pembelajaran Kooperatif Tipe STAD Terhadap Motivasi Belajar Siswa Pada Pembelajaran Sosiologi Kelas XI IPS di SMAN 1 Kubung. *Naradidik: Journal of Education and Pedagogy*, *2*(1), 68–76. https://doi.org/10.24036/nara.v2i1.102

Wang, F. (2022). Mediating Role of Resilience in the Relationship Between English Learners ' Motivation and Well-Being. *Frontiersin*, *13*(May), 1–7. https://doi.org/10.3389/fpsyg.2022.915456

Weiler, T., & Murad, M. W. (2022). Motivational Factors Influencing Learners' Academic Success in an Australian Enabling Education Setting Tanya Weiler 1 & Md. Wahid Murad 2. *JSSER*, *13*(4), 97–119.

Wiangga, I. A., & Febriyanto, N. I. (2025). The Impact of Educators ' Teaching Styles on Secondary School Learners ' Motivation in English. *JEMAST*, *03*(02), 136–144.

Winarni, S., Pratama, W. A., & Triani, E. (2022). Student Team Achievement Division Learning Model and Student Process Skills. *Jurnal Ilmiah Sekolah Dasar*, *6*(1), 1–10.

Yudha, H. T., & Mandasari, B. (2021). THE ANALYSIS OF GAME USAGE FOR SENIOR HIGH SCHOOL. *JELTL*, *2*(2), 74–79.

Yurisma, I. O., Lian, B., & Kurniawan, C. (2022). Siswa, Pengaruh Model Pembelajaran Student Team Achievement Divisions (STAD) terhadap Hasil Belajar. *Jurnal Basicedu*, *5*(5), 3(2), 524–532. https://journal.uii.ac.id/ajie/article/view/971

Zahra, L., Suryani, M., & Yunita, A. (2023). Pengaruh Model Pembelajaran Kooperatif Tipe STAD (Student Team Achievement Division) terhadap Kemampuan Penalaran Matematis Siswa Kelas XI MIPA SMAN 3 Mukomuko. *Jurnal Pendidikan Tambusai*, *7*(2), 14428–14436.

Zayrin, A. A., Nupus, H., Maizia, K. K., & Marsela, S. (2025). Analisis Instrumen Penelitian Pendidikan (Uji Validitas Dan Relibilitas Instrumen Penelitian). *QOSIM*, *3*(2), 780–789.