

EVALUATIVE SKILLS (C5) IN ISLAMIC CREED AND MORALS EDUCATION: THE EFFECTIVENESS OF THE TWO STAY TWO STRAY

Della Aprilia^{1*}, Agus Pahrudin², Riyand Terna Kuswanto³, Baharudin⁴

Universitas Islam Negeri Raden Intan Lampung, Indonesia^{1,2,3,4}

*Corresponding Author: dellaapril0405@gmail.com

Article Submission:
14 Desember 2025

Article Revised:
15 Desember 2025

Article Accepted:
17 Desember 2025

Article Published:
20 Desember 2025

ABSTRACT

This study addresses students' low evaluative (C5) abilities in Akidah Akhlak learning and aims to examine the effectiveness of the Two Stay Two Stray cooperative learning model in improving the evaluative skills of eighth-grade students at MTs Negeri 1 Lampung Selatan. The study employed a quantitative quasi-experimental post-test only control group design, involving class VIII E as the experimental group taught using the Two Stay Two Stray model and class VIII G as the control group receiving conventional instruction. Data were collected using a validated and reliable multiple-choice test. Statistical analysis revealed a significant difference between groups, as indicated by the Mann-Whitney U test ($U = 316.000$; $Z = -2.840$; $p = 0.005$). This result was supported by the Independent Samples t-test (equal variances not assumed), which showed a significant mean score difference of 0.91 in favor of the experimental group ($t = -3.064$; $p = 0.004$), demonstrating the effectiveness of the Two Stay Two Stray learning model.

Keyword: Akidah Akhlak, Learning Outcomes, TSTS

INTRODUCTION

Akidah Akhlak learning aims to develop students' understanding of faith and moral values and their ability to apply these values critically in daily life (Assalihee et al., 2024; Suddahazai, 2024). Ideally, instruction should foster higher-order cognitive skills, particularly evaluative abilities (C5), which involve judging, comparing, and evaluating moral issues based on the principles of *akhlakul karimah* (Dhita et al., 2023; Nurmatova & English, 2023). Learning activities such as discussion and case analysis are therefore essential to support reflective and critical thinking processes. When these approaches are implemented, learning outcomes extend beyond content mastery to include students' capacity to construct sound moral arguments.

However, empirical evidence indicates that learning outcomes in Akidah Akhlak have not yet reached this ideal condition, as classroom practices remain dominated by lecture-based instruction. Such teacher-centered approaches limit students' active participation and provide insufficient opportunities to develop evaluative skills, resulting in weak performance

on higher-order cognitive tasks (Pratiwi & Hidayah, 2024; Qhotrun et al., 2025). Students often experience difficulty in formulating justifications and drawing logical moral conclusions, which negatively affects overall learning outcomes.

These conditions highlight the need for an instructional model that can reduce student passivity while strengthening higher-order thinking skills. One relevant alternative is the Two Stay Two Stray (TSTS) cooperative learning model, which facilitates structured intergroup interaction and information exchange to support evaluative thinking. (Zuanda & Tanjung, 2025). Through such interactions, students actively engage in explaining ideas, listening to peers, providing feedback, and comparing perspectives across groups. These comparative processes strongly support the development of C5 cognitive abilities, as students are required to assess the validity of arguments, evaluate peers' viewpoints, and collaboratively draw conclusions (Elynati et al., 2025; Reinita & Rusdyani, 2024). Moreover, classroom dynamics become more lively and interactive, increasing students' motivation to gain a deeper understanding of Akidah Akhlak content. Therefore, TSTS represents a strategic solution for strengthening learning outcomes while enhancing students' evaluative abilities (Aslamiyah & Nilam, 2025; Iqbal & Hamifah, 2024; Palinussa et al., 2025).

Findings from several previous studies also indicate that the TSTS model is effective in increasing student engagement, social interaction, and learning outcomes across various subjects (Damayanti & Wulandari, 2020; Sianipar et al., 2025; Yusuf, 2023). Nevertheless, most of these studies focus primarily on learning outcomes at low to moderate cognitive levels, without specifically examining evaluative abilities at the C5 level. Furthermore, research investigating the application of TSTS in Akidah Akhlak learning remains limited, despite the subject's moral and value-laden nature, which inherently demands higher-order thinking skills (Ahdi, 2024; Sari, 2025; Sofiyatun et al., 2021). This gap underscores the need to explore the effectiveness of TSTS in improving learning outcomes, particularly in terms of moral evaluation indicators. The novelty of this study lies in its specific focus on examining the enhancement of C5-level abilities through an interactive and collaborative cooperative learning approach, thereby offering a distinct contribution to the existing literature.

The urgency of this research is further emphasized by the critical role of Akidah Akhlak education in fostering both critical thinking skills and character development among students. In the context of contemporary challenges, learners require not only conceptual understanding but also the ability to evaluate situations and make appropriate moral

decisions. The implementation of TSTS has the potential to address these needs by promoting active participation, idea exchange, and argumentative evaluation among students. By identifying the effectiveness of TSTS in improving learning outcomes, educators can select more appropriate instructional strategies to enhance students' evaluative abilities. Beyond its practical implications for classroom instruction in madrasahs, this study also contributes theoretically to the discourse on the relationship between cooperative learning models and the development of higher-order cognitive skills. Therefore, this research is essential to ensure that Akidah Akhlak learning becomes more effective, relevant, and oriented toward improving the quality of students' learning outcomes.

RESEARCH METHOD

This study employed a quantitative approach with a quasi-experimental design. The research utilized a post-test only control group design, which involved comparing the learning outcomes of two groups: an experimental group that received instruction through the Two Stay Two Stray (TSTS) learning model and a control group that was taught using conventional instructional methods. The study was conducted during the odd semester of the 2025/2026 academic year at MTs Negeri 1 Lampung Selatan, located at Jl. Lintas Sumatra No. 22, Kalianda, South Lampung Regency. The research focused on the Akidah Akhlak subject for eighth-grade students. In the implementation phase, students were organized into small groups consisting of four members and followed the procedural steps of the TSTS model, including group discussion, the exchange of two members who visited other groups, the remaining two members who presented their group's discussion results, and the subsequent consolidation of understanding derived from the information exchange process (Azmi & Kunci, 2025; Ihsan & Edwin, 2021).

The research population consisted of all eighth-grade students of MTs Negeri 1 Lampung Selatan, totaling 256 students across eight classes. The sample was selected through simple random sampling, resulting in class VIII E as the experimental group and class VIII G as the control group. The intervention was conducted over four instructional meetings, each lasting 2×40 minutes, covering core topics of Akidah Akhlak Material about imitating the story of prophet musa as. In the experimental class, students were divided into heterogeneous groups of four based on academic ability. The learning process followed the stages of the Two Stay Two Stray (TSTS) model, including group discussion of given moral cases, intergroup visits where two students shared and compared ideas with other groups,

reporting and synthesizing information within the original group, and whole-class reflection guided by the teacher.

In contrast, the control class was taught using conventional instructional methods, characterized by teacher-centered lectures, textbook-based explanations, question-and-answer sessions, and individual assignments without structured group interaction or intergroup information exchange.

Based on the random draw, class VIII G was assigned as the control group, while class VIII E was designated as the experimental group. This selection was intended to ensure balanced representation of the population and to facilitate control over variables that might influence the research outcomes. Each group received different instructional treatments, and learning outcomes were measured using an objective multiple-choice test that had been rigorously examined for validity, reliability, item difficulty level, discriminating power, and the quality of distractors.

Data were collected through a post-test administered after the instructional treatment. Data analysis included a normality test using the Liliefors method and a homogeneity test using Bartlett's formula as prerequisites for hypothesis testing. Subsequently, the hypothesis was tested using an Independent Samples t-test to determine whether there was a statistically significant difference between the experimental and control groups. This study assessed the effectiveness of the TSTS learning model based on achievement indicators within the cognitive domain, particularly at the C5 level. The test instrument was developed according to a detailed test blueprint aligned with the Akidah Akhlak curriculum and analyzed using appropriate statistical procedures to ensure that the results were valid, reliable, and accurately reflected the effects of the instructional treatment.

FINDINGS AND DISCUSSION

This study was conducted at MTs Negeri 1 Lampung Selatan. Data were collected using multiple techniques, primarily through the administration of a multiple-choice test aligned with learning outcome indicators. The data were subsequently subjected to normality testing, homogeneity testing, and hypothesis testing. The results of the normality test are presented below.

Tabel 1. Descriptive Statistics of Students' Evaluative Learning Outcomes (Control Group)

Group	N	Mean	Median	Std. deviation	Minimum	Maximum
Control Conventional	30	3.70	4.50	1.66	0	5

Source: Authors' results

Table X presents the descriptive statistics of students' evaluative learning outcomes in the control group. The results show a mean score of 3.70 with a median of 4.50, indicating moderate achievement levels under conventional instruction. The standard deviation of 1.66 suggests a relatively wide variation in student performance, with scores ranging from 0 to 5. These findings provide an initial overview of learning outcomes prior to inferential statistical analysis.

Tabel 2. Descriptive Statistics of Students' Evaluative Learning Outcomes (Experimental Group)

Group	N	Mean	Median	Std. deviation	Minimum	Maximum
Control	32	4.94	5.00	20.25	4	5
Eksperimental TSTS						

Source: Authors' results

Tabel 3. Descriptive Statistics of Students' Evaluative Learning Outcomes (Experimental and Control Groups)

Group	N	Mean	Median	Std. deviation	Minimum	Maximum
Control Conventional	30	3.70	4.50	1.66	0	5
Control Eksperimental TSTS	32	4.94	5.00	20.25	4	5

Source: Authors' results

Tables 3 present the descriptive statistics of students' evaluative learning outcomes in both groups. The experimental group taught using the Two Stay Two Stray model achieved a higher mean score ($M = 4.94$) and median ($Md = 5.00$) than the control group ($M = 3.70$; $Md = 4.50$). In addition, the experimental group demonstrated lower score variability ($SD = 0.25$) compared to the control group ($SD = 1.66$), indicating more consistent learning outcomes. These descriptive findings suggest that students exposed to the TSTS model achieved higher and more stable evaluative performance prior to inferential statistical testing.

A. Normality Test

The normality test aimed to determine whether the obtained data were normally distributed. Data are considered normally distributed if the significance value exceeds 0.05. The results of the normality test in this study are as follows.

Tabel 4. Tests of Normality

Kelompok	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
1.00	.305	30	.000	.720	30	.000
2.00	.484	32	.000	.412	32	.000

Source: Spss test result

The results of the normality tests for both data groups indicate that the Kolmogorov–Smirnov and Shapiro–Wilk tests yielded significance values (Sig.) of 0.000 for Group 1 ($n = 30$) and Group 2 ($n = 32$). These significance values are far below the threshold of $\alpha = 0.05$, leading to the conclusion that the data in each group are not normally distributed. The Shapiro–Wilk test, which is more strongly recommended for sample sizes smaller than 50, further reinforces the finding that the distributions of both groups do not meet the assumption of normality. Consequently, the data in this study do not satisfy the requirements for the application of parametric statistical procedures, and subsequent analyses should therefore employ appropriate non-parametric statistical tests in accordance with the research objectives.

Tabel 5. Test Statistics^a

Data	
Mann-Whitney U	316.000
Wilcoxon W	781.000
Z	-2.840
Asymp. Sig. (2-tailed)	.005

Source: Spss test result

The results of the Mann–Whitney U test indicate a U value of 316.000, with a corresponding Z value of -2.840 and a significance level (Asymp. Sig. 2-tailed) of 0.005. Since this significance value is lower than the threshold of $\alpha = 0.05$, it can be concluded that there is a statistically significant difference between the two groups compared in this study. The Mann–Whitney U test was employed because the data were not normally distributed, making this non-parametric procedure an appropriate alternative to the independent samples t-test. The Wilcoxon W value of 781.000 represents an internal component of the test calculation and does not affect the primary interpretation of the results. Therefore, these findings demonstrate that the two groups differ significantly in their scores, indicating that the treatments or conditions applied to each group exerted different effects on the learning outcomes (or the measured variable).

B. Homogeneity Test

The homogeneity test was conducted to determine whether the variances of the research populations were equal (homogeneous) or unequal (heterogeneous). Data are considered homogeneous if the significance value exceeds 0.05. The results of the homogeneity test are presented below.

Tabel 6. Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Data	Based on Mean	27.671	1	60	.000
	Based on Median	9.845	1	60	.003
	Based on Median and with adjusted df	9.845	1	38.653	.003
	Based on trimmed mean	24.276	1	60	.000

Source: Spss test result

The results of the Test of Homogeneity of Variances indicate that all Levene's test calculations Based on Mean, Based on Median, Based on Median with adjusted degrees of freedom, and Based on Trimmed Mean produced significance values (Sig.) lower than 0.05. Specifically, the significance value based on the mean was 0.000; based on the median was 0.003; with adjusted degrees of freedom was 0.003; and based on the trimmed mean was 0.000. Because all significance values fall below the threshold of $\alpha = 0.05$, it can be concluded that the data do not exhibit homogeneous variances; in other words, the variances between the groups differ significantly. This condition indicates that the two groups being compared do not share the same level of data dispersion. As the assumption of homogeneity of variances is not satisfied, parametric analyses that require variance homogeneity (such as the independent samples t-test) are not appropriate for use in this context.

C. Independent Samples t-Test

The independent samples t-test in this study was used to assess the final abilities of the sample. Hypothesis testing was conducted using the pooled variance test formula.

Tabel 7. Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	(2-tailed)	Mean Difference
Equal variances assumed	27.671	.000	-3.138	60	.003		-.91458
Equal variances not assumed			-3.064	37.512	.004		-.91458

source:Spss test result

The results of the Independent Samples Test present two analytical conditions, namely the assumption of equal variances assumed and equal variances not assumed. Levene's Test yielded an F value of 27.671 with a significance level of 0.000, indicating that the variances of the two groups are not homogeneous. Because the assumption of variance homogeneity

was not met, the interpretation of the t-test results should refer to the “Equal variances not assumed” row. Under this condition, the analysis produced a t value of -3.064.

with 37.512 degrees of freedom (df) and a significance value (Sig. 2-tailed) of 0.004, which is lower than 0.05. This finding indicates a statistically significant difference between the mean scores of the two groups. The mean difference of -0.91458 suggests that the mean score of the first group is approximately 0.91 points lower than that of the other group. Furthermore, the 95% confidence interval (ranging from -1.51915 to -0.31002) does not cross zero, further confirming that the observed difference is statistically significant. Overall, these results demonstrate that the two groups differ significantly in their mean scores, and the analytical decision appropriately relies on the “equal variances not assumed” condition due to the heterogeneity of variances.

DISCUSSION

The findings of this study demonstrate that the Two Stay Two Stray (TSTS) learning model is effective in improving students' cognitive abilities at the C5 (evaluating) level in the Akidah Akhlak subject (Faiqoh & Asih, 2025). This effectiveness is reflected in students' enhanced ability to assess behavior, analyze moral cases, and construct arguments grounded in religious evidence and moral principles (Rositasari et al., 2025). Within the TSTS model, students do not merely receive information passively; rather, they actively engage in cross-group idea exchange. Such interaction requires students to select information, compare perspectives, and evaluate conceptual accuracy before sharing insights with other groups. These processes are characteristic of evaluative activities and are therefore highly aligned with C5 cognitive indicators that emphasize critical judgment and assessment (Akintayo et al., 2024).

The TSTS model operates through two core activities: *stay* and *stray*. When two students visit other groups, they encounter diverse viewpoints, requiring them to comprehend, reassess, and filter information before reporting it to their original group (Annisa et al., 2025). This cognitive process of selecting and refining information activates students' critical evaluation skills. Meanwhile, the students who remain in the group must explain and defend their group's ideas to visiting peers, encouraging the use of sound reasoning, textual evidence, and strong moral arguments (Badriyah & Info, 2025). Such contexts are particularly conducive to developing C5-level abilities, as students practice evaluating information quality, selecting the most logical viewpoints, and defending conclusions based on Islamic moral principles (Pratiwi et al., 2025).

In Akidah Akhlak learning, C5 competence is essential because students must be able to judge behavior according to standards of virtuous character (*akhlak al-karimah*) (Siswanto et al., 2025). The TSTS model supports this goal by providing space for students to test their understanding through discussion, case analysis, and information exchange. When discussing concepts such as honesty, sincerity, trustworthiness, or patience, students are not limited to defining terms; instead, they are required to evaluate real-life cases presented by other groups. The exchange of perspectives during the stay and stray phases enables students to identify weaknesses in arguments, refine decision-making, and assess actions more objectively. Thus, TSTS functions not merely as a group work strategy, but as a learning mechanism that facilitates deep and contextual evaluative competence.

The findings of this study are consistent with previous research demonstrating the effectiveness of the Two Stay Two Stray (TSTS) model in enhancing evaluative (C5) abilities. Studies by Sarianti (2022) and Barani Harahap (2024) report that TSTS promotes students' analytical and evaluative thinking through structured intergroup interaction. In the context of moral and value-based learning, Avissa (2024) further shows that TSTS increases students' engagement in evaluating information and constructing moral judgments. The present study strengthens these findings by providing empirical evidence that TSTS is particularly effective in improving evaluative learning outcomes in Akidah Akhlak education, where students are required to assess moral issues critically and responsibly.

The effectiveness of TSTS in this study is also influenced by classroom dynamics at MTs Negeri 1 Lampung Selatan. A cooperative learning environment, high student enthusiasm for group work, and the use of contextually relevant case examples strengthened students' evaluative abilities. When students were presented with cases involving leadership behavior, discipline, trustworthiness, or social interaction from a moral perspective, they were better able to connect instructional content with everyday experiences. Intergroup interaction enabled students to consider multiple moral perspectives before reaching conclusions. These factors contributed to more mature evaluative processes and significantly enhanced learning outcomes at the C5 level.

The findings of this study have important practical implications for Akidah Akhlak teachers seeking to improve students' evaluative (C5) abilities through active learning. The Two Stay Two Stray (TSTS) model can be adopted as an instructional strategy to facilitate moral discussion, case analysis, and intergroup reflection in the classroom. However, its implementation may face challenges such as large class sizes, limited instructional time, and initial student resistance to collaborative learning. These challenges can be addressed by

organizing students into manageable heterogeneous groups, allocating clear time limits for each TSTS stage, and providing explicit guidance and roles to ensure active participation. Gradual implementation and the use of contextually relevant moral cases may also help increase students' engagement and acceptance of group-based learning. By applying these strategies, teachers can effectively integrate TSTS into Akidah Akhlak instruction to enhance students' capacity to evaluate moral issues critically and responsibly.

CONCLUSION

The findings of this study indicate that the Two Stay Two Stray (TSTS) learning model is proven to be effective in improving students' learning outcomes, particularly higher-order cognitive abilities at the C5 (evaluating) level in the Akidah Akhlak subject, as evidenced by the significant differences between the experimental and control groups. This effectiveness is reflected in students' enhanced ability to evaluate arguments, compare information, and construct logical moral decisions. Theoretically, this study confirms that cross-group interaction inherent in the TSTS model plays a crucial role in developing evaluative abilities, while also offering novelty through its specific analytical focus on strengthening C5-level cognition in Akidah Akhlak learning—an area that has received limited scholarly attention. Practically, the findings provide empirical support for the use of TSTS as a relevant instructional alternative for teachers seeking to overcome passive learning environments and improve the quality of students' moral evaluation. Nevertheless, this study is subject to certain limitations, including non-normal data distribution and heterogeneous variances, which necessitated the use of non-parametric statistical tests and may limit the generalizability of the findings to the broader population. Future research is therefore recommended to employ designs with stricter variable control, larger sample sizes, or the integration of qualitative methods to explore evaluative learning processes more deeply. Overall, this study makes a meaningful contribution to the development of Islamic education scholarship by demonstrating how cooperative learning models based on information exchange can strengthen students' evaluative thinking skills and enrich the repertoire of HOTS oriented instructional strategies in madrasah education.

ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to all individuals who have provided support and valuable contributions to the completion of this article. I am sincerely thankful to my parents and siblings for their continuous encouragement, unconditional support, and for fulfilling my needs throughout this academic journey. I also extend my heartfelt

appreciation to my academic supervisor, who generously devoted significant time, effort, and patience to guide and mentor me despite the demands and challenges involved. Furthermore, I would like to thank my peers for their constructive feedback, insightful suggestions, and constant motivation, all of which have contributed to enhancing the quality of this article. I hope that this work will be beneficial to all readers, and I remain committed to continuously learning and improving in the pursuit of producing higher-quality scholarly writing in the future.

REFERENCES

Adiyono, A., Akhyak, A., & Kojin, K. (2024). Transformation of Learning Al-Qur'an Hadis Through Two Stay Two Stray (TST) Model: Share Knowledge And Experience In Lessons 1Adiyono. *IICS*, 1, 47–59.

Agbaria, A. (2024). Education for Religion : An Islamic Perspective. *MDPI*, 15(309).

Ahdi, M. W. (2024). Pendidikan Karakter Melalui Penanaman Nilai Keagamaan Pada Mata Pelajaran Akidah Akhlak. *Pediaqu : Jurnal Pendidikan Sosial Dan Humaniora*, 3(3), 2388–2397.

Akintayo, O. T., Eden, C. A., & Ayeni, O. O. (2024). *Evaluating the impact of educational technology on learning outcomes in the higher education sector : A systematic review*.

Annisa, S., Syaifuddin, M., & Azmi, R. D. (2025). Communication Ability and Mathematical Literacy of Junior High School Students in the TSTS Learning Model Assisted with Codular Application. *Journal of Education and Pedagogy*. 6(4), 92–101.

Aslamiyah, & Nilam, T. D. (2025). Implications of the Peer Instruction Type Flipped Classroom Learning Model with Traditional Flipped to Improve Learning Outcomes of Science. *Jurnal Penelitian Pendidikan IPA*, 11(3), 1052–1061. <https://doi.org/10.29303/jppipa.v1i3.10560>

Assalihee, M., Bakoh, N., Boonsuk, Y., & Jaruwat, S. (2024). Transforming Islamic Education through Lesson Study (LS): A Classroom-Based Approach to Professional Development in Southern Thailand Muhammadafeefee. *Education Sciences*, 14(1029), 1–23.

Astuti, Y. P., Wahdian, A., & Jamilah, J. (2024). Penerapan Model Cooperative Learning dengan Teknik Two Stay Two Stray dalam Pembelajaran Ips di Sekolah Dasar. *Jurnal Pendidikan Guru Sekolah Dasar*, 1(2), 1–8. <https://doi.org/10.47134/pgsd.v1i3.246>

Avissa, M., Dewi, M. S., Anwar, M. D., & Farida, N. A. (2024). Meningkatkan Keaktifan Siswa dengan Model Two Stay Two Stray di Kelas VII MTS El-Nur El-Kasysyaf pada Mata Pelajaran Akidah Akhlak. *Jurnal Pendidikan Islam dan Sosial Keagamaan* 03(03), 80–87.

Badriyah, N., & Info, A. (2025). The Influence of the Two Stay Two Stray (TSTS) Model on the Learning Achievement of the Material Properties of Light in Elementary School

2 Sukamulya. *International Education Service Journal (IESJ) 1(1)*, 21–29.

Damayanti, N., & Wulandari, S. (2020). The Application Of Lesson Study Assisted By Two Stay Two Stray Cooperative Model To Improve Activeness And Learning Outcomes Of Elementary School Students. *Widyagogik: Jurnal Pendidikan dan Pembelajaran Sekolah Dasar*. 34–43. <https://doi.org/10.21107/widyagogik.v8i1.8745>

Dhita, A., Hasan, R., & Sukri, A. (2023). Reinforcement analyze and evaluate of higher-order thinking skills using problem- based learning in ecosystem material. *JPBI*, 9(3), 492–499.

Elynati, M., Handayani, B. S., Lestari, T. A., & Jamaluddin, J. (2025). The Effect of SrVER Learning Model-Assisted Augmented Reality to Improve Students Learning Outcomes in Science Topic. *Jurnal Pijar Mipa*, 20(2), 341–345. <https://doi.org/10.29303/jpm.v20i2.8665>.

Faiqoh, S. N., & Asih, S. S. (2025). The Effectiveness of the Two Stay Two Stray (TSTS) Cooperative Learning Model Compared to the Jigsaw Type on Students' Science Learning Outcomes. *Jurnal Penelitian Pendidikan IPA*, 11(2), 937–945. <https://doi.org/10.29303/jppipa.v11i2.10491>

Foster, H. (2024). The impact of formative assessment on student learning outcomes: A meta-analytical review. *Academy of Educational Leadership Journal*, 28(S1), 1-3..

Gulo, I. A., & Laoli, B. (2023). Pengaruh Model Pembelajaran Two Stay Two Stray Terhadap Hasil Belajar Siswa Kelas VIII-A di UPTD SMP Negeri 5 Gunungsitoli. *Jurnal Pendidikan Dan Konseling (JPDK)*, 5(4), 549–559. <https://doi.org/10.31004/jpdk.v5i4.18130>

Harahap, B., Zulhimma, Z., Napitulu, P., & Waldohuakbar, S. (2024). Penerapan Metode Two Stay-Two Stray (TSTS) Dalam Meningkatkan Hasil Belajar Siswa Dalam Mata Pelajaran Ski Kelas Vii Di Mtsn 1 Padangsidimpuan. *Cognoscere: Jurnal Komunikasi Dan Media Pendidikan*, 2(2), 115–125. <https://doi.org/10.61292/cognoscere.185>.

Iqbal, M., & Hamifah, U. (2024). Peran Guru Akidah Akhlak Dalam Mengatasi Prilaku Bullying di MTsS Nurul Falah Kabupaten Aceh Barat. *Wathan: Jurnal Ilmu Sosial Dan Humaniora*, 1(2), 189-203. <https://doi.org/10.71153/wathan.v1i2.76>.

Khadijah, I., Nurhamidah, N., Mulyani, L., & Amanah, S. N. (2025). Improving Learning Outcomes through Innovative Pedagogical Approaches in Modern Education. *Journal of English Language and Education*, 10(1), 423–433.

Harida, E. S., Rahmadhani, S., Syehk, N., Hasan, A., & Addary, A. (n.d.). The Effectiveness of Two Stay Two Stray Model on Students ' Reading Narrative Text Ability The Effectiveness of Two Stay Two Stray Model on Students ' Reading Narrative Text Ability. *English Education*, 1(1).

Maarif, M. A. ., Lenda, S. S. ., Rofiq, M. H., Ismawati, I., & Ardianto, A. (2025). Optimalisasi Pembelajaran Akidah Akhlak melalui Media Quizizz untuk Meningkatkan Prestasi Belajar Siswa. *Attadrib: Jurnal Pendidikan Guru Madrasah Ibtidaiyah*, 8(1), 1–14. <https://doi.org/10.54069/attadrib.v8i1.836>.

Metola, M., Nggandung, Y., & Saragih, F. (2023). ditolak dan h 1 diterima maka dugaan

alternatif diajukan diterima yakni model pembelajaran (TSTS) mempengaruhi hasil belajar siswa kelas X SMA Negeri 3 Kupang Timur. *Journal Economic Education, Business and Accounting (JEEBA)*, 2(2), 160–168.

Nadapdap, M. R., Arini, N. W., Putu, L., & Mahadewi, P. (2021). *Two Stay Two Stray Model Providing Mind Mapping Influences On The Learning Outcomes Of Grade V Sd Students. Advances in Social Science, Education and Humanities Research* 540(Ictes 2020), 324–331.

Nurmatova, S., & Altun, M. (2023). A Comprehensive Review of Bloom's Taxonomy Integration to Enhancing Novice EFL Educators' Pedagogical Impact. *Arab World English Journal*, 14 (3) 380-388. Doi: <https://dx.doi.org/10.24093/awej/vol14no3.24>.

Palinussa, A. L., Limehuwey, J., & Ayal, C. S. (2025). Analysis of Students ' Mathematics Learning Outcomes on Matrix Concepts : A Comparative Study. *Formatif: Jurnal Ilmiah Pendidikan MIPA* 15(148), 1–12. <http://dx.doi.org/10.30998/formatif.v15i1.22179>

Pratiwi, A., Azizah, N., Saputra, M. I., Mustofa, M., Islam, U., Raden, N., & Lampung, I. (2025). Student Learning Outcomes: Innovative Learning with an Experimentation Blended Learning Model. *Jurnal Pendidikan dan Pembelajaran Indonesia (JPPI)* 5, 63–74.

Pratiwi, A., & Hidayah, N. (2024). Pengaruh Prokrastinasi Akademik terhadap Hasil Belajar Mata Pelajaran Akidah Akhlak Siswa Kelas VIII di Sekolah Menengah Pertama Birrul Walidain Muhammadiyah Kabupaten Sragen Tahun. *EDUKASI : Jurnal Pendidikan Dan Pembelajaran*, 5(1), 659–672.

Qhotrun, F., Musammil, N., & Hermawan, Z. (2025). Shaping Student Religiosity : The Combined Effect of Peer Interaction and Akidah Akhlak. *Educazione: Journal of Education and Learning* 02(02), 108–120. <https://doi.org/10.61987/educazione.v2i2.599>

Reinita, R., & Rusdyani, D. (2024). The effect of Two Stay Two Stray learning model assisted by wordwall application on student learning outcomes. *Jurnal Fundadikdas (Fundamental Pendidikan Dasar)*, 7(1), 34–43. <https://doi.org/10.12928/fundadikdas.v7i1.10009>

Rositasari, T., Saraswaty, D. R., & Monica, R. (2025). The effect of two stay two stray (tsts) cooperative learning on students ' vocabulary mastery in english. *English review: journal of english education*. 13(3), 995–1004. <https://doi.org/10.25134/r655pz08>

Sari, D. (2025). Implementasi Pembelajaran Akidah Akhlak Dalam Meningkatkan Perilaku Siswa. *Fathir : Jurnal Tudi Islam*, 2(1), 113–125.

Sarianti, Fahri, H. moh, & Nurlia. (2022). Pengaruh Penggunaan Model Pembelajaran Tipe Two Stay Two Stray (TSTS) Terhadap Hasil Belajar Pada Materi Sistem Saraf di SMA Negeri 2 Pulau Taliabu. *JBB: Jurnal Biologi Babasal*, 1(2), 1–8.

Sianipar, G. R., Ronny, S., Rawatri, S., Oloria, M., & Sihombing, R. (2025). Pengaruh Model Pembelajaran Two Stay Two Stray Terhadap Keaktifan Belajar Pak Siswa Kelas Viii Smp Negeri 1 Habinsaran Tahun Pembelajaran 2024/2025. *Pediaqu : Jurnal Pendidikan Sosial Dan Human*, 4(4), 6907–6919.

Siswanto, D. H., Kuswantara, H., & Wahyuni, N. (2025). Implementation of Problem Based Learning Approach Culturally Responsive Teaching to Enhance Engagement and Learning Outcomes in Algebraic Function Limit Material. *Educatum Jsmt* 12(1), 80–88. <https://doi.org/10.37134/ejsmt.vol12.1.9.2025>

Sofiyatun, D., Jura, M. R., & Sabang, S. M. (2021). *Influence of the Guided Inquiry Learning Model Assisted by a Two-stay Two-stray towards Chemistry Learning Outcomes of High School Students*. 10(November), 208–212. <https://doi.org/10.22487/j24775185.2021.v10.i4.pp208-212>

Sortwell, A., Trimble, K., Ferraz, R., Geelan, D. R., & Hine, G. (2024). A Systematic Review of Meta-Analyses on the Impact of Formative Assessment on K-12 Students ' Learning : Toward Sustainable Quality Education. *Sustainability*, 16(7826), 1–14.

Suddahazai, I. H. K. (2024). Preparing Teachers for the 'Ummah': A Case Study of Hayat Foundation. *Education Sciences*, 14(1146), 1--26.

Une, D. F., Pomalato, S. W. D., & Machmud, T. (2023). Pengaruh Model Pembelajaran Two Stay Two Stray Terhadap Kemampuan Komunikasi Matematis Siswa. *Jambura Journal of Mathematics Education* 4(1), 11–23.

Upi, T., Juldial, H., Oktarisa, Y., Galih, T., & Suryana, S. (2025). Comparison of student learning outcomes using artificial intelligence and physics textbooks on harmonic vibration material. *Jurnal Praktisi Pendidikan* 4(1), 46–54. <https://doi.org/10.58362/hafecspost.v4i1.124>

Yusuf, M. (2023). *Upaya Meningkatkan Hasil Belajar Pelajaran Ipa Materi Pertumbuhan Dan Perkembangan Hewan Pada Peserta Didik Kelas Iv (Empat) Di Sds Islam Al-Istiqra Dengan Implementasi Model Pembelajaran Cooperative Learning Jenis Two Stay Two Stray* . 2(6), 2993–2999.

Zuanda, N., & Tanjung, R. F. (2025). Enhancing junior high school students' self-compassion through Two Stay Two Stray (TSTS) technique: A school- based intervention study. *Asatiza*, 6(2), 160–169. <https://doi.org/10.46963/asatiza.v6i2.2781>