7th International Conference on Learning Innovation and Quality Education (ICLIQE 2023)

SHEs: Conference Series 6 (2) (2023) 64-74

Analysis of The Implementation and Impact of The Co-operative Learning Model (STAD Type) on Student Achievement : Literature Review

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Article History
accepted 31/7/2023 approved 31/8/2023 published 30/9/2023

Abstract
This study aims to describe the application of various STAD type coopera-tive learning models in an effort to improve student learning outcomes. This research was conducted using a systematic literature review method. Data sources that later became the subject of this study consisted of 10 selected articles based on a review of keywords and the year of publication of rele-vant scientific articles and books, the keywords used were 'STAD', 'learning outcome', 'students achievement'. The article database comes from Google Scholar, Scopus.com, and Doaj.com. The data analysis technique in this re-search uses descriptive analysis techniques. The results of this study indicate that the application of the STAD type cooperative learning model can be ap-plied to various levels of education, besides that its application can also be adapted to various subjects which have proven to be quite effective in con-tributing to improving student learning outcomes. It was identified through 10 studies reviewed that students tend to be more active and able to collabo-rate in completing their assignments when teachers apply this learning model. So that this learning model can certainly be adopted by other subject teach-ers.
Keywords: *analysis, cooperative, learning model, STAD, learning achievement*

Social, Humanities, and Education Studies (SHEs): Conference Series p-ISSN 2620-9284
https://jurnal.uns.ac.id/shes e-ISSN 2620-9292

INTRODUCTION

Education is an inherent part of human life. Because of that, education is a very vital process in human survival (Sabila, 2020). In education there is an ac-tivity of delivering material called learning, some experts express their opinions about learning. It is said that learning is a process of effort that is carried out by a person to obtain a new change in behavior as a whole, as a result of his own ex-perience in interaction with the environment (Suriadi et al., 2021). Psychological-ly, learning is a process of change, namely a change in behavior as a result of interaction with the environment in meeting their needs (Muktar, 2019). Further-more, it is also said that learning is a process to obtain motivation in knowledge, skills, habits, and behavior; learning is the mastery of knowledge or skills ob-tained from instruction (Sabaniah et al., 2021). as well as the process carried out by the individual to obtain a new change in behavior as a whole, as a result of the individual's own experience in interaction with his environment (Nastiti & Abdu, 2020).

As it is known that the output of learning is the achievement of goals as a re-sult of learning. Learning outcomes themselves are essentially the achievement of competencies that include aspects of knowledge, attitudes, and values that are embodied in the habit of thinking and acting (Nindiati, 2020). Achievement of maximum learning outcomes can be pursued through the learning process that takes place in the classroom. Of the many factors that contribute to successful learning, one of the most contributing factors to successful teaching is the teacher (Hartanti & Yuniarsih, 2018), therefore the teacher is always required to maintain the quality and ability to convey teaching materials to students properly, for this reason the teacher needs to gain knowledge about teaching methods and media that can be used in the teaching and learning process (Qoriah et al., 2021). Cur-rently, all learning is student-centered, thus students will be more active in seek-ing knowledge and constructing their knowledge through the experiences they got (Hafeez, 2021).

As one of the factors that play a role in the success of learning, as stated earli-er if the teacher is required to be able to process teaching and learning interac-tions that involve more activeness and student participation so that unilateral interactions do not occur, boredom and fear of students in asking questions and exploring knowledge that causes low learning outcomes obtained by students (Morel, 2021). Of course, the effort that can be made by the teacher is to try to apply various learning models during learning activities. As it is known that the use of learning models used by teachers in teaching, is one way that can be used to activate and understand students so that they understand lessons more easily (Astina, 2018). With the learning model, students can take part in learning care-fully, calmly, and enjoyably as a result of implementing active, innovative, crea-tive, affective and fun learning (Sugiarti & Husain, 2021). Therefore, teachers are required to have the ability to identify the accuracy in choosing a learning model to suit the characteristics of the material to be delivered.

The lack of variety of learning models that are brought by the teacher when teaching causes low student learning outcomes. According to some research too, that the low student learning outcomes can be seen when the learning process takes place students look passive, less enthusiastic and bored (Khurniawan et al., 2021). In addition, lack of participation in the learning process is due to learning activities that are still monotonous or teacher-centered which causes students to not be independent in finding information and exploring new knowledge.

One learning model that is considered accommodative can improve students' ability to gather information, collaborate and communicative as well as activate students' active learning activities is through the STAD type cooperative learning model. As it is known that cooperative learning is considered to be one of the most effective learning approaches when students are actively involved in ex-pressing ideas and working collaboratively to do academic assignments (Aryanti & Widodo, 2020).

Therefore, many teachers say there is nothing strange in coop-erative learning because they think they are used to doing cooperative learning in the form of group learning (Andriyani & Wilujeng, 2022). Student Teams Achievement Division (STAD) is a cooperative learning strategy in which several small groups of students with different levels of academic ability work together to complete learning objectives. Not only academically, students are also grouped differently based on gender, race, and ethnicity (Asmaria, 2020). STAD is the most widely researched variation of cooperative learning, and is the best model for encouraging students to encourage and help each other to master the skills taught by the teacher (Abdullah, 2018), besides that STAD is one of the simplest types of cooperative learning (Aryani, 2022), this is because coopera-tive learning type STAD is a type of cooperative learning model using small groups with the number of members in each group 4-5 students heterogeneously. Beginning with the delivery of learning objectives, delivery of material, group activities, quizzes, and group awards (Sriana et al., 2022).

It was identified that through the application of the STAD learning model it can provide stimuli in the form of active students in learning activities, motivat-ing and helping each other when trying to master subjects or content (Kim, 2018). Besides that, many findings show that learning with STAD can increase student participation, critical thinking, learning outcomes, motivation, analytical think-ing, exploring knowledge about learning concepts that are difficult to understand (Ruslan et al., 2021). When there are many findings regarding the benefits of STAD type cooperative learning in improving learning outcomes both cognitive-ly, affectively and psychomotor. This article aims to identify through a literature review regarding the impact of the use of the STAD type cooperative learning model on the achievement of student learning objectives. The novelty of this research lies in the mapping and synthesis of the latest research regarding the implementation and impact of the STAD type Cooperative Learning Model. Through a literature review, this study will provide an in-depth understanding of how the STAD-type Cooperative Learning Model can improve student achieve-ment. In this literature review, it is hoped that new information will be found re-garding this approach, including effective strategies, supporting factors, and con-straints that may be encountered in its implementation. By combining various relevant studies, this research has the potential to provide new insights to educa-tional practitioners and researchers regarding the effectiveness of the STAD-type Cooperative Learning Model in improving student achievement.

METHODS

This research is a type of literature review research (Snyder, 2019), The use of this type of research, of course, aims to provide information sourced from vari-ous documents including reference books, magazines, the results of previous research with the same point of view. The data sources in this research were collected based on basic theories related to the material being studied, so that the reference data sources used in this study were scientific journals and books, the data collection technique was document review through literature searches from various scientific work databases, both SINTA, Scopus, DOAJ (Cherni et al., 2020). Data analysis techniques in this study used analytical descriptive (I Gunawan, 2013). Through regular grouping activities from the data that has been obtained, then the understanding and ex-planation are given so that it can be understood properly by the reader. The crite-ria for the selected journals are journals published in 2015-2021, with the key-words "cooperative learning", "STAD", "Learning Outcomes", "STAD Learning Model". Articles are filtered to obtain 10 selected articles, this process is carried out through searching from a predetermined database, then sorting the year of publication. After that, they made adjustments to the keywords in this research research, until finally 10 articles were selected that had gone

through a filtering and elimination process based on the standard literature in this research.

RESULTS AND DISCUSSIONS

The following are the findings of various articles from referenced database sourcesand refer to search keywords for scientific works which are the data sources.

Table 1. Research Findings

No.	Author(s)	Title	Findings
1.	(Aryanti & Widodo, 2020)	The Effectiveness of Student Team Achiement Divisions (STAD) Cooperative Learning In Science Learning On Analysis Skills and Social Skills	The STAD type cooperative learning model was effective in increasing students' ability to analyze science in science subjects, (2) the STAD type cooperative learning model was effective in increasing the social skills of students in science subjects, and (3) the cooperative learning model STAD type is effective for improving students' analytical skills and social skills in natural science subjects.
2.	(Syamsu & Rahmawati, 2019)	The Effectiveness of the STAD Learning Model on Mathematics Learning Outcomes in Building Materials [Keefektifan Model Pembelajaran STAD terhadap Hasil Belajar Matematika Materi Bangun Ruang]	The results of this research succeeded in showing if there were differences in the value of better learning outcomes between before (pretest) and after (post-test) using the STAD model. So the STAD model is effective for Mathematics learning outcomes in class V SDN 01 Doplang. Based on the results of this study, suggestions that can be conveyed are that the STAD learning model can improve student learning outcomes, therefore teachers need to apply the STAD learning model properly so that students are more enthusiastic and enthusiastic in participating in the teaching and learning process.
3.	(Sri Murwanto, 2022)	The Effectiveness of the STAD Learning Model on Mathematics Learning Outcomes in Building Materials [Penggunaan Model Pembelajaran Kooperatif Tipe STAD (Student Teams Achievement Division) untuk	The results showed that there was an increase in the average value of science learning outcomes for Class IX D students of SMP Negeri 7 Alla Enrekang in each cycle, namely cycle I (72.93), cycle II (75.20) and cycle III (76.53). The learning completeness of class IX D students of SMP Negeri 7 Alla Enrekang increased in each cycle, namely cycle I (73.33%), cycle II (80.00%) and cycle III (86.67%). Therefore, this model can be a

		Meningkatkan Hasil Belajar Ipa Siswa Kelas IX D SMP Negeri 7 Alla Enrekang]	reference and innovation for teachers in varying strategies and learning models.
4.	(Suparsawan, 2021)	Implementation of a Scientific Approach in the STAD Type Cooperative Learning Model to Increase the Activeness and Learning Outcomes of Mathematics [Implementasi Pendekatan Saintifik Pada Model Pembelajaran Kooperatif Tipe STAD Untuk Meningkatkan Keaktifan dan Hasil Belajar Matematika]	The results of the study showed that students' active learning was in the active category. The achievement of student learning outcomes also met the established success criteria, namely the average student score of 75.30, absorption of 75.30%, and learning completeness of 87.88%. The results of this study indicate that the implementation of a scientific approach with the STAD type cooperative learning model can increase student activity and learning outcomes in mathematics.
5.	(Asmaria, 2020)	Improving PPKn Learning Outcomes Through the STAD Type Cooperative Learning Model in Class VIII-A MTsN 3 West Aceh [Peningkatan Hasil Belajar PPKn Melalui Model Pembelajaran Kooperatif Tipe STAD di Kelas VIII-A MTsN 3 Aceh Barat]	The results of this study indicate that through the STAD Type Cooperative Learning Model it can improve student learning outcomes in PPKn Subjects in the Material of Pancasila as the Basis of the State and State Ideology at MTs Negeri 3 Aceh Barat in the 2018-2019 Academic Year. As for the results, the research cycle I showed the results of the test cycles I and II showed an increase in the percentage reached with an average of 74.77 to 83.07.
6.	(Ghufron et al., 2023)	The Effect of STAD-Type Cooperative Learning Based on a Learning Tool on Critical Thinking Ability in Writing Materials	The results of the test decide that the significance is less than 0.05, namely 0.00 < 0.05. The conclusions of this research are: 1) STAD-type cooperative learning based on a learning tool has a significant effect on critical thinking skills on student psychomotor and affective learning outcomes, 2) students' academic abilities do not affect student learning outcomes.
7.	(Marbun et al., 2019)	The influence of the jigsaw-STAD cooperative learning model and interpersonal intelligence on the	The results of the study show that: (1) The learning outcomes of Catholic Religious Education students with the jigsaw type cooperative learning model are better than those with the STAD

		learning outcomes of Catholic religious education [Pengaruh model pembelajaran kooperatif tipe jigsaw-STAD dan kecerdasan interpersonal terhadap hasil belajar pendidikan agama katolik]	type cooperative learning model; (2) The learning outcomes of students who have high interpersonal intelligence are better than those of students who have low interpersonal intelligence; and (3) there is interaction between cooperative learning models and interpersonal intelligence in influencing learning outcomes.
8.	(Pritasari & Wilujeng, 2020)	The application of the STAD type cooperative learning model to increase student activity and learning outcomes [Penerapan model pembelajaran kooperatif tipe STAD untuk meningkatkan aktivitas dan hasil belajar mahasiswa]	The results of reflection and evaluation in cycle I, it is necessary to make changes to the action plan in cycle 2. The results of reflection and evaluation in cycle 2 are observations of lecturer activities or the implementation of learning to obtain an average rating of very good (3.80) from both observers, so we can said to meet the success criteria. Knowledge learning outcomes 77.78% complete. The results of learning skills were 77.78% complete. Based on the results in cycle 2, it was obtained an increase in results from cycle I. So, the use of the STAD type cooperative learning method can increase student learning activity and completeness.
9.	(Knoche, 2022)	Thinking about cooperative learning: The impacts of epistemic motives and social structure on cooperative learning environments	The effects of epistemic motives and individual social structure on behaviors that affect cooperation in a learning environment have important implications for cooperative learning and management education. Specifically, the impacts of these two factors on promotive behaviors that are essential to cooperative learning are examined. The effect of social structures and epistemic motives on learning outcomes is introduced into the cooperative learning. The results suggest that social structures have different implications for individuals depending on their epistemic motives. For individuals with a need for closure, social networks

			offer protection from social ambiguity and assignment uncertainty, whereas, for individuals with a need for cognition, social networks provide social opportunity and assignment sustenance in an interdependent cooperative learning environment. The results have important implications for other learning approaches (e.g., active learning, experiential learning, service learning) that lean on cooperation among students for important learning outcomes
10.	(Wahyuni, 2019)	The Effect of Cooperative Learning Type Student Teams Achievement Division (STAD) on Understanding Mathematical Concepts in Class VIII Students of MTs N Pekanbaru	The results showed that (1) students' understanding of mathematical concepts taught by STAD type cooperative learning was higher than students who were taught using conventional learning, (2) understanding students' mathematical concepts with high initial ability taught by STAD type cooperative learning was higher than high initial capable students taught with conventional learning, and (3) understanding mathematical concepts of low initial ability students taught by STAD type cooperative learning is higher than low initial ability students taught with conventional methods such as lectures and giving assignments during learning.

From the various studies that have been reviewed in this research, 10 articles were identified and selected that were relevant to the keywords as boundaries and references in browsing various articles. The 10 selected articles come from various database sources, be it SINTA, SCOPUS and DOAJ. Some of the selected articles succeeded in showing us that the use of the STAD type cooperative learning model turned out to have a very positive impact on student learning outcomes, both cognitively, attitude and the impact of improving student skills (Raharja et al., 2017),(Prayoga et al., 2021),(Setyaningsih & Rahman, 2022), This is of course very worthy of consideration to be used as a reference model to be applied by teachers during the learning process.

Most of the above findings indicate a significant increase in learning outcomes. Increased learning outcomes because the cooperative learning model type STAD has a role in overcoming the main educational problems that often occur, namely low student learning outcomes which can be caused by a lack of student activity and participation, monotonous learning, the model used is less varied or still uses the lecture model, difficulties students understand the subject matter and so on (Chetty et al., 2019). The success of using the STAD type cooperative learning model from the results of research analysis because this model has a role or benefit for overcoming

problems or obstacles during the learning process so that students can be more facilitated in their learning activities (Ghufron et al., 2023) such as research findings conducted by (Wahyuni, 2019).

In this model, students are trained and facilitated to improve their accuracy, because in cooperative learning the STAD type will make students look for the best possible answer because there is competition between groups and individual scores that students will get (Nureva, 2022),(Prayoga et al., 2021). Besides that, from the findings above it was also identified that the teacher's creativity in managing learning is getting better which results in students being more motivated to learn (Asmaria, 2020). This learning model also causes students to gain embedded experiences in learning that are more meaningful and more firmly embedded in their minds. The strength of a variety of information embedded in students' minds then indirectly also has an impact on student learning outcomes (Syamsu & Rahmawati, 2019). Also identified through the various research above, the application of the STAD type cooperative learning model in the learning process, in fact gives more opportunities for students to participate actively in the teaching and learning process (Sri Murwanto, 2022). So that there are many benefits that have been proven empirically from the application of this type of STAD cooperative learning method.

On the other hand, it appears that the application of this learning model can be applied to various levels of education and various types of subjects (Sri Murwanto, 2022),(Syamsu & Rahmawati, 2019),(Aryani, 2022), without exception the subject of Islamic Religious Education at Madrasah Ibtidayyah (MI) which is planned to be used as a subject object for further research. It is hoped that later after successfully identifying the various benefits of applying the STAD type cooperative learning model, teachers will be able to facilitate students in learning Islamic religious education.

Therefore, the use of the STAD type of cooperative learning model needs to pay attention to several things so that the improvement of learning outcomes can be more optimal, namely by dividing groups according to the direction of the teacher and heterogeneously covering students with high, medium and low abilities. In addition, the teacher must coordinate classes, motivate students who are less active and carry out good time allocating because the group model requires relatively longer time. So that overall, the use of a good type of STAD cooperative learning model and combined with the teacher's ability to use learning media will provide optimal results.

CONCLUSION

Based on the results of the research analysis and discussion of the research that has been carried out, it can be concluded that the STAD type cooperative learning model contributes and plays a very important role in improving student learning outcomes, therefore this learning model can be appropriate to be used as an alternative in learning Islamic religious education in elementary level. It is proven that the use of the STAD type cooperative learning model makes students more motivated and very participatory in learning. Besides that, learning through groups makes the learning atmosphere fun and not passive, students become more confident in giving opinions and helping each other motivate other students to more easily understand the subject matter. Through the results of this literature review, it is also suggested that teachers begin to be motivated to use the STAD type cooperative learning model in the learning process so that they can become more active and participatory.

REFERENCES

Abdullah, N. (2018). UPAYA MENINGKATKAN HASIL BELAJAR BAHASA INDONESIA ASPEK MENULIS DENGAN PENGGUNAAN MODELKOOPERATIF LEARNING TIPE STAD. Jurnal Pendidikan Tambusai, 2(2), 220. https://doi.org/10.31004/jpt.v2i2.669

Andriyani, R., & Wilujeng, H. (2022). ANALYSIS OF STUDENTS' MATHEMATICAL LITERACY ABILITIES IS REVIEWED FROM EMOTIONAL INTELLIGENCE. Prima: Jurnal Pendidikan Matematika, 6(1). https://doi.org/10.31000/prima.v6i1.5293

Aryani, N. L. (2022). Model Pembelajaran Kooperatif Tipe STAD Untuk Meningkatkan Hasil Belajar Tematik (Muatan IPS) Siswa Kelas V. Journal of Education Action Research, 6(3), 348–353.

Aryanti, Y., & Widodo, E. (2020). The Effectiveness of Student Team Achiement Divisions (STAD) Cooperative Learning In Science Learning On Analysis Skills and Social Skills. Journal of Science Education Research, 4(1), 22–27. https://doi.org/10.21831/jser.v4i1.34237

Asmaria, A. S. (2020). Peningkatan Hasil Belajar PPKn Melalui Model Pembelajaran Kooperatif Tipe STAD di Kelas VIII-A MTsN 3 Aceh Barat. Edunesia : Jurnal Ilmiah Pendidikan, 1(3), 89–96. https://doi.org/10.51276/edu.v1i3.80

Astina, K. K. & S. & K. (2018). Pengaruh model pembelajaran service learning terhadap sikap peduli lingkungan. Jurnal Pendidikan Teori, Penelitian, Dan Pengembangan, 3(4).

Cherni, H., Métayer, N., & Souliman, N. (2020). Literature review of locomotion techniques in virtual reality. International Journal of Virtual Reality, 20(1), 1–20. https://doi.org/10.20870/ijvr.2020.20.1.3183

Chetty, N. D. S., Handayani, L., Sahabudin, N. A., Ali, Z., Hamzah, N., Rahman, N. S. A., & Kasim, S. (2019). Learning styles and teaching styles determine students' academic performances. International Journal of Evaluation and Research in Education, 8(4), 610–615. https://doi.org/10.11591/ijere.v8i3. 20345

Ghufron, S., Nafiah, Syahruddin, Kaswadi, & Mustofa. (2023). The Effect of STAD-Type Cooperative Learning Based on a Learning Tool on Critical Thinking Ability in Writing Materials. International Journal of Instruction, 16(1), 61–84. https://doi.org/10.29333/iji.2023.1614a

Hafeez, M. (2021). Systematic Review on Modern Learning Approaches, Critical Thinking Skills and Students Learning Outcomes. Indonesian Journal Of Educational Research and Review, 4(1), 167. https://doi.org/10.23887/ijerr.v4i1.33192

Hartanti, A. S., & Yuniarsih, T. (2018). PENGARUH KOMPETENSI PROFESIONAL GURU DAN MOTIVASI KERJA TERHADAP KINERJA GURU DI SEKOLAH MENENGAH KEJURUAN. Jurnal Pendidikan Manajemen Perkantoran, 3(1), 167. https://doi.org/10.17509/jpm.v3i1.9452

I Gunawan. (2013). Metode Penelitian Kualitatif Teori dan Praktik. In Jakarta: Bumi Aksara.

Khurniawan, A. W., Sailah, I., Muljono, P., Indriyanto, B., & Maarif, M. S. (2021). The improving of effectiveness school-based enterprise: A structural equation modeling in vocational school management. International Journal of Evaluation and Research in Education, 10(1), 161–173. https://doi.org/10.11591/ijere.v10i1.20953

Kim, D. (2018). A study on the influence of Korean Middle School Students' relationship through science class applying STAD cooperative learning. Journal of Technology and Science Education, 8(4), 291–309. https://doi.org/10.3926/jotse.407

Knoche, H. T. (2022). Thinking about cooperative learning: The impacts of epistemic motives and social structure on cooperative learning environments. International Journal of Management Education, 20(2). https://doi.org/10.1016/j.ijme.2022.100643

Marbun, S. P., . M., & Mursid, R. (2019). Pengaruh model pembelajaran kooperatif tipe jigsaw-STAD dan kecerdasan interpersonal terhadap hasil belajar pendidikan

agama katolik. Jurnal Teknologi Pendidikan (JTP), 12(1), 101. https://doi.org/10.24114/jtp.v12i1.14512

Morel, G. M. (2021). Student-centered learning: context needed. Educational Technology Research and Development, 69(1), 91–92. https://doi.org/10.1007/s11423-021-09951-0

Muktar, M. (2019). Pendidikan Behavioristik dan Aktualisasinya. TABYIN: JURNAL PENDIDIKAN ISLAM, 1(1), 14–30. https://doi.org/10.52166/tabyin.v1i1.4

Nastiti, F., & Abdu, A. (2020). Kajian: Kesiapan Pendidikan Indonesia Menghadapi Era Society 5.0. Edcomtech Jurnal Kajian Teknologi Pendidikan, 5(1), 61–66. https://doi.org/10.17977/um039v5i12020p061

Nindiati, D. S. (2020). PENGELOLAAN PEMBELAJARAN JARAK JAUH YANG MEMANDIRIKAN SISWA DAN IMPLIKASINYA PADA PELAYANAN PENDIDIKAN. JOEAI: Journal of Education and Instruction, 3(1), 14–20. https://doi.org/10.31539/joeai.v3i1.1243

Nureva, N. (2022). Analysis of Effect Application of Stad-Type Cooperative Learning Model on Learning Outcomes at Elementary School. International Journal on Advanced Science, Education, and Religion, 5(2), 37–47. https://doi.org/10.33648/ijoaser.v5i2.188

Prayoga, M. F., Safitri, D., Fahmi, F., & Damanik, M. H. (2021). Model Pembelajaran Kooperatif Tipe Student Teams Achievement Division Untuk Mengetahuin Perbedaan Kemampuan Pemecahan Masalah dan Motivasi Belajar Siswa. MES: Journal of Mathematics Education and Science, 6(2), 1–8. https://doi.org/10.30743/mes.v6i2.3096

Pritasari, O. K., & Wilujeng, B. Y. (2020). Penerapan model pembelajaran kooperatif tipe STAD untuk meningkatkan aktivitas dan hasil belajar mahasiswa. Journal of Vocational and Technical Education (JVTE), 2(1), 14–18. https://doi.org/10.26740/jvte.v2n1.p14-18

Qoriah, M., Masitoh, S., & Setyowati, S. (2021). Analisis Guru dalam Menjaga Tata Kelola Pembelajaran Pendidikan Anak Usia Dini Selama Pandemi Covid-19. Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini, 6(1), 549–557. https://doi.org/10.31004/obsesi.v6i1.1453

Raharja, I. G. N. K. R., Gitakarma, M. S., & Ariawan, K. U. (2017). Penerapan model pembelajaran kooperatif tipe STAD berbantuan video animasi untuk meningkatkan hasil belajar perakitan komputer. Jurnal Pendidikan Teknik Elektro Undiksha, 6(3), 96–105.

Ruslan, R., Apriasari, A., Nurjamal, N., Ismawan, H., & Nurhidayat, B. (2021). Learning Results Of Long Badminton Services Through The Cooperative Stad Learning Model. Kinestetik : Jurnal Ilmiah Pendidikan Jasmani, 5(2), 368–374. https://doi.org/10.33369/jk.v5i2.16684

Sabaniah, S., Ramdhan, D. F., & Rohmah, S. K. (2021). Peran Guru dalam Pelaksanaan Pembelajaran Jarak Jauh di Tengah Wabah Covid - 19. Edunesia : Jurnal Ilmiah Pendidikan, 2(1), 43–54. https://doi.org/10.51276/edu.v2i1.77

Sabila, I. A. (2020). IMPLEMENTASI PERENCANAAN STRATEGIS DALAM MENINGKATKAN MUTU PENDIDIKAN DI SMK AL-FALAH MOGA KABUPATEN PEMALANG. Journal of Islamic Education, 7(2). https://doi.org/10.18860/jie.v7i2.10949

Setyaningsih, R., & Rahman, Z. H. (2022). PENGARUH MODEL PROBLEM BASED LEARNING TERHADAP KEMAMPUAN PEMECAHAN MASALAH SISWA. AKSIOMA: Jurnal Program Studi Pendidikan Matematika, 11(2), 1606. https://doi.org/10.24127/ajpm.v11i2.5098

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. Journal of Business Research, 104, 333–339. https://doi.org/10.1016/j.jbusres.2019.07.039

Sri Murwanto, S. H. (2022). Penggunaan Model Pembelajaran Kooperatif Tipe STAD (Student Teams Achievement Division) untuk Meningkatkan Hasil Belajar Ipa Siswa Kelas IX D SMP Negeri 7 Alla Enrekang. Sainsmat : Jurnal Ilmiah Ilmu Pengetahuan Alam, 11(1). https://doi.org/10.35580/sainsmat111231382022

Sriana, J., Muslim, U., & Al, N. (2022). ANALISIS MODEL PEMBELAJARAN KOOPERATIF TIPE STAD. PEDAGOGI : Jurnal Ilmiah Pendidikan, 8(1), 39–51.

Sugiarti, & Husain, H. (2021). An influence of the contextual-based discovery learning model on the academic honesty of high school students. International Journal of Instruction, 14(3), 645–660. https://doi.org/10.29333/iji.2021.14338a

Suparsawan, I. K. (2021). Implementasi Pendekatan Saintifik Pada Model Pembelajaran Kooperatif Tipe STAD Untuk Meningkatkan Keaktifan dan Hasil Belajar Matematika. Indonesian Journal of Educational Development, 1(4), 607–620.

Suriadi, H. J., Firman, F., & Ahmad, R. (2021). Analisis Problema Pembelajaran Daring Terhadap Pendidikan Karakter Peserta Didik. EDUKATIF : JURNAL ILMU PENDIDIKAN, 3(1), 165–173. https://doi.org/10.31004/edukatif.v3i1.251

Syamsu, F. N., & Rahmawati, I. (2019). Keefektifan Model Pembelajaran STAD terhadap Hasil Belajar Matematika Materi Bangun Ruang. International Journal of Elementary Education, 3(3), 344–350.

Wahyuni, P. (2019). The Effect of Cooperative Learning Type Student Teams Achievement Division (STAD) on Understanding Mathematical Concepts in Class VIII Students of MTs N Pekanbaru. International Journal of Trends in Mathematics Education Research, 2(4), 168–172. https://doi.org/10.33122/ijtmer.v2i4.72