



## Enhancing Students' Communication Skills in Social Studies Learning Through Cooperative Learning

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**Abstract:** The goal of this study is to explore how cooperative learning methods affect students' communication skills in social studies classes. This study employed a randomized pretest-posttest control group design as an experimental design. The sample is made up of 60 students who were chosen using the proportional sampling technique from the 184 students in class VII that make up the population. The communication skills assessment sheet is a tool for gathering information. Analysis The research findings were examined using a quantitative descriptive technique. The data were analyzed and the effect of treatment on the variables was determined using the t-test statistical test. The findings indicate that using a cooperative learning model in social studies learning can help improve students' communication skills. The results of this study promote the development of 21st century education, particularly in terms of supporting students to possess the 4C skills, of which communication skills are one.

**Abstrak:** Tujuan dari penelitian ini adalah untuk mengeksplorasi bagaimana metode pembelajaran kooperatif mempengaruhi keterampilan komunikasi siswa pada pembelajaran IPS. Penelitian ini menggunakan rancangan randomized pretest-posttest control group design sebagai rancangan eksperimen. Sampel terdiri dari 60 siswa yang dipilih dengan teknik proporsional sampling dari 184 siswa kelas VII yang menjadi populasi. Instrumen penelitian terdiri dari Lembar penilaian keterampilan komunikasi. Teknik analisis data dilakukan dengan menggunakan teknik deskriptif kuantitatif melalui uji statistik uji-t untuk melihat pengaruh metode pembelajaran kooperatif terhadap keterampilan komunikasi siswa. Hasil penelitian menunjukkan bahwa penggunaan model pembelajaran kooperatif dalam pembelajaran IPS dapat membantu meningkatkan kemampuan komunikasi siswa. Hasil penelitian ini mendorong pengembangan pendidikan abad 21, khususnya dalam hal mendukung siswa untuk memiliki keterampilan 4C, yang salah satunya adalah keterampilan komunikasi.

**Keywords:** Communication skill, cooperative learning, social studies.

## INTRODUCTION

Critical thinking, innovation, creativity, and the ability to communicate and collaborate to solve social problems and make the best decisions are all determinants of educational success in the twenty-first century (González-pérez & Ramírez-montoya, 2022; Fitriani et al., 2022). Communication is one component that needs attention. Communication skills are necessary for personal and professional success (Rao, 2019). In a democratic society, good communication will lead to peaceful cohabitation. By improving their communication abilities, students may enhance their connections with themselves, others, and society. Communication skills are also vital in the development of talents and sensitivity in people's social lives, as well as in the development of constructive interpersonal connections and the eradication of cultural barriers (Rubtsova, 2019). Communication skills are vital in learning because they allow students to explain their learning results and attain effective learning outcomes (Supena et al., 2021). Communication skills are also important for students to form positive relationships with their classmates and teachers at school, allowing them to feel at ease and inspired to study (Alawamleh et al., 2022). This is in line with social studies education's goals, which include the development of critical and creative thinking abilities, have good communication skills, as well as the capacity to analyze and solve community problems and make sound decisions (Sá & Serpa, 2020). Learning in the social sciences emphasizes not only the transfer of knowledge, but also the transformation of students' behaviors into human personalities. Students are required to grasp a variety of topics and be able to develop and train their attitudes, values, morals, and abilities via the social studies curriculum

(Aslamiah et al., 2021). Learning social studies helps each student develop and grow in society while also contributing to the ongoing culture.

The issue is that learning social studies is sometimes described as memorizing dense and boring material. Students get disengaged from engaging in the learning process when the lecture method is used in social studies class. Consequently, a significant number of students are unable to effectively express learning results, resulting in poor learning outcomes. At SMP Negeri 1 Cirebon, 30 students were studied and observed. According to the findings, 75% of students were unable to effectively communicate their learning results. Only 15% of students are proficient in communicating learning outcomes, and only 10% of students are proficient in communicating learning outcomes adequately. This data clearly demonstrates the students' poor communication abilities at SMP Negeri 1 Cirebon. Because of their lack of knowledge, some students are hesitant to express themselves in front of the class. Some students have a lot of ideas but fail to communicate them in class. For students to be engaged in the learning process, educators must be creative and innovative while providing a social studies curriculum.

The researchers next studied the models and learning methods utilized by teachers in the classroom during the social studies learning process. According to the findings, teachers continue to employ traditional learning models and methods, with the teacher serving as an information hub. The material is provided through lectures, examples, textbook exercises, and assignments in the learning process. These types of learning stages are repeated and over, prompting pupils to feel bored and uninterested in engaging in the learning process. The findings of this observation provide preliminary evidence of

students' inability to communicate their learning outcomes. Teachers seldom provide students the opportunity to search for and obtain knowledge on their own using appropriate learning materials. The major teaching materials utilized during the learning process are textbooks. Students are rarely given the chance to work in groups, resulting in a lack of connection and communication. Based on the issues raised above, using the cooperative learning model in the learning process is suggested to develop communication skills.

Cooperative learning, according to Aslan Berzener and Deneme (2021) is a group learning strategy in which students work together to learn and aid one another. Interpersonal activities and face-to-face contact are introduced to students (Afza, 2018; Tran, 2019). Cooperative-based activities in small groups in the classroom are carried out optimally under the cooperative learning paradigm (Yenita, 2017; Yusuf et al., 2019). Each member of the group is responsible for their own learning and encourages others to do the same (Cheng & Learning, 2021). This learning model not only helps teachers manage their classrooms but also promotes a learner-centered atmosphere (Indriati et al., 2015; Khadka, 2022). Teachers also take an active role in group formation. The teacher creates activities that allow group members to study in a comfortable setting. In addition, group members develop essential social skills that enable them to study on their own. As a result, students are required to develop social skills, including communication, teamwork, and problem-solving.

Numerous studies have examined the significant impact that the cooperative learning model has on students' communication skills. However, a lot of previous studies concentrated on enhancing students' communication skills in language learning and mathematical learning (Bina et al., 2021;

Chen, 2021; Darmuki et al., 2018; Khair & Misnawati, 2022; Namaziandost et al., 2019; Nari, 2016). There is relatively little research on how to enhance students' communication abilities in junior high school social studies teaching (Kamaruddin & Yusoff, 2019; R. Silva et al., 2021). Actually, social studies is a subject that attempts to teach students to be good citizens and to have good character, one of which is through effective communication skills. Therefore, it is crucial to conduct this research with a primary focus on enhancing students' communication skills in social studies learning using cooperative learning models in order to address the flaws and limitations of prior research. This study supports the development of education for the twenty-first century, especially in terms of helping students acquire the 4C skills, such as critical thinking, creativity, communication skills, and collaboration.

## METHOD

As an experimental design, this study employed a randomized pretest-posttest control group design. This study included two groups. The experimental group (X1) receives treatment using the cooperative learning (CL) model. The control group was the second group, which got traditional learning (X2). The influence of the cooperative model on students' ability to communicate their learning results is determined using N-gain data. The outcomes of these measures were evaluated, and statistical tests were used to compare them. The design of this study is shown in table 1.

**Table 1.** The design of measuring communication skills using pretest and posttest

Class	Pretest	Treatment	Posttest
Experiment	0 <sub>1</sub>	X <sub>1</sub>	0 <sub>2</sub>
Control	0 <sub>3</sub>	X <sub>2</sub>	0 <sub>4</sub>

Information:

0<sub>1</sub> : Experimental group data on the pretest test

0<sub>2</sub> : Data for the experimental group on the posttest test

0<sub>3</sub> : Data on the control group on the pretest

0<sub>4</sub> : Data on the control group on the post-test

The research populations (184) from the class of VII in SMP Negeri 1 Cierbon are shown in table 2.

**Table 2.** The Population of the Research

No	Class List	The Number of Students
1	Class A	36
2	Class B	38
3	Class C	36
4	Class D	38
5	Class E	36
Total Students		184

The 12 participants were chosen based on the proportional sampling technique. Therefore, this research involved 60 students.

A communication skill assessment sheet served as the data gathering instrument. The validity and reliability of the assessment sheet's instrument were verified before the communication skill exam to verify that the instrument used to measure students' communication skills was valid and reliable.

**Table 3.** Description of Communication Skills in the Experimental Group and Control Group for Each Pretest and Posttest Test.

Group	N	SMI	Range	X <sub>Min</sub>	X <sub>Max</sub>	Mean	Std. Deviation	Variance
<b>Experiment</b>								
Pretest	30	25	7	10	17	13.40	1.831	3.352
Posttest	30	25	5	18	23	22.13	1.383	1.913
<b>Control</b>								
Pretest	30	25	6	10	16	12.90	1.709	2.921
Posttest	30	25	8	10	18	14.60	1.453	2.110

According to the table above, the optimal maximum value is 25. In the experimental class pre-test, the best score was 17, the lowest was 10, the average was 13.40, and the standard deviation was 1.831. On the posttest, the best score was 23, the lowest was 18, the

The data for this study came from the answers of the students' communication skills, which included a variety of communication indicators.

Analysis A quantitative descriptive technique was used to analyze the research findings. The t-test statistical test was used to analyze the data and determine the effect of treating the variable. A homogeneity test was performed before the t-test to determine the variance of the pretest data.

#### Research Hypothesis Formulation

H<sub>0</sub> : Cooperative learning learning model has no effect on communication

H<sub>1</sub> : Cooperative learning learning model affects communication skills

## RESULTS AND DISCUSSION

### Results

The students' communication skills test was divided into two groups, the experimental class employs the cooperative learning model, whereas the control class employs a traditional learning method. Table 3 shows the results of the pretest and posttest for each group

average was 22.13, and the standard deviation was 1.383. In the control group, the highest pre-test score was 16, the lowest pre-test score was 10, the post-test mean was 12.90, and the standard deviation was 1.709. The greatest score was raised to 18, while the lowest score stayed at 10, and the mean score was raised to 14.60, with a standard deviation of 1.453.

Then the communication skills of each indicator are shown in table 4.

**Table 4.** Description of communication skills in the experimental group and control group on each indicator

Type of Test	Indicators	Experiment			Control		
		Score Max	Average	Category	Score Max	Average	Category
Pre-test	Skills Presentation of Information in the form of a written report	4	2.90	Sufficient	3	2.63	Sufficient
	Skills in explaining the contents of the report	3	2.63	Enough	4	2.67	Sufficient
	breadth of content/material presented	4	2.60	Enough	3	2.70	Sufficient
	skills in answering questions	4	2.73	Enough	4	2.73	Sufficient
	skills in giving conclusions	4	2.53	Enough	4	2.73	Sufficient
Posttest	Information Presentation Skills in the form of written reports	5	4.57	Very Skilled	5	3.27	Skilled
	Skills in explaining the contents of the report	5	4.57	Very Skilled	4	2.90	Sufficient
	breadth of content/material presented	5	4.47	Very Skilled	4	3.03	Skilled
	in answering questions	5	4.60	Very Skilled	4	2.97	enough
	to give conclusions	5	4.33	Very Skilled	4	3.03	Skilled

The table 4 above shows the communication skills of the experimental group and the control group as measured by five indicators. The indicators for presenting information in the form of a written report for the pretest are sufficient. On the other hand, the post-test was rated as very skilled for the experimental group and skilled for the control group. The capacity to describe the contents of the report is the second indicator, and both the experimental and control groups are skilled. The experimental group, on the other hand, was categorized as extremely skillful in the post-test, while the control group was still skilled. The third indicator is the breadth of content/material offered in the pretest, which is adequate for both the experimental and control groups, while the posttest for the experimental

group is classified as extremely skilled and the control group as skilled.

Furthermore, the fourth indicator is the skill to answer questions, at the time of the pretest, both the experimental group and the control group were both quite adequate, while the post-test for the experimental group was classified as very skilled, but for the control group it was still quite adequate. The last indicator is the skill in giving conclusions, for the pre-tests, both the experimental group and the control group are in the sufficient category. As for the posttest, the experimental group was classified as very skilled, and the control group was classified as skilled.

Furthermore, to find out whether the pretest data had the same variance or not, a homogeneitytest was carried out using Levene's Statistics. The results of the homogeneity test are presented in table 5.

**Table 5.** The results of the homogeneity test of the pretest data of the experimental group and the control group

		Levene Statistics	df1	df2	Sig.
Data Pretest	Based on Mean	.017	1	58	.896
	Based on Median	.016	1	58	.900
	Based on Median and with adjusted df	.016	1	57,595	.900
	Based on trimmed mean	.017	1	58	.896

Based on table 5, it is known that the data The pretest of both the experimental group and the control group had the same variance which was confirmed by a significance value of 0.896 which was greater than 0.05. Based on these data, it is concluded that the data is homogeneously distributed. Furthermore, to see whether there is a significant effect of the

use of the Cooperative Learning model on the communication skills of students in social studies learning, a hypothesis test is carried out through a t-test. The results of the statistical analysis of the t-test are presented in table 6.

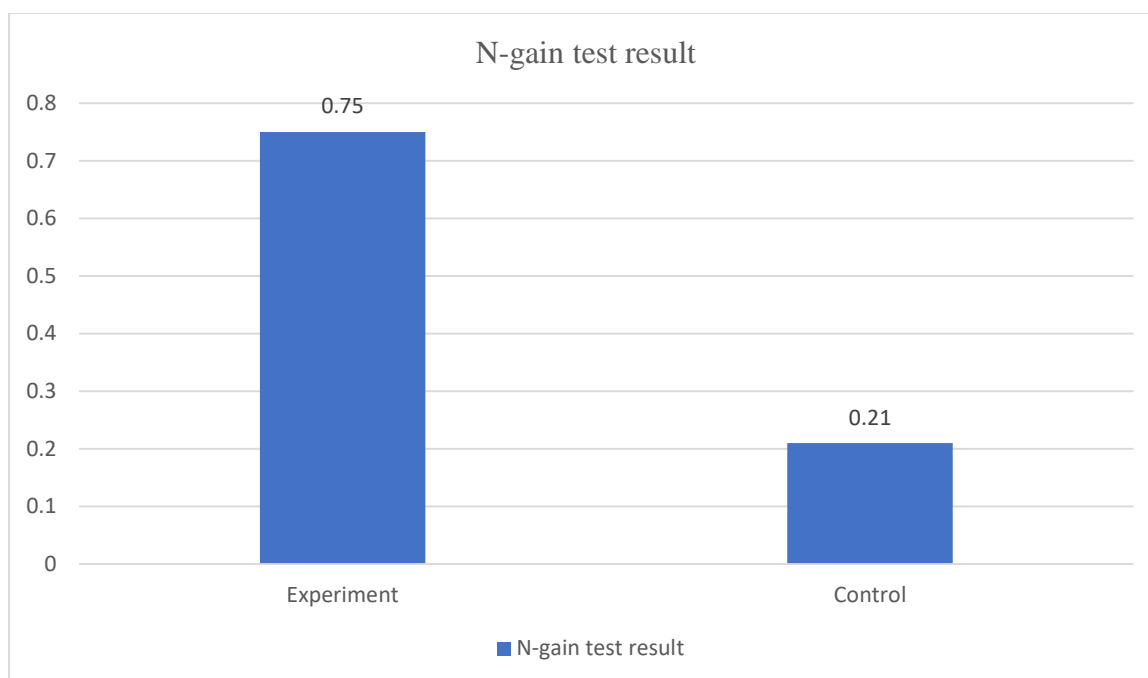
**Table 6.** Description of the t-test statistics

		t-test for Equality of Means				
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Data Pretest	Equal variances assumed	18,933	58	.000	Equal	6,933 .366
	variances not assumed	18,933	57,860,000	.366	6,933	Based

As shown in table 6, the significant value of the t test is 0.000, or less than 0.05. As a result, we may say that H0 is rejected and H1 is approved. As a result, employing the cooperative learning model has a considerable

impact on students' communication abilities in social studies.

Furthermore, to see how much influence is given, the N gain test is carried out. The results of the N-Gain test are presented in figure 1.



**Figure 1.** The results of the N-Gain test

By following the criteria for the N-gain value, namely as follows:

**Table 7.** Criteria of N-Gain Score

Interval	Criteria
$g \geq 0.7$	High
$0.3 \leq g < 0.7$	Middle
$g < 0.3$	Low

So, for the experimental group, the effect of using the cooperative learning model is large. high with a percentage of 79%. Meanwhile, the control group using the conventional model is low with a percentage of 21%. Thus, it can be concluded that the Cooperative Learning model is effective in improving students' communication skills.

### Discussion

The findings of the statistical analysis of the t test had a significance value of 0.000 or less than 0.05, according to the results of the t test. This demonstrates that employing the cooperative learning model has a considerable

impact on students' communication abilities in social studies classes at SMP Negeri 1 Cirebon. Up to 75% of students improved their communication abilities after completing the learning process utilizing the cooperative learning model. Meanwhile, students who use traditional learning methods can only enhance their communication abilities by 21%, which is a small improvement. The findings of this study support those of Bina et al. (2021), Chen (2021), Darmuki et al. (2018) who discovered a significant relationship between the cooperative learning model and students' improvement in communication skills. The

results of this study serve as an alternative strategy for enhancing students' communications skills while studying social sciences.

The students' skills in explaining the contents of the report and the skills in answering questions in the experimental group showed a significant difference with the skills of students in the control group. Cooperative learning in social studies learning can increase student activity in groups to support the learning process. Through collaboration in groups, students actively communicate between students and teachers. By working in groups also train students to be responsible in solving problems. Through the cooperative learning process, students are more confident in completing tasks because they are completed together. Johnson and Johnson (2019) Explaining that in cooperative learning, students independently solve problems through research activities. So that through this cooperative learning, students can also improve higher order thinking skills such as critical thinking skills, analytical skills, and drawing conclusions.

According to the findings of this study, the cooperative learning model had a substantial impact on developing students' communication abilities when compared to traditional learning. When compared to traditional learning, cooperative learning delivers higher levels of accomplishment and output. According to several studies, students can contribute new ideas and solutions, higher-order reasoning, and improved information transfer through cooperative learning (Asok et al., 2017; Budiarti et al., 2020; H. Silva et al.,

2022). Students' creativity is better in the cooperative learning model than in the traditional learning model because they have a higher degree of reasoning and critical thinking (Indriati et al., 2018; Moges, 2019).

Furthermore, according to Namaziandost et al. (2019), a cooperative learning process has five advantages, including (i) improving academic achievement, (ii) increasing student activity, (iii) increasing students' sense of responsibility, (iv) improving students' communication skills, and (v) increasing self-confidence. According to Barksdale et al. (2021), student learning is impacted by the relationships they form with one another, and when students feel supported, they are more equipped to learn. Cooperative learning, according to this study, can create a conducive learning environment in which students can interact with other students in small groups to develop their communication skills.

Students are directed through cooperative learning procedures to accomplish projects in their groups, with the outcomes of group discussions being presented in front of the class. When one group presents their learning outcomes in front of the class, the other group responds to the group that presents, resulting in an active and successful communication process between students and groups. Under the cooperative learning model, students not only connect inside their groups but also interact with students from other groups. As a result, cooperative learning has the potential to greatly improve students' communication skills.



## CONCLUSION

The outcomes of the study demonstrate that the cooperative learning model might help students enhance their communication skills considerably. Students that engage in cooperative learning are better equipped to enhance their communication skills than those who follow traditional learning methods. When compared to traditional learning, cooperative learning delivers higher levels of accomplishment and production. Through cooperative learning, students can produce new ideas and solutions, as well as higher-order reasoning and information transfer. Cooperative learning may foster effective communication among students, allowing them to increase their learning when they feel encouraged.

## REFERENCES

- Afza, A. (2018). Meningkatkan Aktivitas Dan Hasil Belajar Mahasiswa Melalui Model Pembelajaran Kooperatif Tipe Numbered Head Together. *Ta'dib*, 21(1), 1. <https://doi.org/10.31958/jt.v21i1.1058>
- Alawamleh, M., Al-Twait, L. M., & Al-Saht, G. R. (2022). The effect of online learning on communication between instructors and students during Covid-19 pandemic. *Asian Education and Development Studies*, 11(2), 380–400. <https://doi.org/10.1108/AEDS-06-2020-0131>
- Aslamiah, A., Abbas, E. W., & Mutiani, M. (2021). 21st-Century Skills and Social Studies Education. *The Innovation of Social Studies Journal*, 2(2), 82. <https://doi.org/10.20527/iis.v2i2.3066>
- Aslan Berzener, Ü., & Deneme, S. (2021). The Effect of Cooperative Learning on EFL Learners' Success of Reading Comprehension: An Experimental Study Implementing Slavin's STAD Method. *TOJET: The Turkish Online Journal of Educational Technology*, 20(4), 90–100.
- Asok, D., Abirami, A. M., Angeline CV, N., & Lavanya, R. (2017). Active learning environment for achieving higher-order thinking skills in engineering education. *Proceedings - 2016 IEEE 4th International Conference on MOOCs, Innovation and Technology in Education, MITE 2016*, 47–53. <https://doi.org/10.1109/MITE.2016.69>
- Barksdale, C., Peters, M. L., & Corrales, A. (2021). Middle school students' perceptions of classroom climate and its relationship to achievement. *Educational Studies*, 47(1), 84–107. <https://doi.org/10.1080/03055698.2019.1664411>
- Bina, N. S., Fitri, Y., Sihotang, S. F., & Saragih, R. M. B. (2021). Use of Autograph Learning Media to Improve Mathematic Communication Skills. *Proceedings of the 2nd Annual Conference on Social Science and Humanities (ANCOSH 2020)*, 542(Ancosh 2020), 86–91. <https://doi.org/10.2991/assehr.k.210413.021>
- Budiarti, I. S., Suparmi, A., Sarwanto, & Harjana. (2020). Effectiveness of generation, evaluation, and modification-cooperative learning (Gem-cl) model selaras bakar batu cultural practice in papua. *Jurnal Pendidikan IPA Indonesia*, 9(1), 32–41. <https://doi.org/10.15294/jpii.v9i1.22362>
- Chen, R. (2021). A Review of Cooperative Learning in EFL Classroom. *Asian Pendidikan*, 1(1), 1–9. <https://doi.org/10.53797/aspen.v1i1.1.2021>
- Cheng, L., & Learning, C. L. (2021). A Review of Cooperative Language Learning Approach. 4(6), 30–37.

- <https://doi.org/10.23977/curtm.2021.040605>
- Darmuki, A., Andayani, A., Nurkamto, J., & Saddhono, K. (2018). *Cooperative, Synectics, and CTL Learning Models toward Speaking Ability Viewed from Student's Motivation*. 125(Icigr 2017), 75–79. <https://doi.org/10.2991/icigr-17.2018.18>
- Fitriani, W., Komalasari, E., Adzhani, M., & Nelisma, Y. (2022). *Development of Research-Based Modules in Educational Psychology Lectures to Improve Creativity*. 6(4), 603–615. <https://doi.org/10.31004/obsesi.v6i4.2314>
- González-pérez, L. I., & Ramírez-montoya, M. S. (2022). Components of Education 4.0 in 21st Century Skills Frameworks: Systematic Review. *Sustainability (Switzerland)*, 14(3), 1–31. <https://doi.org/10.3390/su14031493>
- Indriati, G., Rosba, E., & Kasmeri, R. (2015). Upaya Peningkatan Aktivitas Dan Hasil Belajar Mahasiswa Melalui Mind Map Dengan Model Pembelajaran Kooperatif Tipe Stad Pada Mata Kuliah Anatomi Fisiologi Manusia. *Ta'dib*, 18(2), 173. <https://doi.org/10.31958/jt.v18i2.289>
- Indriati, G., Rosba, E., & Mely, T. J. (2018). Dampak Pembelajaran Kooperatif Tipe Stad Terhadap Hasil Belajar Biologi Siswa Smpn 3 Batang Anai Pariaman. *Ta'dib*, 21(1), 61. <https://doi.org/10.31958/jt.v21i1.1047>
- Kamaruddin, S., & Yusoff, N. M. R. N. (2019). The Effectiveness of Cooperative Learning Model Jigsaw and Team Games Tournament (TGT) towards Social Skills. *Creative Education*, 10(12), 2529–2539. <https://doi.org/10.4236/ce.2019.1012180>
- Khadka, J. (2022). *Learner-Centered Instruction: Teachers' Practice in Online Class of Mathematics During Covid-19 Pandemic in Nepal*. 15(3), 831–852.
- Khair, U., & Misnawati, M. (2022). Indonesian language teaching in elementary school: Cooperative learning model explicit type instructions chronological technique of events on narrative writing skills .... *Linguistics and Culture Review*, 6, 172–184.
- Moges, B. (2019). Practices and Challenges of Cooperative Learning in Selected College of Arsi University: As a Motivational Factor on Enhancing Students' Learning. *Universal Journal of Psychology*, 7(1), 1–17. <https://doi.org/10.13189/ujp.2019.070101>
- Namaziandost, E., Neisi, L., Kheryadi, & Nasri, M. (2019). Enhancing oral proficiency through cooperative learning among intermediate EFL learners: English learning motivation in focus. *Cogent Education*, 6(1). <https://doi.org/10.1080/2331186X.2019.1683933>
- NARI, N. (2016). Kemampuan Pemahaman Konsep Matematika Dengan Menerapkan Pendekatan Pembelajaran Kontekstual Melalui Model Pembelajaran Kooperatif Think–Pair–Share Berempat Dan Kemunculan Komponen Pembelajaran Kontekstual. *Ta'dib*, 14(1). <https://doi.org/10.31958/jt.v14i1.194>
- Rao, P. S. (2019). VS Publications Alford Council of International English & Literature Journal(ACIELJ). *Alford Council of International English & Literature Journal(ACIELJ)*, 401(2), 6–18.
- Rubtsova, A. (2019). Socio-linguistic innovations in education: Productive implementation of intercultural communication. *IOP Conference Series: Materials Science and Engineering*, 497(1). <https://doi.org/10.1088/1757-899X/497/1/012059>
- Sá, M. J., & Serpa, S. (2020). The covid-19 pandemic as an opportunity to foster the

- sustainable development of teaching in higher education. *Sustainability (Switzerland)*, 12(20), 1–16. <https://doi.org/10.3390/su12208525>
- Silva, H., Lopes, J., Dominguez, C., & Morais, E. (2022). Lecture, Cooperative Learning and Concept Mapping: Any Differences on Critical and Creative Thinking Development. *International Journal of Instruction*, 15(1), 765–780. <https://doi.org/10.29333/iji.2022.15144a>
- Silva, R., Farias, C., & Mesquita, I. (2021). Cooperative learning contribution to student social learning and active role in the class. *Sustainability (Switzerland)*, 13(15). <https://doi.org/10.3390/su13158644>
- Supena, I., Darmuki, A., & Hariyadi, A. (2021). The influence of 4C (constructive, critical, creativity, collaborative) learning model on students' learning outcomes. *International Journal of Instruction*, 14(3), 873–892. <https://doi.org/10.29333/iji.2021.14351a>
- Tran, V. D. (2019). Does cooperative learning increase students' motivation in learning? *International Journal of Higher Education*, 8(5), 12–20. <https://doi.org/10.5430/ijhe.v8n5p12>
- W. Johnson, D., & T. Johnson, R. (2019). Cooperative Learning: The Foundation for Active Learning. *Active Learning - Beyond the Future*. <https://doi.org/10.5772/intechopen.81086>
- Yenita, Y. (2017). Enhancing Students' Math Learning Outcomes on Determining Multiplication Operation Material Through Numbered Head Together (Nht) Model. *Ta'dib*, 20(2), 155. <https://doi.org/10.31958/jt.v20i2.603>
- Yusuf, Q., Jusoh, Z., & Yusuf, Y. Q. (2019). Cooperative learning strategies to enhance writing skills among second language learners. *International Journal of Instruction*, 12(1), 1399–1412. <https://doi.org/10.29333/iji.2019.12189a>