

Improving Student Cooperation Skills in Civics Through the Quick on The Draw Learning Method

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ABSTRACT

Low cooperation skills has created various social problems in the community. This phenomenon is not only discovered in the working world, but also in learning institutions, especially during the COVID-19 pandemic where learning activities were predominantly delivered online. Due to such settings, numerous students prefer to be study by themselves and no longer demonstrate care about their surrounding environment. This study aims to examine the cooperative learning method of Quick On the Draw to improve the skills of class VIII students in one of the public junior high schools in Majalengka, specifically in one civic education subject, namely the order of laws and regulations. Purposive sampling with 24 college students was selected as the sampling approach. The data analysis of the results illustrated that the cooperation skills of students significantly improved and were in good and very good criteria. In the first cycle, the average percentage of the first session was at 61,45%, while the average percentage of the second session was at 69,05%. In the second cycle, the average percentage of the third session was at 78,45%, while the average percentage of the fourth meeting was at 89,97%. The results of this study demonstrate that Quick On the Draw learning method successfully improve the cooperative skills of class VIII students on the subject of civic education.

Keywords: Learning Method, Quick On The Draw, Civic Education, Cooperative Skills

1. INTRODUCTION

An individual cannot live by himself or herself. As social beings, humans are destined to be close to each other and cannot be separated from other human beings [1]. An individual certainly need the help of other people to ensure survival. In meeting all the needs of life, requesting other people's help and working together with other people are key and unavoidable. Individuals who feel that they may live alone without the presence of other people tend to be ostracized from the society. Working hand in hand, cooperation, and mutual assistance are inseparable necessities in human life as social beings.

There are several characteristics of Pancasila students, namely strong faith in God Almighty, respect for local and global cultures, high cooperation skills, a strong sense of independence, critical thinking, and creativity.

Gotong royong is among the principles observed by Indonesians. Pancasila students carry out activities together and advocate cooperation to ensure that the

required task feel easier and lighter to accomplish. Gotong royong fosters a spirit of teamwork, as well as sympathy and a desire to understand and benefiting one another.

The use of an online educational system that allows a range of communication techniques such as messaging, discussion forums, and e-mail bulletin boards may help students, teachers, and instructors communicate more effectively.[2]. Cooperation is one of the skills that students need to master based on their current abilities [3].

Teamwork is regarded as accomplishing a team's target together. In education, the academic goals may be achieved faster with cooperation. In a community or learning group, the results of group work are always better compared to individual work [4].

The lack of expertise regarding collaboration between students is clarified with support from research results that students' cooperation skills in education have not been fully comprehensive. This happens because students behave more towards individualistic, less tolerant, and distant from the point of view of shared

values. [4] This statement aligns with academic research Sholihah, which shows that the lack of cooperation between educators is frightening. So it needs to build a higher quality type of character through learning by growing the potential for collaboration. [5]

Communication is key in educational communities which include students and teachers. Collaborative learning is an essential learning strategy that requires students to work together under a group to achieve a common academic goal. [6] During COVID-19 pandemic, learning activities are being carried out remotely (PJJ). The online learning approach, which has been running for approximately 2 years, has resulted in a lot of teenagers being entangled in various problems, especially ones related to social interaction. Today's teenagers prefer to do anything individually, prefer to be alone and do not concern themselves with the surrounding environment.

This lack of cooperation phenomenon is not only discovered in organizations, government agencies, or community life, but also in the school environment. The low collaboration skills stem from various social problems and the principles of cooperation, including mutual respect, tolerance, caring, and giving each other opportunities, are rarely identified among students, especially in class VIII students. Such conditions affect learning achievement and interactions between students [7]. Ideally, the internal cooperation that takes place in schools, especially in the classroom, is expected to be a driving force to foster student creativity in interacting so that the ultimate goal of learning process may be achieved. [8]

The rapid development of technology has brought about a great influence in transforming adolescents into individuals who avoid social interactions. The COVID-19 pandemic has also caused them to feel that they are in a comfort zone where they are free to do whatever they want without having to care about cooperation or mutual assistance.

This phenomenon has caused students' collaboration skills at school and in the classrooms begin to fade since continuous online learning activities has rendered interactions with friends or teachers awkward. Students do not demonstrate a caring attitude when their friends need help in completing assignments and they choose to work alone.

The phenomenon is in response to the transition from face-to-face to distance learning. As a result, students were no longer involved in direct interactions, and subsequently embarrassed when meeting or engaging with their friends, let alone interacting with strangers.

Similarly, it also influenced students when working on group assignments. The assignments are getting more difficult to complete due to poor teamwork abilities. As a result, students' low interaction skills with others may

affect their life in the future.

Students' learning efforts should focus more on steering them toward a life that includes living with other people, respecting and accommodating each other's viewpoints, valuing those who speak up, being responsible, and willing to sacrifice. To enable the learning process to successfully achieve those objectives, a collaborative learning method is vital. [9]

The right learning method is a method that caters students' learning needs and conditions as well as consists of suitable learning materials. The choice of learning techniques should also be primarily based on the stipulated curriculum. [10]

The current learning system in Indonesia uses the 2013 Curriculum, which places more emphasis on processes rather than on outcomes. The 2013 Curriculum's learning activities are aimed at empowering students' full potential to achieve the desired competencies through efforts and to develop students' attitudes, knowledge, and skills. Other qualities developed in the 2013 Curriculum include a learning process that develops useful life skills for students and shapes their character. [11]

The employment of a learning method will have a significant impact on students' interests in learning. If students develop interests in learning, they tend to better understand learning materials.

Cooperative learning is a learning method that encourages students to collaborate and instills the willingness to do so. It is a series of learning activities carried out with the assistance of other students to achieve learning goals [8]. Cooperative learning techniques require students to be active in discussions and cooperate in groups. [12]

Learning principles in schools include playing and learning activities need to involve playing to ensure that students are happy and comfortable. Exposure to game-based learning approach therefore needs to be integrated to inculcate competence and culture while using educational games. [13].

For civic education, learning models need to be adjusted to suit the characteristics of the learning goals [14], students' learning environment, students' learning abilities, as well as the learning desire of the students themselves [8].

One of the efforts to stimulate students' active learning in civics education is by using Quick On The Draw method. It is a method in which each activity is carried out with a built-in incentive for teamwork and speed.[10] The activity encourages more efficient group work. Institutions and organizations have learned that group work is more productive than individual work. [15]

Developing students' social skills and preference to learn in groups are necessary. Working together to finish an assignment is also in line with values delivered in civic education. Students are able to learn better by interacting with their friends and helping each other in understanding learning materials better using Quick On The Draw method.

In essence, this method helps students to not rely entirely on teachers. The learning process could be more student-centered and, as a result, students may enjoy the learning activities better. This learning model may increase students' tendency to ask and debate each other and enhance students' cooperation skills in their groups.

To solve the problem of the low cooperative skills of class VIII students at one of the private junior high schools in Majalengka, a study to improve students' cooperation skills in civic education through Quick On The Draw Method was proposed.

The purpose of this study is to provide an alternative to cultivate and develop students' cooperation skills in the learning process and enable students to excel academically while maintaining a high level of social interactions with their peers. This would eliminate the difficulty in mingling with friends and benefit students as they gradually enter adulthood.

2. METHOD

Research design refers to all the processes involved in planning and implementing a study. Classroom action research was selected as the method for this research (CAR) [16]. Teachers are actively in collaboration with researchers and school principals in this method. This study incorporated a singular action in each cycle, where each cycle entailed planning, implementation, observation, and reflection. The participants in this study were students of class VIII MTsN 9 Majalengka, West Java. The number of students who became the research subjects were 25 people, consisting of 11 male students and 14 female students. As for research, the subject is civics with the subject of laws and regulations.

2.1. Research instrument

The research instruments used in this study are as follows:

- a. Learning Implementation Plan (RPP)

Minister of Education and Culture Regulation (Permendikbud) No. 22 of 2016 [17], concerning Standards for Primary and Secondary Education is the reference for the RPP of this study with an application of Quick On The Draw cooperative learning model. [18]
- b. Group Worksheet

LKK sheets are distributed to each group and incorporate topics to learn and assignments to complete.

- c. Teaching Materials

Teaching materials include learning materials to be delivered to students in the classroom.
- d. Quick On The Draw Question.

Questions were formulated to adapt to students' learning materials .

2.2. Data Collection Instruments

The data collection instruments include:

- a. Students' Cooperation Observation Sheet.

The purpose of this instrument is to assess students' abilities to cooperate and to track their progress in class during learning process.
- b. Activity Observation Sheet for Teachers and Students.

This instrument is used to determine the effectiveness of RPP.
- c. Field Notes.

Study findings are recorded using field notes during teaching activities.

2.3. Data Analysis

Qualitative and quantitative data analyses were used to analyze study results. Quantitative data were obtained using descriptive statistics of averages and percentages. Descriptive statistics are used to analyze or describe data without intending to draw inferences or generalizations. [19]. The qualitative data were evaluated using Miles and Huberman's model, which consists of the following three components [20]:

- a. Data Reduction

This component includes summarizing, selecting essential data, focusing on important details, as well as identifying themes and patterns [21].
- b. Data Visualization

Inputs are sorted based on specified criteria in to identify existing similarities. Tables, graphs, files, charts, pictograms, and other visual aids are used to present the information.
- c. Conclusion and Verification

Preliminary conclusions are temporary and they may change if better evidence emerges in the next step of data collection [22].

3. RESULTS AND DISCUSSION

A person who courageously faces various problems in life and creatively and proactively overcome them is the core of the study as well as a reflection of the ultimate life skills. [23]

In the 21st century, learning institutions are required to prepare students to acquire and master several skills, including soft skills and hard skills, in order to succeed in life.

The required life skills, as formulated in Permendikbud No. 103 of 2015, include the 4Cs, namely

creative thought, critical analysis, and issue abilities, as well as interpersonal and teamwork abilities [24].

Collaboration skills can be developed by students through experiences within school, between schools, and outside of school. [25]

In the idea of student profiles, the Ministry of Education and Culture has conveyed what is included in the Pancasila Student Profile marker. According to Rusnaini, this profile will be used as a benchmark for the criteria for Indonesian students.

In education, various learning methods that are more focused on cooperation have emerged, including cooperative learning method [9]. The cooperative learning model encourages students to work together. Its characteristics consist of team learning and willingness to work collectively. [26] Effective learning is not limited to knowing (*learning to know*), but also include doing (*learning to do*), becoming (*learning to be*), and coexisting (*learning to live together*). [27]

Teachers are not merely facilitators of learning materials, but also facilitators of skills application to ensure that students develop and succeed (learning to do). Teachers are also critical in molding students based on their talents and interests, physical and psychological development, personality as well as their environment (learning to be).

Learning issues, if present, must be addressed immediately to prevent them from hampering students'

learning process. One option to address such issue is by applying cooperative learning method. [28] This is in accordance to Sunan and Hans [29] who stated that "cooperative learning method is an approach or a series of strategies specifically designed to encourage students to work together [18]. In addition, Rusman stated that the goal of cooperative learning is to teach pupils how to collaborate [30]. In cooperative learning, students are actively involved, interacting a lot with other students, participating in discussions, solving problems together to achieve learning objectives. [31].

Slavin, Abrani, and Chambers argued that learning through cooperative learning method could be explained from several perspectives. One such perspective is social perspective, where students are willing to help each other because they want all group members to succeed collectively [8].

Cooperative learning is a learning model that utilizes a grouping system between four to six students who have different backgrounds, competencies, gender, race, or ethnicity [30]. The involvement of students to study in groups will encourage a two-way learning process. This is in line with Tatar & Oktay who stated that if a good quality education is to be desired, learning with a student-centered approach is key and the cooperative learning method plays an important role in realizing it. [31]

Table 1. Overall Value of Cooperation Observations

No.	Component	Evaluation	Pre Cycle	Cycle I		Cycle II	
				Session 1	Session 2	Session 3	Session 4
1.	Using the deal						
2.	Appreciating contribution	Value	944	1106	1243	1412	1619
3.	Accepting responsibility						
4.	Accepting other people's opinions						
5.	Respecting individual differences	Average Score	26.22	30.72	43.52	39.22	44.98
6.	Mutual understanding						
7.	Helping each other	Percentage	52,45%	61,45%	69,05%	78,45%	89,97%
8.	Motivating others						
9.	Completing tasks on time	Description	Not enough	Enough	Enough	Good	Very Good

Learning activities with Quick On The Draw learning method can help students to get used to active learning and not passively sit during learning. Quick On The Draw activities encourage students to learn from sources, not

teachers. They are suitable for students who may have difficulty in being passive for more than two minutes. Quick On The Draw method will introduce various reading skills, self-study and other test skills, careful

reading skills, methods of answering questions correctly, and the skills to distinguish important and unimportant matters.

There were two meeting sessions in Cycle I. Teaching activities were based on researchers' preparations, such as the syllabus, cycle I RPP utilizing Quick On The Draw approach, and Activity Observation Sheets for Teachers and Students. A set of questions was also prepared a medium during learning process.

The RPP that has been prepared serves a guide to the implementation of learning activities. The number of tasks that students need to do increased when Quick On The Draw approach was used, compared to students' activities in the pre-cycle phase. There were four student activities in the pre-cycle: listening to the teacher's explanation, reading textbooks, copying learning materials from textbooks, and doing exercises on textbooks.

In core activities, both cycle I or II, teacher explained learning materials briefly so that students understand the important points. Subsequently, teacher prepared a set of questions regarding the topic being discussed and arranged them on the teacher's desk, with each set consisted of 5 questions in 5 separate cards tailored to groups formed earlier.

Table 2. Cooperation Score Criteria

Criteria Percentage	Level
80%-100%	Very good
70%-79%	Good
60%-69%	Enough
50%-59%	Not enough
0%-49%	Very less

After students were in their groups, the teacher explained the rules of the game. Group representatives picked a card from the teacher's desk and brought it to their respective group and discussed the question printed on the card with their group members using the source that was provided. Answers were subsequently written on a separate piece of paper. [32]

Table 3. Recapitulation Percent Evaluation Of Scholar Cooperation Abilities

Cycle I & II	Percentage	Level
Session 1	61,45%	Enough
Session 2	69,05%	Good
Session 1	78,45%.	Good
Session 2	89,97%.	Very Good

The teacher monitored and guided the learning process by encouraging students to cooperate with their group members in completing the set of questions given.

Groups that had finished answering the first question, were instructed to submit the answer sheet to the teacher's desk to be checked. If the answer was correct, they proceeded with the subsequent question. This process was repeated few times. The first group to finish answering all sets of questions would be the winner of the game.

Table 4. The Percentages of Achievement Cycle I

Cycle 1	Percentage	Level
Session 1	61,45%	Enough
Session 2	69,05%	Good

The findings of the study suggest that learning in cycles I and II is superior to pre-cycle phase in terms of improving students' cooperative skills. Students in class VIII-A demonstrated a low collaboration skills in the pre-cycle phase, with a cooperative skills percentage of 52,45 percent. The first meeting session in the first cycle demonstrated an average percentage of 61,45 percent, while the second meeting session indicated an average percentage of 69,05 percent. The average percentage of the third meeting session in the second cycle was 78,45 percent, while the average percentage improved to 89,97 percent in the fourth meeting session.[33]

Table 5. The Percentages of Achievement in Cycle II

Cycle II	Percentage	Level
Session 1	78,45%.	Good
Session 2	89,97%.	Very Good

In the second cycle, the cooperative ability of class VIII-A students is at a high level with a percentage of 89.97%. Different reasons affected that progress, including (1) Quick on the Draw cooperative learning method used in learning, (2) group study guidelines that students must follow to be more orderly, (3) the learning experience in cycle I, which teaches students what to do, (4) motivated to become a superior group and receive awards from the teacher in the second cycle of learning.

Table 6. The Effects Of The Recapitulation Of The

Pre Cycle	Cycle 1		Cycle II	
	Session I	Session II	Session I	Session II
52,45%	61,45%	69,05%	78,45%.	89,97%.

Percentage Of Usual Scholar Cooperation Assessment

In the first cycle, students' cooperation skills had not been achieved optimally. This was because students had not adapted to Quick On The Draw method. During the initial part of the learning activities, it was observed that

several students did not cooperate when solving Quick On The Draw questions due to the lack of guidance from the teacher and the lack of monitoring from the teacher. To overcome this, in cycle II the teacher guided the learning process more actively and motivated students to be enthusiastic about working together. Students were advised neither to fall behind other teams since the winning team is the first team to finish all series of questionnaires.

That cooperative learning approach is being used utilizing Quick On The Draw technique substantially influenced the improvement the performance of class VIII-A students. This is in line with the growth observed in collaboration skills in cycle I and cycle II [34].

The comparison may be observed in the following graphic from the pre-cycle, first cycle, and second cycle, based on students' cooperative skills.

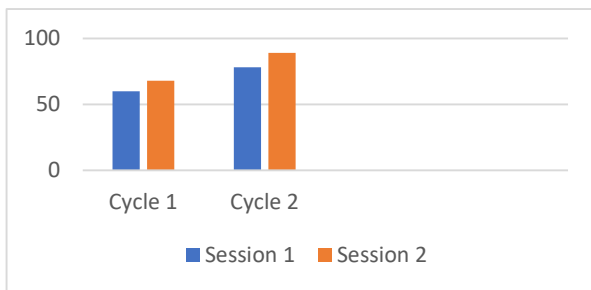


Figure 1. Graph of Increasing Student Cooperation

From observations, it was concluded that there have been improvements in students' cooperation skills [35]. In the first cycle, students were enthusiastic about the learning method, even though they did not fully understand the method initially. This was because students were not familiar with the learning model. Table 6 illustrated that in the first cycle, students' cooperation skills after using Quick On The Draw approach was at 69,05 percent and within the second cycle, their cooperative skills improved to 89.97%.

Based on the results obtained from the first and second cycle, it was observed that there improvements on students' learning results and the expected goals were achieved. [36]

4. CONCLUSION AND SUGGESTIONS

Based on the study results, Quick On The Draw method improved students' cooperation skills in the civic education subject Legislation Order of class VIII-A students of MTsN 9 Majalengka. The first meeting session of the first cycle indicated an average percentage of 61,45%, which belongs to "Enough" category. The second meeting session indicated an average percentage of 69,05%, which also belongs to "Enough" category. In the second cycle, the third meeting session indicated an average percentage of 78,45%, which belongs to "Good" category, while the fourth meeting session indicated an

average percentage of 89.97%, which belongs to the "Very Good" category.

Therefore, it may well be stated than students' cooperation abilities during classes are VIII-A of MTsN 9 Majalengka, improved through the use of Quick On The Draw method. Basis of the findings, it is expected that when using the Quick On The Draw method, teachers will be far more concentrated and continually supervise students in group activities so that they may collaborate better. To achieve and exceed learning goals, teachers must exercise sound time management skills and guide students using an effective method accordingly.

AUTHORS' CONTRIBUTIONS

Endah Zakiyyatun Najah M contributed to classroom action research, data analysis, and manuscript writing of this study.

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REFERENCES

- [1] N. R. D. Zulyusri, "The application of cooperative learning model type problem base learning (PBL) to increase the learning activities of students of class XII MIA 3 in SMA Negeri 1 Padang," *J. Phys. Conf. Ser.*, vol. 012195, 2019.
- [2] N. A. N. Azlina, "CETLs: Supporting Collaborative Activities Among Students and Teachers Through the Use of Think- Pair-Share Techniques," *Int. J. Comput. Sci. Issues*, vol. 7, no. 5, pp. 18–29, 2010.
- [3] S. M. M. Nurshahira Alwani Mohd Taufik, "Perception of mathematics teachers on cooperative learning method in the 21st century," no. 2017.
- [4] & L. Rosita, I., "Meningkatkan kerja sama siswa melalui pembelajaran kooperatif tipe think pair shar," *J. Form.*, vol. 3, no. 1, pp. 1–10, 2015.
- [5] Sholihah, *Profil kemampuan kerjasama siswa dalam pembelajaran ipa*. Lampung: Universitas Lampung, 2016.
- [6] S. S. Tint and E. E. Nyunt, "Collaborative Learning with Think-Pair -Share Technique," vol. Comput. Ap, no. 2015, pp. 1–11.
- [7] Y. Y. Richard J. Shavelson, Donald B. Young, Carlos C. Ayala, Paul R. Brandon, Erin Marie Furtak, Maria Araceli Ruiz-Primo, Miki K. Tomita, "On the Impact of Curriculum-Embedded Formative Assessment on Learning: A Collaboration between Curriculum and Assessment Developers," *Appl. Meas. Educ.*, pp. 295–314, 2008.

- [8] S. Nasia, B. Saneba, and Hasdin, "Meningkatkan Kerjasama Siswa pada Pembelajaran PKN Kreatif melalui Value Clarification Technique (VCT) di Kelas IV GKLB Sabang," *J. Tadulako Online*, vol. 2, no. 3, pp. 63–77, 2014, [Online]. Available: <http://jurnal.untad.ac.id/jurnal/index.php/JKTO/articel/view/2932>.
- [9] Djoko Apriono, "Suatu Landasan untuk Membangun Kebersamaan dan Keterampilan Kerjasama," *FKIP Univ. PGRI Ronggo Lawe TUBAN*, vol. 01, no. XVI, pp. 293–296, 2013.
- [10] J. D. K. Mohammed K. Khalil, "Faculty reflections on the process of building an integrated preclerkship curriculum: a new school perspective," *Adv. Physiol. Educ.*, no. 2014,3, pp. 199–209.
- [11] Hosnan, *Pendekatan Saintifik dan Kontekstual dalam Pembelajaran Abad 21*. Bogor: Ghalia Indonesia, 2014.
- [12] W. W. H R Permatasari, "Gender: Its relation to Mathematical Creative Thinking Skill," *J. Phys. Conf. Ser.*, no. 2017, p. 012093.
- [13] J. Parker, "Comparative Study of Games and Think-Pair-Share on Pre-Service Teachers' Performance in Classification of Living Organisms.," *Int. J. Sci. Res. Publ.*, vol. 11, n, no. 2021, pp. 43–48.
- [14] L. A. Elly Mardiana, Cholis Sa'dijah, Abd Qohar, "Practicality and effectiveness of realistic mathematical learning materials to support mathematical literacy skill of junior high school students," *28TH Russ. Conf. Math. Model. Nat. Sci.*, no. 2020.
- [15] J. L. Hook, "Reconsidering the Division of Household Labor: Incorporating Volunteer Work and Informal Support," *J. Marriage Fam.*, no. 2004, 1.
- [16] D. J. B. BOON L. TAN, "DEVELOPMENT AND APPLICATION OF AN ELECTRONIC-MANUFACTURING SELECTION FRAMEWORK FOR SMEs," *Int. J. Innov. Technol. Manag.*, no. 2007,03, pp. 241–265.
- [17] Kemendikbud, "Permendikbud No 20 tahun 2016 Tentang Standar Kompetensi Lulusan Pendidikan Dasar Dan Menengah," Jakarta, 2016
- [18] B. V. M. Lynda Baloché, Marilyn Lee Mauger, Therese M. Willis, Joseph R. Filinuk, "Fishbowls, Creative Controversy, Talking Chips: Exploring Literature Cooperatively," *English J.*, no. 1993,6, p. 43.
- [19] Sugiyono, *Metode Penelitian Kombinasi (Mix Methods)*. Bandung: Alfabeta, 2015.
- [20] A. Mehdi Riazi, "The Routledge Encyclopedia of Research Methods in Applied Linguistics," no. 2016.
- [21] J. A. T. H Widyaningsih, A Asmawi, "The implementation of physical education learning based on local excellence," *J. Phys. Conf. Ser.*, no. 2019, p. 012113.
- [22] S. S. S Puspa, R Riyadi, "Profile of mathematical communication skills junior high school students in problem solving," *J. Phys. Conf. Ser.*, no. 2019, p. 032125.
- [23] H. K. Puji Iman Nursuhud, Danis Alif Oktavia, Mas Aji Kurniawan, Insih Wilujeng, Jumadi, "Multimedia Learning Modules Development based on Android Assisted in Light Diffraction Concept," *J. Phys. Conf. Ser.*, no. 2019, p. 012056.
- [24] G. H. N Nurlenasari, D A M Lidinillah, A Nugraha, "Assessing 21st century skills of fourth-grade student in STEM learning," *J. Phys. Conf. Ser.*, no. 2019, p. 012058.
- [25] R. Septika, R dan Nugraha, "Keterampilan 4C Abad 21 dalam Pembelajaran Pendidikan Dasar," *Tarb. Al-Awlad*, vol. VIII, no. 02, p. 108, 2018.
- [26] M. B. Milan Cavic, Sonja Skuban, Maja Stojanovic, Ivana Bogdanovic, "Effect of cooperative learning on the development of metacognition," p. 2019.
- [27] Sutrisno, "Penerapan pembelajaran kooperatif tipe think pair share terhadap hasil belajar matematika," vol. 4, no. 4, pp. 37–43, 2007.
- [28] S. S. I Y H Manapa, Budiyo, "The experiment of cooperative learning model type team assisted individualization (TAI) on three-dimensional space subject viewed from spatial intelligence," *J. Phys. Conf. Ser.*, no. 2018, p. 012136.
- [29] S. Purwanti Wulandari Hastuti, Insih Wilujeng, "Creative Learning Model Toolkit: An Essential Element of Science Learning to Develop Learning Skills in Students," *J. Phys. Conf. Ser.*, no. 2019, p. 012101.
- [30] Z. Mahyiddin, "Improving Motivation and Learning Outcomes of MTsN 2 the Great Aceh Students in Vocational Processing Subject Through the Cooperative Learning Model Think Pair and Share," *ournal Phys. Conf. Ser.*, no. 2019, p. 012034.
- [31] E. . M. O. Tatar, "Relative Evaluation System as An Obstacle To Cooperative Learning The Views of Lecturers in a Science Education Departement," *Int. J. Environ. Sci. Educ.*, vol. 3, no. 2, pp. 67–73, 2008.
- [32] C. J. Bell, "Measuring Tangrams on a Geoboard," *Math. Teach. Middle Sch.*, no. 2017,6, pp. 374–378.
- [33] A. Aulia Akhrian Syahidi, Arifin Noor Asyikin, "Applying Student Team Achievement Divisions (STAD) Model on Material of Basic Programme Branch Control Structure to Increase Activity and

Student Result,” *IOP Conf. Ser. Mater. Sci. Eng.*, no. 2018, p. 012027.

- [34] H. S. P. Armiami, “Preliminary research development of mathematics learning devices based on problem-based for student at the senior high school,” *J. Phys. Conf. Ser.*, no. 2019, p. 012117.
- [35] N. S. Nurmalia, A Halim, “Application of jigsaw type cooperative learning to improve student creative thinking skills,” *J. Phys. Conf. Ser.*, no. 2020, p. 012142.
- [36] I. R. K R Daulay, “Polya theory to improve problem-solving skills,” *J. Phys. Conf. Ser.*, no. 2019, p. 012070.