THE INFLUENCE *OF COLLABORATIVE LEARNING* AND INTERPERSONAL INTELLIGENCE ON THE LEARNING OUTCOMES OF PPKN ELEMENTARY SCHOOL STUDENTS IN MUNA DISTRICT

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Abstract

This study aims to investigate the influence of collaborative learning and interpersonal intelligence on the learning outcomes of Civic Education and Citizenship (CEC) among primary school students in Muna Regency. The research employs a quantitative approach with a quasi-experimental design. The research sample consists of lower-grade and upper-grade students from various randomly selected primary schools in Muna Regency. Data collection involves CEC learning outcome tests, collaborative learning scale, and interpersonal intelligence scale. The results of the data analysis using multiple linear regression techniques indicate a positive and significant impact of collaborative learning on CEC learning outcomes. Additionally, interpersonal intelligence also exerts a positive and significant influence on CEC learning outcomes. Furthermore, the interaction between collaborative learning and interpersonal intelligence significantly affects CEC learning outcomes. The findings suggest that the implementation of collaborative learning methods and the development of interpersonal intelligence among primary school students can positively influence their performance in the subject of CEC. In conclusion, collaborative learning and interpersonal intelligence significantly contribute to the learning outcomes of CEC among primary school students in Muna Regency. Hence, it is recommended to continue emphasizing the implementation of teaching methods that foster collaboration and the enhancement of interpersonal intelligence in order to improve the quality of instruction and learning outcomes in CEC at the primary education level.

Keywords: Collaborative Learning, Interpersonal Intelligence, Learning Outcomes, Civic Education and Citizenship (CEC), Primary School Students, Muna Regency.

BACKGROUND OF THE PROBLEM

Civics learning also demands changes for the better. This hints at being able to facilitate students from the teacher center approach to switch to the student-center (Putri & Setiawan, 2022). Student learning will be more interactive, teachers also carry out the role of facilitators because students are the ones who act as experts, learning that was originally only limited to remembering facts to find information and concepts of new knowledge and practice, will turn into communication, collaboration and interaction (Arends, 2014). In addition, to improving students' interpersonal intelligence, teachers must update a more interactive learning model so that students get used to interacting with teachers and their friends (Sun et al., 2021).

Based on observations at SDN 1 Katobu and SDN 2 Katobu in Muna Regency, when teachers carry out Civics learning, it is found that in learning teachers still use the direct learning model. The teacher's learning is very dominant as the main source of learning and students directly receive information or knowledge from the teacher. In the early stages of learning, the teacher opens the lesson and explains the subject matter with the lecture method then provides exercises for students to do. Then, based on observations, it is found that students only listen

silently and one or two students ask the teacher while the other students passively listen. Events like this make students feel bored and bored during learning, so they don't capture the information conveyed by the teacher. Then students are less used to working together or discussing, do not show empathy towards other students when problems are faced, and tend to work individually.

Furthermore, based on the results of interviews with Civics teachers, information was obtained that student participation in learning was low, most students were less questioning and enthusiastic in learning, difficult or not daring to express opinions, less cooperation in the learning process. As a result, based on the results of the evaluation in Civics subjects, the value of learning outcomes is still low.

Based on the document on student learning outcomes in schools for the 2019 academic year, data was obtained that less than 76% of students obtained a ≥ score of 70, while in the 2020 academic year data was obtained that less than 79% of students obtained a ≥ 70. This means that in the last 2 years' students have not achieved a significant improvement in the Minimum Completeness Criteria (KKM). Based on these facts and phenomena, it certainly should not be ignored. In this case, an alternative solution must be sought to solve the problem. The solution that can be offered is to implement a student-centered learning model. Because the learning model is a conceptual and procedural representation that is used as a reference in achieving learning objectives.

The application of direct learning is still categorized as a teacher-centered learning model (teacher-centered). While ideally learning is student-centered (student center). This shows that all students cannot actively participate, and tend to receive only one-way information from the teacher. The obstacle faced in the implementation in class is that students find it difficult to express reasoning orally or in writing so there are still problems with low student learning outcomes.

To overcome the problems that occur, one of the learning models that become an alternative is the Collaborative Learning learning model or collaborative learning. The Collaborative Learning model in this study is TAPPS and Case Study type. Collaborative learning is a way of learning and interacting with people in the learning process so that students feel safe in thinking, curious, able to create and able to collaborate with each other in building ideas/ideas to achieve goals. Stating that deep learning is learning that includes mastering existing knowledge to create and use existing knowledge, and integrating digital technology technology to expand the range of learning opportunities (Von Rueden et al., 2021).

Collaborative learning is one of the learning models that can be used in Civics learning in elementary schools (Wuryandani, 2021). Collaborative learning is the formation of small groups where students and teachers work together as much as possible in learning to seek or create knowledge that can enrich and broaden horizons. This is in line with the opinion of Smith and States that collaborative learning is work in groups consisting of two or more mutually beneficial to build understanding, completion, understanding and produce products (Tran et al., 2019).

The success of collaborative learning positively affects students' openness to diversity, regardless of their individual background characteristics, collaborative learning increases the frequency of interaction in students with others, which in turn leads to openness (Loes, et al., 2018).

Cooperative learning is supported by various research results conducted by Darmuki and Hariyadi (2021) on the use of constructive, critical, creative, and collaborative learning models stating that there is a significant increase in student learning outcomes both cognition, affective and psychomotor. In line with the results of Azar's research, Keats, Arutus (2021) on the use of collaborative learning models in the classroom states that most students have a positive attitude towards the Collaborative Learning method and find it beneficial for them, in terms of social skills and interaction during the learning process.

Then, research conducted by Micari and Pazos (2021) on improving students' socio-cognitive outcomes through collaborative learning environments states that the application of small group learning can be used as a means to improve student's study habits and confidence because it contributes to socio-cognitive outcomes and emphasizes good academic performance results. In line with the results of Nakata, Nitta, Tsuda's (2020) research on collaborative learning as a key to improving students' social interaction skills this learning affects student motivation and learning. In this case, it can create a positive classroom environment where students influence and motivate each other.

In addition, research by Shayan, Fouman, Hejazi (2020) regarding the effectiveness of collaborative learning methods on academic motivation and emotional control in children who have attention disorders and hyperactivity, it is said that cooperative learning can increase academic motivation and control emotions by increasing a sense of cooperation. In line with the research of Tolmie, Topping, Christie, Donaldson, Howe, C., Jessiman, Livingston, Thurston (2010) on collaborative learning provides social benefits in training students' skills in group work. Collaborative learning encourages groups to regulate emotions and motivation precisely at the beginning of the learning session so that it is said to be motivationally and emotionally challenging learning (Järvenoja et al., 2020). Another opinion was expressed that collaborative learning can improve student learning activities and learning performance is assessed to be related to peer interaction, instructors, social engagement and presence (Qureshi et al., 2023).

Other research has also shown that collaborative models can improve thinking skills, activity and learning outcomes. For example, (Tan, 2019; Loes & Pascarella, 2017) found that the application of Collaborative Learning in learning will increase student knowledge, critical thinking skills, and cooperation skills and found student involvement and satisfaction in learning. Crafting collaborative learning experiences can challenge students' thinking and how to solve problems critically, and creatively, encourage prosocial and enhance cognitive understanding (Nishina et al., 2019). Then Lin (2019) found that there was a significant interaction effect between cooperation ability and satisfaction with the discussion process. (Herrera-pavo, 2021) says that collaborative learning has great potential in the field of higher education because it promotes the construction of shared knowledge, as well as the

development of skills related to interaction that generate a more important learning process. Group work planning is an important component of collaborative learning in overcoming resistance issues and building individual responsibility. This shows that aspects of teacher guidance are positively related to student cooperation, for example when teachers focus their attention on student problem-solving strategies, then during collaboration, opportunities arise for students to engage in collaborative activities that support their learning process (Leeuwen &; Janssen, 2019).

Furthermore, (Dindar et al., 2019) conducted research on the relationship between joint monitoring of collaborative learning processes and physiological synchronization between group members working together. Its findings suggest that the relationship between physiological synchrony (PS) and the socially shared Regulation of Learning (SSRL) monitoring group may depend on the task type and group characteristics, and not all monitoring events in collaborative tasks lead to PS. In addition, the findings reveal that interactions in the collaborative content space can generate PS, even in the absence of emotion or motivational regulation that occurs in the relational space.

Qiu & Lee (2020) say that the application of collaborative writing activities can develop students' writing skills and encourage them to organize their own writing process. The results of a study conducted by (Akhrif et al., 2020) show that collaborative learning as one of the best practices used to create learning environment practices to acquire and share knowledge. Intelligent collaboration and serves to improve collaboration performance and provide an effective way to create a collaborative learning environment, which is primarily based on learner profiles and evaluations of student abilities (Syafi'i et al., 2023).

Studies conducted by (Bhat et al., 2020) show that the application of Collaborative Learning can improve learning outcomes or student performance. Students find the task easier, especially when they are faced with more collaboration (Kumar et al., 2020).

Such is the case with research conducted by (Ibrahim et al., 2015; Maharani et al., 2020; Sulaiman &; Shahrill, 2015) concluded that collaborative learning carried out through grouping has an impact on student achievement regardless of their ability, in this study it was also reported that by implementing collaborative learning will improve students' cooperation habits. Other studies have shown a higher correlation between positive attitudes towards collaborative learning and dimensions of a sense of community (Chatterjee & Correia, 2020).

Furthermore, another factor that can affect learning outcomes is the level of intelligence which is the ability to solve problems and create products that have cultural value or a collection of abilities or skills that can be developed. The results showed that there is an interaction between learning approaches and interpersonal intelligence in influencing student learning outcomes (Yavich & Rotnitsky, 2020).

According to Gardner (2011) everyone has more than one kind of intelligence or in other words has multiple intelligences. This multiple intelligences has the essence that everyone is unique, everyone needs to realize and develop the variety of human intelligence and its combinations every student is different because they have different combinations of intelligences.

Furthermore, Gardner divided intelligence into several criteria, namely; linguistic intelligence, logical-mathematical intelligence, spatial intelligence, bodily-kinesthetic intelligence, and personal intelligence (Mulbar et al., 2019).

One type of intelligence that has a relationship with Civics learning outcomes is interpersonal intelligence. Interpersonal intelligence relates to the student's ability to interact with others, and sensitivity to the needs of others (Onufriieva et al., 2020). Children who have interpersonal intelligence will have a positive impact on the surrounding environment, able to understand what is felt, planned and what is dreamed, understanding of others.

Armstrong (2009) said that interpersonal intelligence is the ability to perceive and distinguish the moods, intentions, motivations, and desires of others, as well as the ability to respond appropriately to the moods, motivations and desires of others. This opinion shows that children who have interpersonal intelligence will be able to motivate themselves to increase their potential, to study hard and build cooperation with others to work together in completing learning tasks (Fariah, 2021). One of the results of the study also shows that there is an influence of intrapersonal intelligence together with interpersonal intelligence on student learning outcomes (Mulbar et al., 2019). So it can be said that children who have interpersonal intelligence will tend to have high Civics learning outcomes. The results showed that the learning outcomes of Civics students were higher when they had high interpersonal intelligence than students who had low interpersonal intelligence (Syasmita et al., 2019; Ishaq et al., 2022).

Irwantoro and Suryana (2016) view that learning that can develop students' intelligence requires a conducive environment, which supports and encourages students to develop various elements of intelligence contained in them. In this regard, Uno and Kusquared in Irwantoro and Suryana (2016), raised a number of ecological questions in the learning process to develop the plural intelligence of students. The ecological questions for interpersonal intelligence, are; (a) does an atmosphere of belonging and mutual trust animate the classroom or do learners feel alienated, distant, or distrustful?; (b) should established procedures for mediating conflicts between class members, or should problems often be brought to higher authorities (e.g. principals)?; (c) do learners often get opportunities for positive interaction (e.g., teaching opportunities in front of the class, discussions, group learning, parties) or are learners relatively isolated from each other?; (d) do students have the opportunity to share their feelings in class, or are students' personal lives considered outside the limits of class authority?; (e) are students experiencing emotional problems met with counsellors for proper support or left alone?; and (f) whether learners get the opportunity to choose how they learn, or they have only two choices "my way or out".

Likewise, the relationship between interpersonal intelligence and student learning outcomes is very much supported by the results of previous research, including research conducted by Moradi, Faghiharam, and Ghasempour (2017) on the influence between group learning and interpersonal intelligence through the role of emotional intelligence stating that group learning also directly affects interpersonal skills and emotional intelligence and indirectly affects skills interpersonal through emotional intelligence. That is, emotional intelligence along with group learning can strengthen interpersonal skills among students.

In addition, research conducted by Begum, Lakshmi, and Goud (2020) on collaborative learning strengthens learners of interpersonal abilities, as a result of applying collaborative learning techniques in the classroom, students can identify themselves to learn about managing information and thinking, they can ascertain their abilities and weak points then students begin to create (Syafii et al., 2023). Even students who experience mute are encouraged to speak in groups and participate actively.

Furthermore, research conducted by Sakit, Setiawan, and Saragi, (2010) on the development of the influence of collaborative learning models and interpersonal intelligence on learning outcomes, shows that there is an influence and interaction between collaborative models and interpersonal intelligence on learning outcomes. One of them is the learning outcomes of Civics students who use a higher collaborative model compared to those who use conventional learning models and the learning outcomes of students who have high learning interpersonal intelligence higher than students who have low learning interpersonal intelligence.

Another research conducted by Leeuwen and Janssen (2019) on a systematic review of teacher guidance during collaborative learning in Primary and Secondary education that teacher guidance strategies on collaborative learning processes and outcomes are considered very positive because during collaboration, opportunities for students to engage in collaborative activities that support the learning process. In this case, learning is seen as real by students depending on taking control of a teacher and good student involvement (Chiu, 2023).

Based on the various studies that have been stated above, there are similarities and differences. The equation is that both use Collaborative Larning learning which can improve student abilities, learning outcomes, learning achievement, and student cooperation habits increase and also examine the relationship with interpersonal intelligence variables. However, the difference with the research to be carried out is that researchers focus on the Collaborative learning model, Think think-aloud pair Problem Solving (TAPPS) type, and Case Study which are associated with interpersonal intelligence. Another difference lies in the location, subject and design of the study.

Thus, to find out the phenomenon of the two learning models and the relationship with interpersonal intelligence in Civics subjects, it is necessary to conduct research entitled "The Effect of Collaborative Learning and Interpersonal Intelligence on PKN Learning Outcomes of SDN 1 Katobu and SDN 2 Katobu Students in Muna Regency.

RESEARCH METHODS

(Sugiyono, 2010) Counterbalanced design. In this design, all groups receive treatment only in different treatment orders (Ruseffendi, H. E. T, 1998). In line with that, (Fraenkel, Jack R, et al., 2012) argue that in a Counterbalanced design, each group is exposed to all treatments, however many there are, but in a different order. This means that in a counterbalanced design, each group is treated however the number is in a different order. The experimental method is a research method used to find the effect of a particular treatment. This study consists of the dependent variable, namely the learning outcomes of PPKN in elementary school students in

Kab. Muna has high and low interpersonal intelligence. Meanwhile, the independent variables are learning (Sugiyono, 2010) collaborative TAPPS techniques, case studies techniques, and using game techniques.

The research design used was a treatment design by level 2 x 2, where each independent variable was classified into 2 (two). The treatment-free variables are classified in 2 (two) techniques Collaborative learning model (A), namely the TAPPS type Collaborative learning model (A1), and the Case Study Type Collaborative learning model (A2). While the independent variable or moderator is classified in 2 (two) levels of students who have interpersonal intelligence (B), namely high interpersonal intelligence (B1) and low interpersonal intelligence (B2).

The design of *treatment by level* 2 x 2 can be explained as the following table:

Table 3.1: Design of Treatment *by Level 2* x 2 Research Design

p	Collaborative Learning Model (A)	
	Teknik TAPPS(A1)	Teknik Case Studies(A2)
Height (B1)	A1B1	A2B1
Low (B2)	A1B2	A2B2

1. Population and Research Sample

a. Population

The target population in this study were all fifth-grade elementary school students in Kab. Muna.

b. Samples

This research was carried out in elementary schools in Muna Regency in accordance with considerations of equality in terms of accreditation, school location, teachers, curriculum and other achievements (Hakim & Nabila, 2022). Preliminary observations indicated that elementary schools that were considered equivalent in Muna district that could be sampled in this study were SDN 1 and SDN 2 Katobu.

Sampling was carried out using simple random sampling technique, namely determining respondents to be sampled based on certain criteria (Siregar, 2013). The sample came from an accredited B elementary school in class V students at SDN 1 and SDN 2 Katobu in Muna District so they have relatively the same abilities and are homogeneous.

Sampling was carried out by drawing lots to determine experimental class 1 and experimental class 2, using lottery numbers numbers 1 and 2. If the number comes out 1 then it is declared as experimental class 1, and number 2 as experimental class 2. Based on the results of the draw obtained by SDN 1 Katobu as the experimental class 1 (group of students who learn by applying the TAPPS collaborative learning technique) and SDN 2 as the experimental class 2 (group of students who learn by applying the case study collaborative learning technique).

Furthermore, from the two groups of students, interpersonal intelligence tests were given to determine groups of students with high and low interpersonal intelligence by giving

interpersonal intelligence instruments. Students selected from the test results who have high and low interpersonal intelligence will be the actual sample. The scores obtained are sorted from the highest score to the lowest of the two classes sorted. The determination of groups of students who have high and low interpersonal intelligence in this study uses the opinion (Lacy &; Williams, 2018: 300) that in large groups, for example, N = 100, the upper group is obtained from the top 27% of the scores and the bottom group is obtained from the bottom 27% of scores. For small N, suppose N = 35, then the division is 50% of the upper group and 50% of the bottom group of the score (Lacy &; Williams, 2018: 300). Based on data in the research sample schools, data on the number of samples at SDN 1 Katobu, N1 = 25 students and on the number of samples at SDN 2 Katobu N2 = 25 students. Therefore, the actual sample determination in the study uses a small sample. So the group of students who have high interpersonal intelligence (upper group) is 50% of students who achieve high interpersonal intelligence scores and the group of students who have low interpersonal intelligence (lower group) is 50% of students who obtain low interpersonal intelligence scores. The determination of the upper and lower groups in experimental class 1 and experiment 2 is listed in Appendix 5.

2. Treatment Design

The TAPPS type and case studies type collaborative learning model is the treatment given to the experimental class. The treatment is carried out in three stages, namely the following stages: (1) initial preparation of treatment; (2) the implementation of treatment; (3) End of treatment. More details are presented in the following table:

Table 3.2 Stages of Treatment

No.	Phase	Activity Syntax
1	Preliminary preparation of treatment	1) Preparation of learning implementation plans (RPP) with *collaborative learning learning* models of TAPPS type and *case studies type* 2) Preparation of instruments for measurement measuring the interpersonal intelligence of grade V students 3) Preparation of instruments to measure the learning outcomes of PPKN grade V students
2	Implementation of treatment	1) Equalization of perceptions with class V teachers related to the treatment process in research 2) Measurement of interpersonal intelligence tests Before the treatment is carried out to distinguish the interpersonal intelligence of students 3) Carry out the treatment of the two experimental groups together following a special learning schedule of PPKN Basic Competencies
3	End of treatment	1) Conducting PPKN learning outcomes tests of students who were the subjects of the study, namely the experimental group and the control group 2) Analyze and process collected data

RESEARCH RESULTS

1. Data Normality Test Results

Table 4.10: Summary of data normality test calculation results with *Lilliefor test*

Group	n	L^{hitung}	L^{tabel}	Information
Aggregated Data	50	0.122	0.125	Data comes from a normally distributed population
A1	25	0.118	0.177	Data comes from a normally distributed population
A2	25	0.127	0.177	Data comes from a normally distributed population
B1	26	0.123	0.174	Data comes from a normally distributed population
B2	24	0.160	0.177	Data comes from a normally distributed population
A1B1	13	0.142	0.246	Data comes from a normally distributed population
A1B2	12	0.132	0.246	Data comes from a normally distributed population
A2B1	13	0.190	0.246	Data comes from a normally distributed population
A2B2	12	0.185	0.256	Data comes from a normally distributed population

Based on Table 4.10. The summary of the calculation results of the data normality test shows that all data groups (there are 9 data groups) tested with the Lilliefors Test all show that the calculated value in each data group is smaller than the L^{table} at the corresponding n value and the significance level = 0.05.

2. Data Homogeneity Test Results

Table 4.11: Summary of Homogeneity Test Results with Barlett Test

Combined variance	B	db	Value		Information
			χ^2_{count}	$\chi^2_{table\ (\alpha = 0.05;\ db=3)}$	
46.782	76.824	3	3.649	7.82	Homogeneous data variance

Based on table 4.11 obtained count = 3.649 < table (α = 0.05; db=3) = 7.82, then Ho is accepted, which means that all four groups of data, A1B1, A1B2, A2B1 and A2B2 have the same or homogeneous data variations

3. Hypothesis Test Results

Table 4.12: ANOVA table

Sources of Variation	JK	db	RJK	Fo	F Table a = 0.05
Antar A	321.514	1	321.514	6.873	4.05
Inter B	266.371	1	266.371	5.694	4.05
AB Interaction	1937.500	1	1937.500	41.415	4.05
Deep	2151.985	46	46.782		
Total	4677.370	49	-	-	

a. Test the Difference in PPKN Learning Outcomes Students Taught with the TAPPS *Type Collaborative* Learning Model (A1) *and Those Taught with the* Case Study Type Collaborative Learning *Model (A2)*

The calculation results using two-way variance analysis as listed in table 4.12 show that the $F_{calculate}$ value for the A or Fo(A) = 6.873 test and F_{table} at = 0.05 with free degree α v1 = 1 and free degree v2 = 46, obtained F_{table} (0.05;1.46) = 4.05. Because the value of $F_{calculate}$ = 6.873 >

F_{tabel} (0.05;1;46) = 4.05, Ho is rejected and as a consequence accepts H1. This means that there is a significant difference in PPKN learning outcomes of students taught with the TAPPS type Collaborative Learning model and students taught with the Case Study type Collaborative Learning model. The learning outcomes of PPKN students who were given the TAPPS technique Collaborative Learning model were higher than students who were given the Case Study technique Collaborative Learning model.

b. Test the Difference in PPKN Learning Outcomes for Students Who Have High Interpersonal Intelligence (B1) and Students Who Have Low Interpersonal Intelligence (B2)

The calculation results using two-way variance analysis as listed in table 4.12 show that the $F_{calculate}$ value for the Test Factor B or Fo(B) = 5.694 and F_{table} at = 0.05 with free degrees v1 = 1 and free degrees v2 = 46, obtained F_{table} α(0.05; 1.46) = 4.05. Because the value of $F_{calculate}$ = 5.694 > F_{table} (0.05;1;46) = 4.05 then Ho is rejected and as a consequence accept H1. This means that there is a significant difference in the learning outcomes of PPKN students who have high interpersonal intelligence (B1) and PPKN learning outcomes of students who have low interpersonal intelligence (B2). The learning outcomes of PPKN students who have high Interpersonal Intelligence are higher than the learning outcomes of PPKN students who have low Interpersonal Intelligence.

c. Test the Effect of Interaction between the _Collaborative Learning Model_ and Interpersonal Intelligence on Student PPKN Learning Outcomes

Based on the calculation of the calculated F value in the ANOVA table in Table 4.12 to test the effect of the interaction between factors A and B, the value of $F_{calculate}$ (AB) = Fo (AB) = 41.415 was obtained. At the significant level α = 0.05 and the free degree db1 = 1 and db2 = 46, obtained F table = F (= 0.05;αdb1=1;db2=46) = 4.05. Because the value of $F_{calculate}$ = Fo (AB) = 41.415 > the value of F_{tabel} = 4.05, Ho is rejected and accepts H1. This means that there is an interaction between the Collaborative Learning model and Interpersonal Intelligence on student PPKN learning outcomes. In graphic form, the interaction between the Collaborative Learning model and the student's Interpersonal Intelligence can be shown in the following figure 4.9.
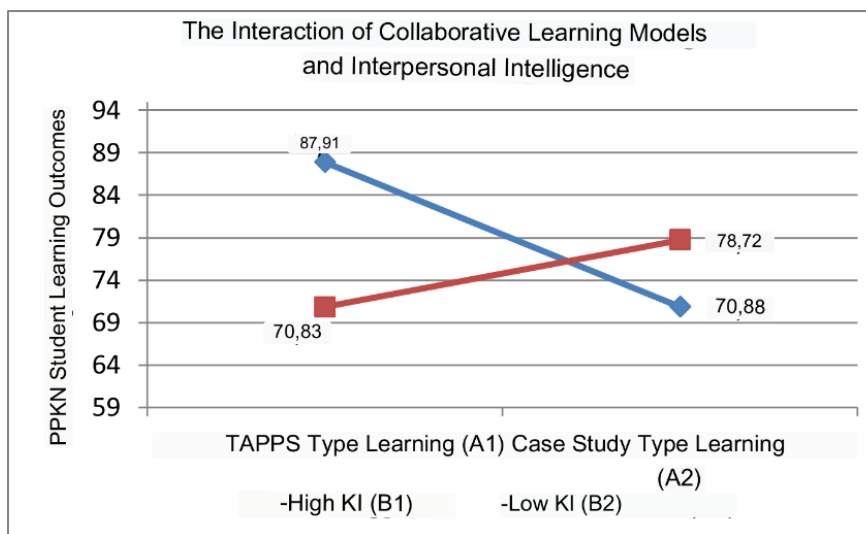
Figure 4.9 Graph of Interaction between Collaborative Learning Model and Student Interpersonal Intelligence

Based on the graph of the interaction between the Collaborative Learning learning model and student Interpersonal Intelligence, it can be seen that there is a curve crossover between the curve that connects the average value of PPKN learning outcomes of students taught with the TAPPS type Collaborative Learning model and the average value of PPKN learning outcomes of students taught with the Case Study type Collaborative Learning model in students who have high interpersonal intelligence (blue color curve) with a curve that linking the average value of PPKN learning outcomes of students taught with the TAPPS type Collaborative Learning model and the average value of PPKN learning outcomes of students taught with the Case Study type Collaborative Learning model in students who have low interpersonal intelligence (red color curve). In the graph, it can be seen that the average value of PPKN learning outcomes of students taught with the TAPPS type Collaborative Learning model, the highest average is achieved by the group of students who have high interpersonal intelligence, while in the group of students taught with the Case Study type Collaborative Learning model, the highest average is achieved by students in the group that has low interpersonal.

d. Test the Difference in PPKN Learning Outcomes Students Taught with the TAPPS Type Collaborative Learning Model and Those Taught with the Case Study Type Collaborative Learning Model Special Students Who Have High Interpersonal Intelligence

The results of the follow-up test calculation using the Dunnet t-test in table 4.13 show that the results of the test are the average difference in PPKN learning outcomes of students taught with the TAPPS type Collaborative Learning model specifically who have high interpersonal intelligence (A1B1) and those taught with the Collaborative Learning model type Case Study specifically who have high interpersonal intelligence (A2B1) using the Dunnet t-test obtained $t_{count} = 6.349$ and $t_{table} = t(0.05;46) = 1.684$. Because the value of $t_{calculate} = 6.349 < t_{tabel} = t$

(0.05;46) = 1.684, the decision rejects Ho, which means that the average learning outcomes of PPKN students taught with the special TAPPS type Collaborative Learning model who has high interpersonal intelligence (A1B1) are higher than the average PPKN learning outcomes of students taught with a special Case Study type Collaborative Learning model that has high interpersonal intelligence (A2B1).

Based on these findings, the hypothesis states that the learning outcomes of PPKN students who are given the Collaborative Learning model of the Think Aloud Pair Problem Solving (TAPPS) technique are higher than those students who are given the Collaborative Learning model of the Case Study technique in groups that have high Interpersonal Intelligence.

e. Test the Difference in PPKN Learning Outcomes Students Taught *with the TAPPS Type Collaborative Learning Model and Those Taught with the Case* Study Type Collaborative Learning *Model specifically for students who have low interpersonal intelligence*

The results of the follow-up test calculation using the Dunnet t-test in Table 4.13 show that the results of the test are the average difference in PPKN learning outcomes of students taught with a special TAPPS type Collaborative Learning model who have low interpersonal intelligence (A1B2) and who are taught with a special Case Study type Collaborative Learning model that has low interpersonal intelligence (A2B2) with the Dunnet t-test obtained t_{count} = 2.824 and t-table = t(0.05;46) = 1.684. Because the value of $t_{calculate}$ = 2.824 < t_{tabel} = t (0.05;46) = 1.684, the decision rejects Ho, which means that the average learning outcomes of PPKN students taught with the special TAPPS type Collaborative Learning model who has low interpersonal intelligence (A1B2) are lower than the average PPKN learning outcomes of students taught with the special Case Study type Collaborative Learning model who have low interpersonal intelligence (A2B2).

Based on these findings, the hypothesis states that the learning outcomes of PPKN students who are given the Collaborative Learning model of the Think Aloud Pair Problem Solving (TAPPS) technique are lower than those students who are given the Collaborative Learning model of the Case Study technique in groups that have low Interpersonal Intelligence.

f. Test the Difference in PPKN Learning Outcomes between Students Who Have High Interpersonal Intelligence and Students Who Have Low Interpersonal Intelligence in TAPPS Learning

The results of the follow-up test calculation using the Dunnet t-test in Table 4.13 show that the results of the average difference in PPKN learning outcomes of students taught with the special TAPPS type Collaborative Learning model who have high interpersonal intelligence (A1B1) and those taught with the special TAPPS type Collaborative Learning model who has low interpersonal intelligence (A1B2) with the Dunnet t-test obtained t_{count} = 6.238. Because this hypothesis uses a two-part test, the table t value used is t 2-party test table, namely t_{table} = t (0.05;46) = 2.021. When comparing the value of t count and t table, the value of $t_{calculate}$ = to = 6.238 > t_{table} = t (0.05;46) = 2.021, meaning Ho is rejected and accepts H1. Thus, it can be concluded that there are differences in PPKN learning outcomes between students who have high interpersonal intelligence and students who have low interpersonal intelligence in TAPPS

learning. Based on these findings, the hypothesis states that there are differences in PPKN learning outcomes between students who have high interpersonal intelligence and students who have low interpersonal intelligence in TAPPS learning.

g. Test the Difference in PPKN Learning Outcomes between Students Who Have High Interpersonal Intelligence and Students Who Have Low Interpersonal Intelligence in Case Study Learning

The results of the follow-up test calculation using the Dunnet t-test in Table 4.13 show that the results of the average difference in PPKN learning outcomes of students taught with a special Case Study type Collaborative Learning model who has high interpersonal intelligence (A2B1) and those taught with a special Case Study type Collaborative Learning model who has low interpersonal intelligence (A2B2) with the Dunnet t-test obtained $t_{count} = 2.863$. Because this hypothesis uses a two-part test, the table t value used is t 2-party test table, namely $t_{table} = t (0.05;46) = 2.021$. When comparing the value of t count and t table, the value of $t_{calculate} = to = 2.863 > t_{table} = t (0.05;46) = 2.021$, meaning Ho is rejected and accepts H1. Thus, it can be concluded that there are differences in PPKN learning outcomes between students who have high interpersonal intelligence and students who have low interpersonal intelligence in Case Study learning.

Based on these findings, the hypothesis states that there are differences in PPKN learning outcomes between students who have high interpersonal intelligence and students who have low interpersonal in Case Study learning.

CONCLUSION

There are differences in PPKN learning outcomes between students taught with the Think Pair Aloud Problem Solving (TAPPS) type Collaborative Learning model and students taught with the Case Study Type Collaborative Learning model. The results of one-party testing at the real level □ = 0.05 showed that the learning outcomes of PPKN students taught with the Think Aloud Pair Problem Solving (TAPPS) type Collaborative Learning model were higher than the PPKN learning outcomes of students taught with the Case Study Type Collaborative Learning model. There are differences in PPKN learning outcomes between students who have high interpersonal intelligence and students who have low interpersonal intelligence. The results of one-party testing at the real level □ = 0.05 show that the learning outcomes of PPKN students who have high Interpersonal Intelligence are higher than the PPKN learning outcomes of students who have low Interpersonal Intelligence.

There is an influence of interaction between the Collaborative Learning model (Aloud Pair Problem Solving (TAPPS) type and Case Study type) with Interpersonal Intelligence (high and low) on student PPKN learning outcomes, which are empirically tested at a real level □ = 0.05. The learning outcomes of PPKN students taught the Think Aloud Pair Problem Solving (TAPPS) type Collaborative Learning model are higher than students taught with the Case Study Technique Collaborative Learning model in groups that have high Interpersonal Intelligence.

The learning outcomes of PPKN students taught with the Think Aloud Pair Problem Solving (TAPPS) type Collaborative Learning model are lower than students taught with the Case Study Type Collaborative Learning model in groups that have low Interpersonal Intelligence.

There are differences in PPKN learning outcomes between students who have high interpersonal intelligence and students who have low interpersonal intelligence in Think Aloud Pair Problem Solving (TAPPS) type Collaborative Learning. There are differences in PPKN learning outcomes between students who have high interpersonal intelligence and students who have low interpersonal in Case Study Type Collaborative Learning.

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