Improving Critical Thinking Skills and Collaboration Skills Using Problem Based Learning Models, DNGM Models, Wordwall Media and Dragon Games

by Fahri Fajrul

Submission date: 01-Jul-2024 01:24PM (UTC+0700)
Submission ID: 2411090394
File name: IJMEAL_-_VOLUME_1,_NO._3,_AUGUST_2024_hal_95-109.docx (202.12K)
Word count: 5375
Character count: 26786

International Journal of Multilingual Education and Applied Linguistics
Volume. 1 No. 3 August 2024
e-ISSN: 3046-8779, and p-ISSN: 3046-8302, Page. 95-109
DOI: https://doi.org/10.62951/ijmeal.v1i3.73

Improving Critical Thinking Skills and Collaboration Skills Using Problem Based Learning Models, DNGM Models, Wordwall Media and Dragon Games

Fahri Fajrul Falah[1], Zain Ahmad Fauzi [2], Norma Paulina [3]
Annisa Hasanah [4], Asyfa Nabila [5], Linda Rosydah [6]

[1,2,3,4,5,6] PGSD Study Program, Lambung Mangkurat University
Alamat: Jl. Brigjen Jl. Brig Jend. Hasan Basri, Pangeran, Kec. Banjarmasin Utara, Kota Banjarmasin, Kalimantan Selatan 70123

E-mail: [1] fahriiff15@gmail.com, [2] zain.fauzi@ulm.ac.id, [3] normapaulinaa@gmail.com, [4] annisahasanah0904@gmail.com, [5] asyfaanabilaa@gmail.com, [6] lindaro3133@gmail.com

Abstract. *The problem of this research is that there is still a lack of student activity in participatory learning as well as interaction and collaboration between students in group learning activities. In this research, Classroom Action Research (PTK) was carried out in three meetings. The subjects of this research were 25 class V students of SDN Antasan Besar 7 Banjarmasin. The measure of research success with learning completeness is that 80% of students achieved a KKM score above 80. The results of this research show that at Meeting I to Meeting III there was an increase in the acquisition of learning activities in the application of the learning model, resulting in the "Very Active" criteria at Meeting I, II and III. At Meetings II and III, learning activities increased to almost all very active. Students' critical thinking skills increased to almost all highly skilled at Meetings II and III. At Meetings II and III, students' collaboration skills increased to Almost All Skilled. Meanwhile, completeness of learning outcomes increased again to 100% at Meeting III. From the results of this research, it can be concluded that educators' activities experienced a very significant increase when implementing the PBL model supported by DNGM using Wordwall media and the Dragon Snake game, as well as student activities, critical thinking skills, collaboration skills, and learning outcomes.*

Keywords: *Critical Thinking, Collaboration, PBL, DNGM*

INTRODUCTION

The rapid increase in knowledge and innovation in the current era of globalization demands quality human resources, so that current progress can be mastered and can be created to improve the situation. Therefore, education requires careful handling and attention. In the era of Society 5.0, it is very important to grow human resources who are able to overcome obstacles and compete globally. The education sector cannot be separated from this. Skills such as critical thinking, creativity, communication, collaboration, character and citizenship must be taught in education according to 21st century skills (Fauzi, Z A. et al, 2022).

National education is education based on Pancasila and the 1945 Constitution of the Republic of Indonesia. National education is characterized by religious values, Indonesian national culture and is responsive to the demands of contemporary developments. In accordance with the process standards of PP number 57 of 2021 concerning National Education Standards, learning is carried out in an interactive, inspiring, fun and challenging manner.

Received: Mei 30, 2024; Accepted: July 01, 2024; Published: August 31, 2024;
* Fahri Fajrul Falah, *fahriiff15@gmail.com*

Provide sufficient space for initiative, creativity and independence in accordance with students' talents, interests and physical and psychological development (Ministry of Education and Culture, National Process Standards, 2021).

According to South Kalimantan Province Regional Regulation No. 3 of 2017 concerning the Implementation of Education to Answer the Various Challenges of the Changing Times, quality human resources are created through quality education in accordance with developments in science and technology as well as faith and charity. In addition, training must be based on insight into closeness to the environment which is reinforced by serious benefits such as those in the South Kalimantan region (South Kalimantan Provincial Regulation, 2017).

According to UNESCO data (Priscilla & Yudhyarta, 2021), Indonesia's education quality is in 10th place out of 14 developing countries in the 2016 Global Education Monitoring (GEM) Report. Indonesia's education indicators are also still low, according to the Human Development Report 2017 Education Index, which placing Indonesia in seventh place in ASEAN with a score of 0.622. In South Kalimantan itself, based on data released by IPM (Metroyadi & Fauzi, 2021) it is stated that South Kalimantan is ranked 22nd out of 34 provinces in terms of the lowest human development index.

The steps taken to improve the quality of the human development index in the education sector are to make efforts to make changes, one of which is changes in the curriculum sector, where currently education in Indonesia uses the 2013 curriculum (K13). The 2013 curriculum is a curriculum that contains themes, namely integrating several subjects into one theme. Themes are used as a binder to link several fields of study which can ultimately provide real experience to students (Iskandar & Farida, 2020).

Advances in science and technology are important factors in determining the quality of life of a nation in the 21st century. This period is described by unlimited correspondence which has an impact on the spread of data that does not correspond to reality. On the other hand, students become bored when the learning model used is below standard (Asniwati et al., 2019) . Without using strategies and learning models that encourage students to be involved and interested in participating in lessons about understanding interviews and writing reports, students are only given textbooks containing various learning materials (Amir, Magfirah, Malmia, & Taufik, 2020). The application of learning models in the world of education is very important to achieve learning goals in terms of increasing, or balancing cognitive and psychomotor abilities among students. The application of an ideal learning model is the center of the educational experience in achieving ideal learning goals. In addition, educators can train

and empower students' critical thinking and collaboration skills through the use of learning models. Determining the learning model must be based on dissecting the conditions of learning outcomes in the classroom. The learning model is then translated into a learning tool that guides educators in carrying out activities related to learning (Noorhapizah et al., 2019) . Learning tools are created so that they can be used by teachers as a guide in teaching and learning activities and so that they can help teachers. The idea of learning guided by learning tools aims to create meaningful learning activities and help students realize their maximum potential (Caitra, Nasution, & Sukartiningsih, 2019).

So learning activities at school really require the implementation of learning that is interesting, fun and not only centered on educators. Apart from that, students must also take part in learning, both in being active and understanding learning. Learning activities that are directed at actively participating in learning will certainly reduce the number of students who are less active in learning. Students will be interested in being actively involved rather than just silently listening to the teacher's explanation using the lecture method (Asniwati et al., 2018) .

The hope for further learning is learning that includes critical thinking skills. Critical thinking is a type of reasoning that must be created in every student. Skills for critical thinking involve cognitive processes and encourage students to think critically about problems (Saputra, 2020). Another hope is that there will be interaction between students in learning to share knowledge and experience (Collaboration). In classroom activities, collaboration skills are very important because they can help students achieve learning goals.

However, the reality that actually occurs in the field shows something different. Based on the results of interviews conducted on Tuesday 19 December 2023 with class Vc educators at SDN Antasan Besar 7, namely Mrs. Risna Disliani, S.Pd, said that there was still a lack of activity from students in participating in learning, students were still not confident in expressing their opinions. In learning, students' lack of critical thinking skills, such as solving problems, and lack of interaction and collaboration in group learning activities contribute to less than optimal student learning outcomes. During teaching and learning activities, teachers have used learning models and learning media that can liven up the classroom atmosphere to make teaching and learning activities more dynamic, but the results are still not ideal.

The impact if learning is still teacher-centered or one-way, then learning becomes less interesting and enjoyable and students tend to lack understanding of the learning material being taught. then the lack of using various methods and models means that students' activities tend to be passive. Meanwhile, if students' critical thinking skills are still low, it will be difficult for students to solve problems and find solutions to solve these problems and students tend to lack

creative potential. Meanwhile, the impact of a lack of collaboration skills on students is that students have less experience collaborating with their peers and are less able to solve problems together.

Based on the various problems mentioned above, serious efforts are needed to improve the learning process in the future. By introducing a learning system that makes it easier for students to understand the material taught by the teacher and involving them in learning activities in class, a fun and meaningful learning environment will be created. The solution that can be used is by applying the Problem Based Learning model which is assisted by the DNGM model (direct instruction, number heads together, group investigation, mind mapping) and the traditional game namely dragon snake.

METHOD

In this research, the PTK (Classroom Action Research) method was used with a qualitative approach. This research took place at SDN Antasan Besar 7. The research subjects were 25 class V students of SDN Antasan Besar 7. The stages of the classroom action research flow are as follows:

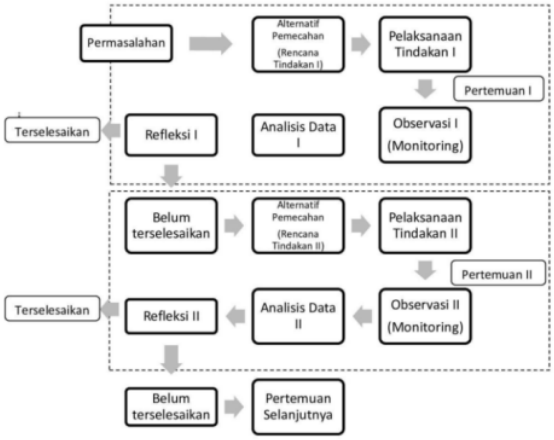

Figure 1. Classroom Action Research Flow

The type of data used in this research comes from primary and secondary data. Data collection techniques were developed through observation and testing activities. After the data is collected, it is then followed up with data analysis methods. The purpose of this data analysis is to analyze the data critically and sharply to obtain novelty in research and obtain conclusions from research findings.

RESULTS AND DISCUSSION

Research result

At SDN Antasan Besar 7, researchers conducted interviews and observations and discovered a problem: students' critical thinking and collaboration skills were not developed optimally in the activities they participated in. When students participate in the learning process, their critical thinking and collaboration skills are also relatively low. However, the learning model currently used by educators does not provide maximum results.

At the first meeting, it was discovered that students' low critical thinking skills could be identified by calculating the total scores obtained by students. At the first meeting, the results obtained were presented in Table 1 and then a recapitulation was carried out which was presented in Table 1 , namely:

Table 1. Analysis of Observation Results of the Concept of Critical Thinking Skills of Students in Meeting I

No	Aspect	Criteria evaluation										S.A	Classical (%)
		TA		KA		C.A		A		S.A			
		F	%	F	%	F	%	F	%	F	%		
1	Aspect A	0	0%	0	0%	5	20%	9	36%	11	44%	11	44%
2	Aspect B	0	0%	0	0%	8	32%	14	56%	3	12%	3	12%
3	Aspect C	0	0%	0	0%	5	20%	18	72%	2	8%	2	8%
4	Aspect D	0	0%	0	0%	7	28%	16	64%	2	8%	2	8%

Table 2. Recapitulation of Observations on the Concept of Critical Thinking Skills of Students in Meeting I

No	Range score	Information	Frequency	Percentage
1.	13 – 16	Very Skilled	16	64%
2.	9 – 12	Skilled	4	16%
3.	5 – 8	Enough Skilled	5	20%
4.	1 – 4	Not enough Skilled	-	-
5.	0	No Skilled	-	-
Amount			24	100%
Percentage of classic activeness (active andvery active)			64%	
Criteria			*Part big very skilled*	

By using a problem-based learning model supported by the DNGM model with the Wordwall and Dragon Snake games at Meeting I, students' critical thinking abilities were not functioning optimally. This can be seen from the percentage of classical activity with the

"Mostly Highly Skilled" criteria of 64%. With details for the percentage of highly skilled criteria of 64%, skilled criteria of 20%, moderately skilled criteria of 16% and 0% for less skilled and unskilled criteria. At the first meeting, only 16 students fell into the very active criteria, 5 students fell into the skilled criteria, and 4 students fell into the moderately skilled criteria, while there were no students who fell into the less skilled and unskilled criteria. There are still many aspects that fall into the highly skilled category but still have not reached the criteria for completeness set by the researchers, this of course must be material for reflection by educators for the next meeting.

Classically, at meeting I it can be seen that students' critical thinking skills have reached 64% with the criteria being highly skilled. Apart from that, at the first meeting the collaboration skills per aspect were as follows:

Table 3 Analysis of Observation Results of Student Collaboration Skills in Meeting I

No	Aspect	Assessment criteria										S. A	Classical (%)
		TT		KT		CT		Q		ST			
		F	%	F	%	F	%	F	%	F	%		
1	Aspect A	0	0%	0	0%	11	20%	5	20%	9	36%	9	36%
2	Aspect B	0	0%	0	0%	5	20%	16	64%	4	16%	4	16%
3	Aspect C	0	0%	0	0%	5	20%	16	64%	4	16%	4	16%
4	Aspect D	0	0%	0	0%	5	20%	16	64%	4	16%	4	16%

Table 4 recapitulation of observations Collaboration skills of students in Meeting I

No	**Range score**	**Information**	**Frequency**	**Percentage**
1.	13 – 16	Very Skilled	16	64%
2.	9 – 12	Skilled	4	16%
3.	5 – 8	Enough Skilled	5	20%
4.	1 – 4	Not enough Skilled	-	-
5.	0	No Skilled	-	-
Amount			24	100%
Percentage of classic activeness (active andvery active)			64%	
Criteria			*Part big very skilled*	

By using a problem-based learning model supported by the DNGM model with Wordwall media and the Dragon Snake game, students' collaboration abilities were not optimal at Meeting I. This can be seen from the percentage of classical activeness which is 64% with the criteria "Most are very skilled". With details for the percentage of highly skilled criteria of 64%, skilled criteria of 16%, moderately skilled criteria of 20% and 0% for less skilled and unskilled criteria. At the first meeting, only 16 students fell into the highly skilled criteria, 5 students fell into the skilled criteria, and 4 students fell into the moderately skilled criteria, while there were no students who fell into the less skilled and unskilled criteria. There are still many aspects that fall into the highly skilled category but still have not reached the criteria for completeness set by the researchers, this of course must be material for reflection by educators for the next meeting.

At this first meeting, students' classical collaboration skills had reached 64% with the criteria being highly skilled.

Table 3. Recapitulation of Observations on Student Learning Results from Meeting I

No	Range Mark	Cognitive		Affective		Psychomotor		Information
		F	%	F	%	F	%	
1.	90-100	0	0%	0	0%	0	0%	Complete
2.	80-89	18	72%	19	76%	19	76%	Complete
3.	70-79	7	28%	6	24%	6	24%	Not Completed
4.	60-69	0	0%	0	0%	0	0%	Not Completed
5.	50-59	0	0%	0	0%	0	0%	Not Completed
Amount		25	100%	25	100%	25	100%	
JK Individual		18		19		19		
JK Classical		72 %		76 %		76 %		

Table 4. Accumulation of Completion of Learning Outcomes of Classical Students Meeting I

No	Completeness criteria	Classical learning outcomes	
		F	%
1	Complete (≥80)	18	72%
2	Incomplete (<80)	7	28%
Amount		12	25

The total learning outcomes of substitute students at the first meeting traditionally reached 72%, especially 18 substitute students who had fulfilled the basic culmination rules, while 7 substitute students or 28% were still below the basic fulfillment measure.

The indicators of completeness set by researchers individually and classically were still not met by student learning outcomes at meeting I. because only 72% of students completed it, while the researchers' success criteria required a minimum of 80% of students to get a score of less than 80. This happened because the teacher had not used learning model well, and there are still students who do not actively participate in the learning process. In order for students to become more enthusiastic and participate actively in learning, educators need to prepare themselves better and be better able to apply the learning model at the next meeting.

Table 5. Analysis of Observation Results Concept of Skills Critical Thinking of Participants Student Meeting II

No	Aspect	Assessment criteria										S.A	Classical (%)
		TA		KA		C.A		A		S.A			
		F	%	F	%	F	%	F	%	F	%		
1	Aspect A	0	0%	0	0%	2	8%	6	24%	17	68%	17	68%
2	Aspect B	0	0%	0	0%	3	12%	15	60%	7	28%	7	28%
3	Aspect C	0	0%	0	0%	0	0%	16	64%	9	36%	9	36%
4	Aspect D	0	0%	0	0%	3	12%	12	8%	20	80%	20	80%

Table 6. Recapitulation of Observations Critical Thinking Skills of Participants Educator Meeting II

No	Score range	Information	Frequency	Percentage
1.	13 – 16	Very Skilled	20	80%
2.	9 – 12	Skilled	5	20%
3.	5 – 8	Quite Skillful	-	-
4.	1 – 4	Less Skilled	-	-
5.	0	Unskilled	-	-
Amount			25	100%
f classic activeness (active and very active)			80%	
Criteria			Almost All Are Highly Skilled	

Critical thinking skills at meeting II have increased to reach the classical percentage of 80% with the criteria being that almost all of them are highly skilled.

With details for the percentage of highly skilled criteria of 80%, skilled criteria of 20%, and 0% for the criteria of moderately skilled, less skilled and unskilled. At Meeting II, 16 students fell into the highly skilled criteria, 5 students fell into the skilled criteria, while there

were no students who fell into the moderately skilled, less skilled and unskilled criteria. There are still many aspects that fall into the highly skilled category and have reached the criteria for completion set by the researchers, but they can still be improved and should be used as material for reflection by educators for the next meeting.

The collaboration skills at meeting II per aspect are as follows:

Table 5. Analysis of Observation Results of the Concept of Collaboration Skills of Students in Meeting II

No	Aspect	Assessment criteria										S.A Classical (%)	
		TA		KA		C.A		A		S.A			
		F	%	F	%	F	%	F	%	F	%		
1	Aspect A	0	0%	0	0%	1	4%	10	40%	14	56%	14	56%
2	Aspect B	0	0%	0	0%	3	12%	17	68%	5	20%	5	20%
3	Aspect C	0	0%	0	0%	0	0%	18	72%	7	28%	7	28%
4	Aspect D	0	0%	0	0%	2	2%	16	64%	7	28%	7	28%

Table 4. 1 Skills Observation Recapitulation Student Collaboration Meeting II

No	Score range	Information	Frequency	Percentage
1.	13 – 16	Very Skilled	19	76%
2.	9 – 12	Skilled	6	24%
3.	5 – 8	Quite Skillful	-	-
4.	1 – 4	Less Skilled	-	-
5.	0	Unskilled	-	-
Amount			25	100%
f classic activeness (active and very active)			76 %	
Criteria			Almost All Are Highly Skilled	

This can be seen from the percentage of classical activeness which is 76% with the criteria "Almost All are Highly Skilled". With details for the percentage of highly skilled criteria of 76%, skilled criteria of 24%, and 0% for the criteria of less skilled, unskilled and quite skilled. At Meeting II, only 19 students fell into the highly skilled criteria, 6 students fell into the skilled criteria, while there were no students who fell into the moderately skilled, less skilled and unskilled criteria. There are still many aspects that fall into the highly skilled category but still have not reached the criteria for completeness set by the researchers, this of course must be material for reflection by educators for the next meeting.

Assessment of student learning outcomes at meeting II per aspect can be seen as follows:

Table 7. Recapitulation of Observations on Student Learning Results from Meeting II

No	Range Mark	Cognitive		Affective		Psychomotor		Information
		F	%	F	%	F	%	
1.	90-100	3	12%	6	24%	5	20%	Complete
2.	80-89	19	76%	17	68%	17	68%	Complete
3.	70-79	3	12%	2	8%	3	12%	No Complete
4.	60-69	0	0%	0	0%	0	0%	No Complete
5.	50-59	0	0%	0	0%	0	0%	No Complete
Amount		25	100%	25	100%	25	100%	The whole thing complete
JK Individual		22		23		22		
JK Classical		88 %		92 %		88 %		

Table 8. Accumulated Mastery of Classical Student Learning Results Meeting II

No	Criteria completeness	Results Study classic	
		F	%
1	Complete (≥80)	22	88 %
2	No Complete (<80)	3	12 %
Amount		25	100%

The learning outcomes of students at meeting II were considered very satisfying because the percentage of students who completed both the cognitive, affective and psychomotor aspects had exceeded the standard of success set by researchers, namely 80% of students who got a score of ≥80. However, this result can still be improved at the next meeting.

The results of observations of critical thinking skills at meeting III per aspect are as follows:

Table 9. Analysis of Observation Results of the Concept of Critical Thinking Skills of Students in Meeting III

No	Aspect	Criteria evaluation										S.A Classical(%)	
		TA		KA		C.A		A		S.A			
		F	%	F	%	F	%	F	%	F	%		
1	Aspect A	0	0%	0	0%	0	0%	2	8%	23	82%	23	82%
2	Aspect B	0	0%	0	0%	0	0%	12	48%	13	52%	13	52%
3	Aspect C	0	0%	0	0%	0	0%	9	36%	16	64%	16	64%
4	Aspect D	0	0%	0	0%	1	4%	18	72%	6	24%	6	24%

Table 10. Recapitulation of Observations on Critical Thinking Skills of Students from Meeting III

No	Range Score	Information	Frequency	Percentage
1.	13 – 16	Very Skilled	24	96%
2.	9 – 12	Skilled	1	4%
3.	5 – 8	Enough Skilled	-	-
4.	1 – 4	Not enough Skilled	-	-
5.	0	No Skilled	-	-
Amount			25	100%
f classic activeness (active andvery active)			96%	
Criteria			Almost All Are Highly Skilled	

Students' critical thinking skills using the *problem based learning* model assisted by the DNGM model using wordwall media and the dragon snake game at meeting III have gone very well. This can be seen from the percentage of classical activity which is 96% with the criteria being that almost all of them are highly skilled.

Table 4. 2Analysis of Observation Results of Student Collaboration Skills Meeting III

No	Aspect	Criteria evaluation										S.A	lassical(%)
		TA		KA		C.A		A		S.A			
		F	%	F	%	F	%	F	%	F	%		
1	spect A	0	0%	0	0%	0	0%	4	16%	21	84%	21	84%
2	spect B	0	0%	0	0%	0	0%	13	52%	12	48%	12	48%
3	spect C	0	0%	0	0%	0	0%	9	36%	16	64%	16	64%
4	spect D	0	0%	0	0%	1	4%	13	52%	12	48%	12	48%

Table 4. 3recapitulations of observations of students' collaboration skills at meeting III

No	Range Score	Information	Frequency	Percentage
1.	13 – 16	Very Skilled	23	92%
2.	9 – 12	Skilled	2	8%
3.	5 – 8	Enough Skilled	-	-
4.	1 – 4	Not enough Skilled	-	-
5.	0	No Skilled	-	-
Amount			25	100%
f classic activeness (active andvery active)			96%	
Criteria			Almost All Are Highly Skilled	

The collaborative ability of students working with a problem-based learning model is supported by the DNGM model with Wordwall media and the Dragon Snake game at Meeting III. This can be seen from the percentage of classical activity which is 92% with the criteria being that almost all of them are highly skilled.

Table 11. Recapitulation of Observations on Student Learning Results from Meeting III

No	RangeMark	Cognitive		Affective		Psychomotor		Information
		F	%	F	%	F	%	
1.	90-100	3	12%	6	24%	5	20%	Complete
2.	80-89	19	76%	17	68%	17	68%	Complete
3.	70-79	3	12%	2	8%	3	12%	No Complete
4.	60-69	0	0%	0	0%	0	0%	No Complete
5.	50-59	0	0%	0	0%	0	0%	No Complete
Amount		25	100%	25	100%	25	100%	
JK Individual		25		25		25		The whole thingcomplete
JK Classical		100%		100%		100%		

Table 12. Accumulated Mastery of Classical Student Learning Results Meeting III

No	Criteria completeness	Results Study classic	
		F	%
1	Complete (≥80)	25	100%
2	No Complete (<80)	0	0 %
Amount		25	100%

The learning outcomes of students at meeting III were considered very satisfying because the percentage of students who completed both the cognitive, affective and psychomotor aspects had exceeded the standard of success set by researchers, namely 80% of students who got a score of ≥80. The results of students' complete learning at meeting III classically reached 100%, namely 25 students or all of them who had met the minimum completeness criteria.

DISCUSSION

Critical thinking is the ability to assess things rationally. When students are faced with complex problems, they may need to apply several skills such as the ability to analyze and make arguments, present classifications, present evidence, provide reasons, analyze the implications of an opinion and draw conclusions. Therefore, critical thinking skills can be developed (Noorhapizah, et al, 2022) .

Based on this graph, students' critical thinking skills usually reach a percentage of 64 percent at meeting I, rising to 80 percent at meeting II, and then rising again to 96 percent at meeting III. in accordance with Filsaime's definition of critical thinking as evaluating something rationally. Providing classification serves to facilitate the development of critical thinking skills because students are faced with complex problems that may require them to

apply various skills they already have, such as the ability to analyze, present arguments, present evidence, give reasons, analyze the implications of an opinion, and draw Conclusion (Noorhapizah, et al, 2022).

The results of this research are supported by research that has been conducted: Ridha Nadhira (2022), Siti Muslehah (2022), Arpani (2022) and Hindun Aprilia (2021). In these studies, students' critical thinking abilities were found to have increased to the "Very Critical" level.

Students usually achieve a percentage of 64% for their ability to collaborate, which increases to 76% at meeting II and 92% at meeting III. The consequences of this research are supported by several studies that have been effective, in particular as follows: Exploration by Abdurrahman (2022), Euis Anisa Rahmah (2022), The results of the research show that the joint venture ability of students who enter the "Specially Gifted" class increases. Based on this, the combination of the Problem Based Learning model assisted by the DNGM model with wordwall media and the dragon snake game has been proven to be able to improve collaborative abilities.

Student learning outcomes that had not been completed at the first meeting had a completeness level of 72%, increased at the second meeting to a completeness level of 88% and increased again at the third meeting with a completeness level of 100%. It can be seen from previous data that student learning outcomes increase at each meeting. This is for the reason that analysts consider the use of models in a developing experience that makes the educational and growing experience much better so that the influence on the substitute student's capacity to dominate the material expands.

The learning role carried out by educators in each meeting cannot be separated from their success in improving student learning outcomes. In the research conducted, it was found that this learning process was able to achieve positive results. This is in line with the views of Suriansyah et al. (2014: 219) that students learn best by learning through the process, not by learning through products. .

CONCLUSION

The conclusion of this research is that wordwall media and the dragon game, together with the Problem Based Learning model and DNGM model, can improve critical thinking skills, collaboration and learning outcomes. The consequence of this study is that the level of students' critical thinking abilities which is traditionally obtained at meeting I is 64% with the "Mostly Very Talented" measure and increases at meeting II to 80% with the "Almost All

Talented" model then increases again at meeting III to 96%. Collaboration skills were rated "Mostly Very Skilled" by 64% of participants at meeting I, "Mostly Very Skilled" by 76% of participants at meeting II, and "Almost All Very Skilled" by 92% of participants at meeting III. Aspects of student cognitive learning outcomes at Meeting I were 72%, increased to 88% at Meeting II and then increased again to 100% at Meeting III. This was because at Meeting I there were several students who did not reach the KKM score. This condition is still below the standards set by researchers for student learning outcomes. Educators improve the application of learning models so that students are more enthusiastic and actively involved in learning in order to overcome these obstacles.

BIBLIOGRAPHY

Amir, N. F., Magfirah, I., Malmia, W., & Taufik. (2020). Use of the Problem Based Learning (PBL) Model in Thematic Learning for Elementary School Students. *Uniqbu Journal of Social Sciences*, *22-25*.

Aprilia, H. (2020). Increasing student activity, motivation and learning outcomes PPKN contents theme of our friends environment using the Group Investigation (GI) learning model combined with Numbered Heads Together (NHT), and Snowball Throwing in Class V of SDN Sungai Miai 8 Banjarmasin Thesis School Teacher Education Study Program Basics of FKIP ULM Banjarmasin.

Arpanii. (2022). Increases activity, critical thinking and learning outcomes of VC class students at SDN Handil Bakti using a combination of PBL models, experimental articulation and RBG comment media Thesis Primary School Teacher Education Study Program FKIP ULM Banjarmasin.

Asniwati, F., Fauzi, Z. A., & Fikri, H. (2018). Improving learning activities using a combination of Mind Mapping model, Think Pair Share and Teams Game Tournament. *ATLANTIS PRESS: Advances in Social Science, Education and Humanities Research, 274*, 318–322. https://doi.org/10.2991/iccite-18.2018.67

Asniwati, F., Fauzi, Z. A., & Rahima, L. (2019). Improving student learning activities theme of the region where I live civic content material diversity of individual characteristics using a combination of Problem Based Learning (PBL), Numbered Heads Together (NHT), and Make a Match in Class IV SDN Pekauman 3. *Proceedings of the ULM PS2DMP National Seminar, 5*(1), 155–166.

Caitra, Z. D., Nasution, & Sukartiningsih, W. (2019). Development of Think Talk Write Model learning tools sub-theme harmonious living to improve critical thinking abilities for Class V elementary school students. *Journal of Educational Studies and Research Results, 2460-8475*.

Fauzi, Z. A., et al. (2022). Implementation of PBL, NHT, and CCB models as well as investigative bag media. *Journal of Elementary Education Science, 758-766*.

Iskandar, R., & Farida, F. (2020). Implementation of the ASSURE model to develop learning design in elementary schools. *Basicedu Journal*, *4*(4), 1052–1065.

Ministry of Education and Culture. (2021). National process standards.

Muslehah, S. (2022). Implementation of the PT BARUANG model to improve learning activities, critical thinking skills and student learning outcomes in elementary schools. Thesis for Elementary School Teacher Education Study Program FKIP ULM Banjarmasin.

Nadhira, R. (2022). Improving learning activities, critical thinking abilities and learning outcomes of elementary school students using a combination of PBL, NHT and CCB models and thesis research bag media. Thesis Primary School Teacher Education Study Program FKIP ULM Banjarmasin.

Noorhapizah, et al. (2022). Improving critical thinking skills using SMART models for elementary school students 1, 2, 3 1. *2*(2), 613–624.

Noorhapizah, N., Nur'alim, Agusta, A. R., & Fauzi, Z. A. (2019). Improving critical thinking abilities through reading comprehension skills in finding important information using a combination of Directed Inquiry Activity (Dia), Think Pair Share (TPS) and Scramble models in Class V students of Pemurus Dalam 7 SDN Banjarmasin. *Proceedings of the ULM PS2DMP National Seminar, 5*(2), 101–116.

Saputra, J., Triyogo, A., & Frima, A. (2021). Application of the Mind Mapping learning model to learning outcomes in elementary schools. *Basicedu Journal, 5134- 5135.*

Suriansyah, A., Aslamiah, S., & Noorhafizah. (2014). *Learning strategies*. Jakarta: Rajawali Press.

Improving Critical Thinking Skills and Collaboration Skills Using Problem Based Learning Models, DNGM Models, Wordwall Media and Dragon Games

ORIGINALITY REPORT

13%	13%	5%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	journal.berpusi.co.id Internet Source	3%
2	jppipa.unram.ac.id Internet Source	2%
3	eprints.uny.ac.id Internet Source	2%
4	ejournal.undiksha.ac.id Internet Source	1%
5	jurnal.ittc.web.id Internet Source	1%
6	Fitria Hidayat, Nida Fatmah Wahidah, Yadi Mulyadi. "A Curriculum Analysis of the Moral Creed: the Pattern of Moral Formation", Jurnal Inovasi Pendidikan Agama Islam (JIPAI), 2022 Publication	1%
7	repository.unpas.ac.id Internet Source	<1%

8	Yogie Indra Wahyudi Yogie, Diana Haiti, Nurunnisa Nurunnisa. "Anak Sebagai Korban Pemerkosaan Dalam Teori Viktimologi", Jurnal Penegakan Hukum Indonesia, 2023 Publication	<1 %
9	ojs.iai-darussalam.ac.id Internet Source	<1 %
10	repository.uinsaizu.ac.id Internet Source	<1 %
11	discovery.researcher.life Internet Source	<1 %
12	ejournal.1001tutorial.com Internet Source	<1 %
13	jurnal.jomparnd.com Internet Source	<1 %
14	www.ijrrjournal.com Internet Source	<1 %
15	cr.indianrailways.gov.in Internet Source	<1 %
16	A Yunita, M N Aufa. " Wetland environment as learning resource using CTL approach to improve critical thinking in 21 century ", Journal of Physics: Conference Series, 2020 Publication	<1 %
17	ijramr.com Internet Source	

<1%

18 Nofrion, Syafri Anwar, Azwar Ananda, Yurni Suasti, Ikhwanul Furqon. "EXO-OLO Task Learning Model: Improving Learning Activities and Student's Collaboration In Geography Learning Based On Lesson Study", IOP Conference Series: Earth and Environmental Science, 2019
Publication
<1%

19 Ramadhan Arifin, Mita Erliana, Ahmad Faisal. "Improving Learning Outcomes Of Big Ball Games Using Coopertive Methods In Primary Schools", Kinestetik : Jurnal Ilmiah Pendidikan Jasmani, 2021
Publication
<1%

20 Teri Wagner, Liesl Baum, Phyllis Newbill. "From rhetoric to real world: fostering higher order thinking through transdisciplinary collaboration", Innovations in Education and Teaching International, 2013
Publication
<1%

21 bajangjournal.com
Internet Source
<1%

22 repository.iainpalopo.ac.id
Internet Source
<1%

Exclude quotes	Off	Exclude matches	Off
Exclude bibliography	Off		