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# IMPLEMENTATION OF PROJECT-BASED LEARNING TO IMPROVE ORAL COMMUNICATION SKILLS OF 7TH GRADE STUDENTS IN NGANJUK

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#### Abstract

The purpose of this study is to determine the effect of Project Based Learning implementation on improving students' oral communication skills. The research method used was classroom action research with two learning cycles. The subjects in this study were students of class VII-C at one of the junior high school in Nganjuk. The data for this study were obtained from observation sheets and questionnaires on oral communication skills. This research uses Miles and Huberman's qualitative data analysis with steps data reduction, data display, and conclusions drawing. The observation result showed that the average achievement indicator for oral communication skills in pre-cycle was 14.38%, cycle 1 was 30.72%, and cycle 2 was 47.71%. The results of the pre-cycle student response questionnaire was 19.28%, cycle 1 was 37.90% and cycle 2 was 50.37%. These show that there is an effect of implementing project based learning in the form of improving students' oral communication skills.

Keywords: Project Based Learning, Oral Communication Skills

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#### INTRODUCTION

Learning in the 21st century require the younger generation to have creative thinking skills, be communicative, solve problems, and be intelligent in making decisions so that they can present their ideas effectively. Efforts to harmonize education with the times in the 21st century are made by having communication skills as one of the connecting lines. The term communication in question refers to all forms of conveying information originating from one person to another (Pohan & Fitria, 2021).

Students' communication skills need to be trained and facilitated so that the learning process can run effectively and optimally. The main communication skill that is important for students to have is oral communication. Oral communication is the ability to convey information, explain it, listen to it effectively, discuss it with others, clarify necessary information, and be open to exchanging opinions. Good communication skills can help students play an active role during the learning process. The learning process is carried out through active discussions between students and teachers. Students not only record material and listen to information from the teacher but also skilled in expressing ideas and opinions effectively so that they can develop knowledge. Oral communication skills can be learned and trained during group discussions. Group discussions allow students to interact among members and express opinions orally (Mutabiah, Fitriani, & Astuti, 2021).

Communication skills are important developed in students. Good communication skills will be able to facilitate the delivery of ideas and the exchange of information in the learning process (Fitriah, Yulianto, & Asmarani, 2020). Oral or oral communication skills can help students succeed in the academic field (Ulfa, Indrowati, & Maridi, 2019). Students who lack skills in verbal communication will have a tendency to be inappropriate when responding to instruction from the teacher. Students who are effective in verbal communication. especially in questioning skills, will find difficulties while participating in learning. Good communication skills, helping to articulate their views on the material being studied (Margaretha, Nulhakim, & Taufik, 2023). Students who have communication skills will be more confident in asking questions or conveying ideas.

Based on the results of observations at student high school in Nganjuk, it was found that students in class VII-C lacked the courage to ask questions about things they did not understand during the learning process. The results of

interviews with science subject teachers indicated that only certain students had the courage to ask questions, give opinions, or convey the results of discussions orally. Students lack the desire to convey ideas or opinions during group discussions. This shows that students have low verbal communication skills. The low level of students' oral communication skills is also shown hv the results of research (Harvanti&Sumarwa, 2018). Which show that most of the students' oral communication skills are in the category that does not meet the criteria.

Low oral communication skills can be handled by applying a learning model that can provide space for students to practice expressing and conveying ideas in group projects with colleagues. Giving students the freedom to think according to their creativity in expressing their ideas becomes a place for them to share opinions, ask questions, respond, debate, or act in order to produce the expected project. Project-Based Learning (PjBL) was chosen because it requires students to work in teams and produce work through student project activities. This can help students build thinking and communication skills. Project Based Learning is important to be applied in learning because the activities in it make students actively participate by doing various tasks when in groups and interacting with fellow friends (Dinda & Sukma, 2021).

Research by Languju suggests that project-based teaching or *project-based learning has* proven to be able to improve the verbal communication skills of kindergarten students (Languju, Syaikhu, & Nadar, 2021). An analysis of the literature study conducted by Melinda and Zainil stated that *project-based Learning* (PjBL) can optimize the communication of elementary school students (Melinda &Zainil, 2020). It is possible that this model is also able to improve students' communication skills at the secondary level.

Based on the description of the background that has been put forward, this research has the formulation of the problem "How is the application of the project-based learning learning model to improve the oral communication skills of class VII students at SMPN 2 Baron?". The results of this study can provide a reference as a solution of problems related to student's low communication skills in learning science in high schools.

## METHOD Research Design

This research was conducted using the Classroom Action Research (CAR) method which aims to implement *Project Based* 

Learning to improve students' oral communication skills. This classroom action research consisted of two cycles. Classroom Action Research (CAR) is research designed by teachers to improve the quality of learning in the classroom (Rahardjo, 2015). According to Trianto, each cycle in PTK consists of several stages, namely planning (planning), execution (acting), observation (observing), and reflection (reflection) (Maliasih, Hartono, & Nurani, 2017). The initial state of the students before the action is taken, is known through the pre-cycle or preaction activities to see the differences before and after the PTK cycle is applied.

### Research Subject

This research was conducted in class VII C of SMPN 2 Baron, Nganjuk Regency in 2nd semester of the 2022/2023 school year. The research subjects were 34 students. The determination of this class as the research subject was based on observations regarding the students' oral communication skills. In addition, it is also based on the results of interviews with science teachers.

# **Data Collection Technique**

Research data obtained from qualitative data based on the description of the real situation during the learning process takes place. Qualitative data were obtained from observations in class, interviews with tutors as science teachers, as well as oral communication skills questionnaires filled in by students.

Qualitative data analysis in this study uses Miles and Huberman's analysis with data reduction steps, presenting data, and drawing conclusions (Ni'mah, 2017). Data reduction is done by selecting data. Presentation of data is written systematically from the results of the reduction, starting from planning, implementing, observing, and reflecting on each

implementation of the cycle. Conclusions are written down to find out the meaning and essence of the data.

The success of this research is based on the achievement of research targets. The target for each indicator is 19.28% asbased linewhich is obtained from the largest average pre-cycle between the results of student questionnaires and observations. The overall average target indicator of oral communication skills is 41% with the medium category on the criteria shown in Table 1. Actions or cycles in research can be declared complete if the research results have reached the target.

Table 1. Oral Communication Skills Criteria

Value in Percentage (%)	Category	
81 - 100	Very High	
61 - 80	High	
41 - 60	Medium	
21 - 40	Low	
0 - 20	Very Low	
	(Simon, 2016)	

#### RESULTS AND DISCUSSION

The research results are presented starting from data before the cycle (pre-cycle), data from cycle 1, and cycle 2. Pre-cycle data is obtained from observations during learning and questionnaires distributed to students to find out the initial state of students before carrying out the PTK cycle. The average results of observations and pre-cycle student questionnaires are then used as research targets as a basic reference point to determine whether there are differences in the use of *Project Based Learning* on students' oral communication skills in each indicator. The results of observing students' communication skills orally during the study are presented in Table 2.

Table 2. Observation Results of Students' Oral Communication Skills

No	Indicator	Indicator Achievement (%)		
		Pre Cycle	Cycle 1	Cycle 2
1	Answer the question	8.82	29.41	35.29
2	Ask the question	0.00	8.82	20.59
3	Opinion in class discussion	0.00	20.59	29.41
4	Opinion in group discussion	20.59	32.35	58.82
5	Organize material	8.82	44.12	55.88
6	Use of correct language and spelling	11.76	23.53	38.24
7	Body language during presentation	2.94	23.53	44.12
8	Listen to opinion	52.94	58.82	88.24
9	Respond to opinion	23.53	35.29	58.82
Average		14.38	30.72	47.71

Based on Table 2, it can be seen that the results of observations regarding students' oral abilities have increased from pre-cycle to cycle 2. The average achievement indicator in the pre-cycle was 14.38% in a very low category. In cycle 1, students' oral communication skills increased to 30.72% in the very low category, so they did not reach the specified target, so further research was carried out in cycle 2. The results of observing students' skills in cycle 2 averaged 47.71% in the moderate category.

The indicator that has the lowest percentage in all cycles is the asking indicator. The results of cycle 1 regarding the questioning indicator show a percentage of 8.82%. These results are still below the achievement targets for each indicator so that research in cycle 2 is more focused on stimulating students' curiosity so they have the courage to ask questions. The results in cycle 2

showed an increase in the achievement of the asking indicators with a percentage of 20.59%.

The students' oral communication skills were also seen from the results of the questionnaires filled out by the students. The questionnaire contains questions that use the Guttman scale to get affirmative answers from students by answering Yes and No. There are 9 indicators in the student communication skills questionnaire, namely 1) answering questions, 2) asking questions, 3) arguing in class discussions, 4) arguing in group discussions, 5) organizing material, 6) using language, 7) body language during presentations, 8) listen to opinions, and 9) respond to opinions (Wahyudi, Widoretno, &Sugiharto, 2015). This questionnaire is filled according to the actual situation in students during learning Project Based Learning going on. The results of the oral communication skills questionnaire are shown in Table 3 below.

Table 3. Results of Student Oral Communication Skills Questionnaire

No	Indicator	Indicator Achievement (%)			
		Pre Cycle	Cycle 1	Cycle 2	
1	Answer the question	14.70	41.17	50.00	
2	Ask the question	0.00	11.76	32.35	
3	Opinion in class discussion	17.64	26.40	52.94	
4	Opinion in group discussion	23.53	44.11	64.71	
5	Organize material	17.64	47.25	67.65	
6	Use of correct language and spelling	11.76	23.52	38.24	
7	Body language during presentation	5.88	35.29	52.94	
8	Listen to opinion	61.76	73.53	82.35	
9	Respond to opinion	20.59	38.23	44.12	
	Average	19.28	37.90	50.37	

The results of the student questionnaire stated that the average pre-cycle indicator achievement was 19.28%, cycle 1 increased by 37.90%, and cycle 2 was 50.37%. There is a difference in the percentage of achievement indicators between the results of observations and student questionnaires. This is because there are different points of view between observers and students. Observation results were obtained from observing the ability to communicate verbally objectively and factually during the learning process. The results of student questionnaire responses were filled in based on the subjectivity of each student towards his own assessment.

## Cycle 1

Activities in cycle 1 begin with learning planning by establishing a model *Project Based Learning* as a learning model to be used. This

model was chosen because it is based on the results of research conducted by Languju (2021) *Project Based Learning* can improve the verbal communication of kindergarten children, while based on research conducted by Yani, this model emphasizes student-centered learning (Yani & Taufik, 2020). Other research shows that the PjBL model can improve students' mathematical communication (Melinda & Zainil, 2020). Based on the advantages of these various studies, the researchers decided to choose this PjBL model as the learning model used in class action.

After establishing the learning model, then determining the learning objectives, the next activity is compiling teaching modules. In addition, it also compiles other learning tools to complement teaching modules such as student worksheets, learning media, making questions for diagnostic assessment and evaluation questions, assessment rubrics and providing tools

and materials to support the project to be carried out. Other activities include preparing research instruments in the form of observation sheets to observe students' oral communication skills, and oral communication skills questionnaires.

After planning, the second stage is taking action. Learning begins with preliminary activities such as greetings, checking student attendance, carrying out cognitive and noncognitive diagnostic assessments, delivering apperceptions through video displays about coral reefs to spark students' knowledge about the classification of living things. This apperception is important because it can focus students' attention. This is in accordance with research conducted by Saidah (2021), that apperception can make students focus on the material to be learned and generate student interest in learning. After that, the next steps is delivery of learning objectives.

The core learning activities are carried out according to the syntax of the Project Based Learning. The first syntax is the fundamental question. Students get an introduction to the material delivered by the teacher. Then, students observe pictures about sea creatures and get basic questions as material for discussion. The second syntax is designing product planning. At this stage, students are divided into 8 groups which will then discuss to design a project to make mind mapping 5 kingdom classification according to the creativity of each group. The third syntax is to arrange a project creation schedule. Students divide tasks to each group member to complete the project to be made. The fourth syntax is to monitor the activity and progress of the project. At this stage, students who have difficulty understanding the concept of the material and their project assignments will receive guidance from the teacher. In addition, at this stage students are active in seeking information from various literature, discussing and working together to complete the project. The fifth syntax is to test the results. Student activities in this syntax are presenting the results of the project and then responding to it by other groups in turn. However, in practice, only two groups dared to present their project results. This is because there are still many students who are afraid and not confident to come forward, causing a lack of students' ability to communicate verbally. One form of student oral communication problem is not daring to appear and convey material in front of the class (Remanda, Wahyuni, & Erningsih, 2022). The last syntax is the evaluation of learning experiences. Students and teachers evaluate the results of discussions and projects

that have been made. The results of student projects can be seen in Figure 1

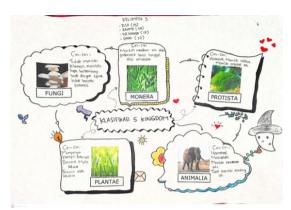


Figure 1. Student Mind Mapping Project Results

Student projects are mind mapping containing examples of living things and kingdom groups and their characteristics. The results of this project were then presented in front of the class as a manifestation of the stages of testing the results and evaluating learning outcomes. Other groups will respond and ask questions that are not understood. Making mind map could be best for their project assignment because of the mapping of each sub-chapter of material which makes it more concise and can be sorted in the order of the material (Harlis, Budiarti, & Mataniari, 2022). This shows that mind mapping projects make all the material clearly depicted to fit the needs and time available.

At the end of the cycle, students are given evaluation questions to measure their understanding of the material they have learned. In addition, all students filled out a questionnaire regarding their oral communication skills in learning.

The third stage in cycle 1 is observation (observation). What is observed is students' oral communication skills. Improved students' oral communication skills are shown in Figure 2.

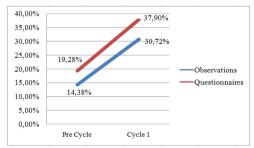


Figure 2. Improved Oral Communication Skills from Pre-cycle to Cycle 1

According to Figure 2, it can be understood that there is an increase in oral communication

skills in pre-cycle to cycle 1 both from the observations and from the results of the questionnaire. Project-making activities as well group discussions can improve communication between students in groups. Discussion activities and giving responsibility in the form of projects that are the responsibility of the group can stimulate communication skills such as giving opinions, asking questions, or responding to opinions. However, the average results of student oral communication indicators in cycle 1 have not reached the research target set at 41%. In addition, in Table 2 and Table 3 it can be seen that the indicators regarding students' ability to ask questions are still below the target. This is not in accordance with the predetermined target of each indicator which is 19.28%, so further action is needed in the next cycle.

The final stage in cycle 1 is reflection. Things to note during the implementation of cycle 1 are: 1) The courage of students in asking about the material being studied is still low. 2) There are still some students who are busy so that it disrupts the discussion. 3) Only a few students dare to make presentations. Follow-up that needs to be done in cycle 2, namely: 1) Stimulate students' courage to ask questions about what they have not understood by providing more contextual problems and statements between the material and their daily lives. 2) Give intensive attention to students who are less focused in discussion. 3) Motivating students to be more courageous in showing their work through presentations in front of the class.

#### Cycle 2

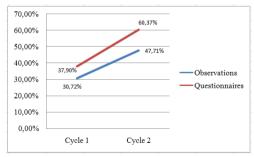
Activities in cycle 2 are carried out to correct deficiencies that occur in cycle 1. Activities in cycle 2 begin with a lesson plan or plan. The planning is carried out in the form of making teaching modules, making student worksheets, scoring rubrics and evaluation questions as well as diagnostic assessment questions, learning media, providing tools and materials for making projects. Planning is done carefully to get maximum results in the implementation of learning.

The second stage is the implementation of learning, starting with ice breaking to maintain student focus. In the previous cycle there were still students who were not focused, so in cycle 2 an effort was made to anticipate this, one of which was by icebreaking. After that, trigger students' understanding of the material to be studied. Giving trigger questions aims to link students' understanding that has been previously owned with the material to be studied next and stimulates students to dare to argue. The next

activity is the same as in cycle 1, namely dividing students into 8 groups which will then discuss designing poster projects and completing worksheets. The next stage is compiling a schedule for project creation and division of tasks, monitoring the activity and progress of the project. During the discussion activities, there is intensive assistance for students who do not understand the material or in completing their projects. This discussion activity is very important to support the occurrence of oral communication between group members. This is supported by Ramanda's research, that group discussion activities lead to communication patterns compared to before the discussion (Ramanda, Wahyuni, & Erningsih, 2022).

After the project is finished, it is then presented in front of the class. In carrying out this cycle 2 presentation, all groups were brave enough to present their results, but there were some students who still didn't seem confident. This presentation activity was accompanied by questions and answers and input from other groups. This can train students' communication skills to be more developed. Closing activities in the implementation of learning are carried out by conducting evaluation tests and writing questionnaires on students' oral communication skills, reflection, and concluding learning activities.

The third stage in cycle 2 is observation. Observations were made from the beginning of learning to closing using the observation sheet provided. Improved students' oral communication skills can be seen in Figure 3.



**Figure 3.** Improvement of Oral Communication Skills from Cycle 1 to Cycle 2

Based on Figure 3, it can be seen that the average increase in the achievement of indicators of students' oral communication skills in cycle 1 to cycle 2 on the results of observations and questionnaire results of students' oral communication skills. Based on Table 2 and Table 3, there was an increase in each indicator from cycle 1 to cycle 2. One of the improvements in student communication skills can be seen in the indicators of asking questions and expressing

opinions in discussions. This is equivalent to the research conducted by Kristanti, that the use of the PjBL model has an effect on increasing student activity, especially in terms of discussions that have very good results and questioning activities in good categories (Kristanti, Subiki, &Handayani, 2016). The increase in the achievement of these indicators proves that there is an influence between the PjBL learning model on students' oral communication abilities. In cycle 2, the achievements of each indicator and the average indicator have reached the research target so that this research can be stopped.

The final stage in cycle 2 is reflection. The results of reflection on the implementation of learning in cycle 2 are: 1) there is an increase in each indicator of oral communication, 2) students are responsible for completing their projects, 3) the syntax of the PjBL learning model has been implemented according to the teaching module.

# **Project Based Learning on Student Oral Communication**

Project Based Learning has activities that invite students to actively express opinions, ask questions, or discuss the project being worked on. The responsibility given to students to complete tasks in the form of projects can stimulate curiosity so that they can increase the courage to ask questions. Giving projects makes students learn to take responsibility for their own learning, they will learn to cooperate with others and interact. This interaction gives them the opportunity to communicate with each other so that they can hone their verbal communication skills. In line with Musriono & Winanto's Research, that PjBL increases self-confidence and ability to convey messages effectively when presenting the completed project (Musriono & Winanto, 2023). In addition, making projects makes student activities more numerous compared to before the learning model was implemented Project Based Learning. This is supported by Rezeki, et al who said that projectbased learning helps students grow their thinking and communication skills (Rezeki, Nurhayati, &Mulyani, 2015).

The effect of PjBL can be seen from the increase in the average achievement of students' oral communication indicators from the observations of cycle 1 of 30.72% (low) to 47.71% (moderate) in cycle 2. In addition, based on the results of the student questionnaire there was also an increase from cycle 1 of 37.90% (Low) to 50.37% (Medium) in cycle 2. This is evidence to support that learning that applies the

Project Based Learning help students grow thinking and communication skills.

# CONCLUSIONS AND SUGGESTIONS Conclusion

Impelementation of project based learning model can improve the oral communication skills of class VII students at Junior High School in Nganjuk. The results of this study can be used as material for teacher consideration in designing science lessons in order to improve students' communication skills.

### Suggestion

Further research is suggested to use a more varied project by adjusting the characteristics of students in learning Poject Based Learning.

#### REFERENCES

- Dinda, N. U., & Sukma, E. (2021). Analisis Langkah-Langkah Model Project Based Learning (PjBL) Pada Pembelajaran Tematik Terpadu di Sekolah Dasar Menurut Pandangan Para Ahli. *Journal of Basic Education Studies*, 44-62.
- Fitriah, P. I., Yulianto, B., & Asmarani, R. (2020). Meningkatkan Keterampilan Komunikasi Siswa Melalui Penerapan Metode Everyone Is A Teacher Here. *Journal of Education Action Research*, 546-555.
- Harlis, Budiarti, R. S., & Mataniari, R. (2022).

  Upaya Meningkatkan Kemampuan
  Berpikir Kreatif Melalui Model Projectbased Learning Pada Mata Kuliah
  Taksonomi Monera dan Protista.

  BIODIK: Jurnal Ilmiah Pendidikan
  Biologi, 215-223.
- Haryanti, A., & Sumarwa, I. R. (2018). Profil Keterampilan Komunikasi Siswa SMP dalam Pembelajaran IPA Berbasis STEM. *Jurnal Wahana Pendidikan Fisika*, 49-54.
- Iftitahurrahimah, Andayani, Y., & Al Idrus, S. W. (2020). Pengaruh Model Problem Based Learning (PBL) Terhadap Kemampuan Komunikasi Siswa Materi Pokok Larutan Elektrolit dan Non-Elektrolit. *J. Pijar MIPA*, 7-12.
- Kristanti, Y. D., Subiki, &Handayani, R. D. (2016). Model Pembelajaran Berbasis Proyek (Project Based Learning Model) Pada Pembelajaran Fisika di SMA. *Jurnal Pembelajaran Fisika*, 122-128.
- Languju, M., Syaikhu, A., & Nadar, W. (2021).
  Peningkatan Kemampuan Komunikasi
  Verbal melalui Project Based Learning.
  Prosiding Seminar Nasional Pendidikan

- STKIP Kusuma Negara III, (hal. 74-82). Jakarta Timur.
- Maliasih, Hartono, & Nurani. (2017). Upaya Meningkatkan Motivasi Belajar dan Hasil Belajar Kognitif Melalui Metode Teams Games Tournaments dengan Strategi Peta Konsep Pada Siswa SMA. *Jurnal Profesi Keguruan*, 222-226.
- Margaretha, Y., Nulhakim, L., & Taufik, A. N. (2023). Pengaruh Model Pembelajaran Think Talk Write terhadap Keterampilan Komunikasi Siswa Kelas VII pada Tema Pencemaran Lingkungan. *Jurnal Pendidikan MIPA*, 13, 459-464.
- Maridi, Suciati, & Permata, B. M. (2019).
  Peningkatan Keterampilan Komunikasi
  Lisan dan Tulisan melalui Model
  Pembelajaran Problem Based Learning
  pada Siswa Kelas X SMA. *Bioedukasi*: Jurnal Pendidikan Biologi, 182-188.
- Melinda, v., &Zainil, M. (2020). Penerapan Model Project Based Learning untuk Meningkatkan Kemampuan Komunikasi Matematis Siswa Sekolah Dasar (Studi Literatur). *Jurnal Pendidikan Tambusai*, 1526-1539.
- Musriono, A. A., & Winanto, A. (2023).

  Peningkatan Kemampuan Komunikasi
  Lisan Peserta Didik Sekolah Dasar
  Melalui Model Project Based Learning.

  El-Muhbib: Jurnal Pemikiran dan
  Penelitian Pendidikan Dasar, 41-49.
- Mutabiah, Fitriani, D., & Astuti, S. (2021).

  Meningkatkan Keterampilan Berbicara
  Siswa Melalui Teknik Diskusi Kelompok
  Kecil. Prosiding Seminar Nasional
  Pendidikan STKIP Kusuma Negara III
  (hal. 130-136). Jakarta: Semnara STKIP
  Kusuma Negara
- Ni'mah, F. (2017). Penerapan Strategi Pembelajaran Active Knowledge Sharing Disertai Media Video untuk Meningkatkan Keaktifan Belajar IPA SiswaKelas VII. JurnalProfesiKeguruan, 43-59.
- Nugroho, A. T., Jalmo, T., &Surbakti, A. (2019).

  Pengaruh Model Project Based Learning (PjBL) Terhadap Kemampuan Komunikasi dan Berpikir Kreatif.

  JurnalBioterdidik, 50-58.
- Pohan, D. D., & Fitria, U. S. (2021). Jenis Jenis Komunikasi. *Cybernetics: Journal Educational Research and Social Studies*, 2, 29-37.
- Rahardjo, M. (2015, Maret 09). Penelitian Tindakan Kelas (PTK): Bolehkah untuk Menyusun Tesis atau Disertasi? Dipetik September 20, 2013, dari Gema Maulana

- Malik Ibrahim Malang: https://uin-malang.ac.id/r/150301/penelitian-tindakan-kelas-ptk-bolehkan-untuk-menyusun-tesis-atau-disertasi.html
- Ramanda, J., Wahyuni, Y. S., &Erningsih. (2022). Keterampilan Komunikasi Siswa melalui Metode Diskusi Kelompok di Kelas XI IPS 2 Taruna SMAN 1 Sungai Rumbai Kabupaten Dharmasraya. *Jurnal Pendidikan Tambusai*, 3612-3624.
- Remanda, J., Wahyuni, Y. S., & Erningsih. (2022). Keterampilan Komunikasi Siswa Melalui Metode Diskusi Kelompok Di Kelas XI IPS 2 Taruna SMA N 1 Sungai Rumbai Kabupaten Dhamasraya. *Jurnal Pendidikan Tambusai*, 3612-3624.
- Rezeki, R. D., Nurhayati, N. D., &Mulyani, S. (2015). Penerapan Metode Pembelajaran Project Based Learning (PjBL) Disertai dengan Peta Konsep Untuk Meningkatkan Prestasi dan Aktivitas Belajar Siswa pada Materi Redoks Kelas X-3 SMA Negeri Kebakkramat Tahun Pelajaran 2013/2014. *Jurnal Pendidikan Kimia*, 74-81.
- Saidah, K., Primasatya, N., Mukminin, B. A., & Damayanti, S. (2021). Sosialisasi Peran Apersepsi untuk Meningkatkan Kesiapan Belajar Anak di Sanggar Genius Yayasan Yatim Mandiri Cabang Kediri. Dedikasi Nusantara Jurnal Pengabdian Masyarakat Pendidikan Dasar, 18-24.
- Simon, R. (2016). KeterampilanKomunikasi Guru Kelas Pada Pembelajaran IPA dan Bahasa Indonesia di SD Negeri. *Jurnal Pendidikan Guru SekolahDasar*, 3218-3226
- Ulfa, A., Indrowati, M., & Maridi. (2019).

  Perbandingan Keterampilan Komunikasi
  Oral Siswa melalui Penerapan Model
  Kooperatif Tipe Jigsaw dan Tipe
  Reciprocal Teaching (RT) dalam
  Pembelajaran Biologi. Bio Pedagogi:
  JurnalPembelajaranBiologi, 8, 111-119.
- Wahyudi, Widoretno, S., &Sugiharto, B. (2015).

  Upaya Meningkatkan Kemampuan
  Komunikasi Oral Siswa melalui
  Penerapan Model Pembelajaran Problem
  Based Instruction Siswa Kelas VII-A
  SMP Negeri 22 Surakarta Tahun
  Pelajaran 2012/2013. Bio-Pedagogi, IV,
  30-35.
- Yani, L. I., & Taufik, M. (2020). Penerapan Model Project Based Learning dalam PembelajaranTematikTerpadu di Kelas V Sekolah Dasar (Studi Literatur). *Inovasi Pembelajaran SD*, 70-82.