

# Strategy for Increasing The Students' Interpersonal Communication Skills through Problem-Based Learning

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## ABSTRACT

This research aims to determine the effectiveness of problem-based learning to increase the students' interpersonal communication skills. This research was conducted at State Primary School Pilangsari 3 and State Primary School Ngarum 1, Ngrampal District, Sragen. The sample used in this research included 2 teachers and 58 students. The research used quantitative research method with a quasi-experimental type. The data were collected by means of tests, interviews and observations. The validity test used Aiken's content validity and the reliability test used Product Moment. The requirement test used the normality test from Lilliefors while the homogeneity test used the one from Bartlett. Independent t-test was used as the technique of data analysis. The results of this research show that  $t\text{-arithmetic } 4.469 > t\text{-table } 1.645$  with a significance level of 5%. Based on the results of the analysis, it can be concluded that problem-based learning is effective to increase the students' interpersonal communication skills. Likewise, the results of interviews and observations show that the students' interpersonal communication skills increases after the implementation of problem-based learning.

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### Keywords:

Interpersonal Communication, Problem-Based Learning.

## INTRODUCTION

Rusman (2017) defines learning as a process of interaction toward all situations that exist around the students. Students' learning process especially in primary school is very influenced by the aspects of the inside and the surrounding environment. Both of these can not be separated because the learning process occurs in the context of the students' self-interaction with their environment (Rusman, 2017). One of the activities as the implementation of the interaction is interpersonal communication (Suranto, 2011). Based on the description of the nature of learning, it can be concluded that the purpose of learning will be achieved if there is an interaction between students and their environment. This statement is also accordance with Low, Chong & Ellis's opinion that critical component of teaching is effective communication skills. If there is a mismatch between what was intended to be conveyed and what is conveyed, then ineffective teaching outcomes even the best teaching decisions can be brought out (Boztepe, 2017).

Moreover, the effectiveness of the interaction is sustained by effective interpersonal communication as well. The statement of the relationship between interaction and interpersonal communication is supported by the opinion of Liliweri (2015) that two or more persons can interact and build an interpersonal relationship but if there is no interpersonal communication between them, the interpersonal interaction and relationship will disappear on their own. In other words, social interaction will be hampered if learners do not have good interpersonal communication skills. Basically, interpersonal communication skills have a big role in the success of delivery of interpersonal messages because communication is conducted directly. Direct communication will directly affect a social relationship. When communicators use language and expression that is less precise with the contents of the message, it will certainly affect the way the communicant responds to the message. The statement was supported by Liliweri's opinion (2015), there is a reciprocal relationship between interaction, relations and interpersonal communication. Reciprocal relations in a sociological perspective are, (1) there are interpersonal face-to-face interactions that are often known as interpersonal interactions, (2) which then form interactive, dynamic, and transactional interpersonal interactions, and (3) which in turn shapes interpersonal communication.

Opinions about how communicators convey a message affecting the way the communicant responds to the message are supported by Shoelhi's opinion that interpersonal communication is communication done by someone with others, in which there is an influenced-influencing process between two parties and it takes place dynamically (2009). The definition of interpersonal communication skill is also supported by Wiseman's opinion that effective communication or behavior is the ability to achieve personal goals by

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manipulating and controlling one's environment (Nadeem, Mohammed and Dalib, 2017). While Singh and Lairopuii (2014) define interpersonal communication as a process of transmitting shared information and understanding from one person to another, which is critical to the success of an organization. While Suranto (2011) further explains about interpersonal communication that is the process of delivering and receiving messages between the sender of the message and the recipient both directly and indirectly.

Based on some descriptions of the understanding of interpersonal communication, the researcher can conclude that between-persons or interpersonal communication as a process of face-to-face communication between two or more people that is useful to influence each other and to solve conflict. The indicator of someone having the ability of interpersonal communication can be seen from the seven qualities or skills considered to create effective interpersonal communication (Devito, 2001) that include openness, empathy, positiveness, immediacy, interaction management, expressiveness, and other-orientation.

Interpersonal communication has many benefits, not only to support the success of the students' interaction in learning but also to establish and maintain good a relationship between individuals, to help convey knowledge or information, to change attitudes and behaviors, to help solve problems of human relationships, to improve self-image, and to make the way to success (Suranto, 2011). While the benefits of interpersonal communication according to Singh and Lairopuii (2014) are the capability to report and work with various people, to handle conflict, to negotiate differences, to make an objective requests effectively and efficiently, to be open to the ideas of others and willing to express their views on important things in the process of solving the problem. Based on the description, it is known that the ability of interpersonal communication has many benefits of conveniences in social relationships in school, community, and work environments. The statement about the importance of communication skill is also in accordance with Howard's opinion that one of the most important skills is having the ability to communicate properly within the workplace in order to ensure your ideas, wants, and needs are heard (Boztepe, 2017).

Nevertheless, many students especially in primary school still have the interpersonal communications skills, which is considered low. One of the learning models that can optimize the interpersonal communication skills are the problem-based learning model. Arends (2013) defines problem-based learning (PBL) as the presentation of an authentic and meaningful problem situation to students that can be the cornerstone of inquiry investigation. Then, Gorghiu et al (2015) define PBL as a teaching method consisting of utilizing real-world problems such as the needed context so that students learn to think critically and to have problem-solving skills as well as to assimilate important concepts for various disciplines.

Problem-based learning (PBL) is a student-centered pedagogy in which students learn about a subject by trying to find solutions to open problems (Phungsuk, Viriyavejakul, and Ratanaolarn, 2017 : 297). Based on some of the above description, the researcher can conclude that problem-based learning is a learning model using the problem as an initial introduction to stimulate and develop problem-solving skills. The researcher's consideration making PBL as one of solutions for increasing the interpersonal communication skills are to see some advantages of PBL i.e., problem-based learning curriculum facilitates successful problem solving, communication, teamwork and interpersonal skills better than other approaches (Rusman, 2012).

In other words, the problem-based learning model is assumed to be a solution to increase communication skills because the problem-based learning model familiarizes students to actively communicate with members of the group in formulating the understanding of a problem. The statement is supported by Saleh's statement (2013) Thar through problem-based learning, students actively think, communicate, search and process data and finally conclude the data. Likewise, the opinion of Alrahlah (2016: 158) that the advantages of PBL compared to traditional a pproaches include improving the integration of basic and clinical skills, better communication, teamwork, and self-learning, as well as increasing motivation and enjoyment of working together in a problem.

The statement is also reinforced by Karlimah research (2010) entitled Development of Communication Ability and Problem Solving and Mathematical Disposition of PGSD Students Through Problem Based Learning. The result showed that the students' mathematical communication ability receiving problem-based learning is reviewed overall as well as at each level of students' early mathematical ability is classified

as a moderate classification and it is better than the mathematical ability of students in the conventional class. A similar conclusion occurs for students' mathematical problem-solving skills.

The difference between Karlimah's research and this research is on research variables in which dependent variables in the previous research are communication skills and problem solving of mathematics, whereas in this research, the dependent variable is interpersonal communication skills. In addition, the previous research used samples of 67 students, while this study used 2 teachers and 58 students in the fourth grade at primary schools. The material used in the previous research is *Kapita Selekt*a Mathematics, while the one in this research covers the material of Social Studies, Civics and Mathematics that are integrated. The previous study divided the students into groups of students with moderate and low initial communication skills as well as with two-track ANAVA as data analysis, whereas this study used two classes with initial communication skills that are similar to independent t-test as data analysis.

Based on the results of this research, the researcher can conclude that the problem-based learning model proves do be able to increase the communication skills of a person when compared to conventional learning model. Based on the description, the researcher takes the title of this Research, which is the strategy for increasing the students' interpersonal communication skills through problem-based learning. The purpose of this research is to determine the effectiveness of problem-based learning to increase the students' interpersonal communication skills.

### **Situation of the Problem**

Social interaction will be hampered if learners do not have good interpersonal communication skills. Basically, interpersonal communication skills have a big role in the success of delivery of interpersonal messages because communication is conducted directly. The statement was supported by Liliwari's opinion (2015: 106), there is a reciprocal relationship between interaction, relations and interpersonal communication. Reciprocal relations in a sociological perspective are, (1) there are interpersonal face-to-face interactions that are often known as interpersonal interactions, (2) which then form interactive, dynamic, and transactional interpersonal interactions, and (3) which in turn shapes interpersonal communication. Nevertheless, many students especially in primary school still have the ability of interpersonal communications, which is considered low.

Moreover, the effectiveness of the interaction is sustained by effective interpersonal communication as well. The low level of interpersonal communication ability is supported by the results of the researcher's observation on May 2, 2017 in grade 4 of State Primary School Ngarum 2 Sragen, showing that some students have not performed interpersonal communication well. It is evidenced by 24% of students who have not been able to communicate well when studying in the group, 17% of students who communicate with less good language or even use the wrong tone of voice, 34% of female students who are less confident to express opinions in front of the class, 17% of students who dominate the communications in the group, while 8% of students who are less able to express their opinions.

Based on the results of interview with fourth grade teacher in State Primary School Ngarum 2 Sragen on May 2, 2017, some problems are motivated by the students' low ability of interpersonal communication, the lack of teachers' understanding of the learning model, one-way learning model (the teacher explains whereas the students listen without any reciprocity), and learning media that are less supportive of communicative learning. One of the learning models that can optimize the ability of interpersonal communication is the problem-based learning model.

### **Aim of the Study**

This research aims to determine the effectiveness of problem-based learning to improve students' ability in interpersonal communication.

## **METHOD**

This research is a quantitative research of quasi-experimental type with pre-test and post-test designs. Researchers used quasi-experimental type with pre-test and post-test designs because researchers want to know the differences in students' interpersonal communication skills before and after the implementation of

the problem based learning model. The working hypothesis proposed in this research is that the problem-based learning model is effective to improve the students' ability in interpersonal communication, while the nil hypothesis is that the problem-based learning model is not effective to improve the students' ability in interpersonal communication.

**Material**

Determination of this research sample was conducted by using purposive sampling technique. This research was conducted at State Primary School Pilangsari 3 and State Primary School Ngarum 1, Ngrampal District, Sragen. This research was started in October 2017. The sample used in this research included 2 teachers and 58 students, these students consist of 30 female students and 28 male students. The data were collected by means of tests, interviews, and observations. Interview and observation guidelines were tested for validity in advance with expert review. The validity testing of the performance test was conducted by using Aiken's content validity and the reliability test was conducted by using the Product Moment formula.

**Data Analyses**

The technique of analysis requirement test includes the normality and homogeneity tests. The normality test used Lilliefors while the homogeneity test used Bartlett test. The data analysis technique used independent t-test.

**FINDINGS**

**Test Results**

Instrument of interpersonal communication skills test uses a performance test sheet containing 5 questions. In terms of the validity test, the results of communication skills test by using content validity from Aiken are attached in Table 1.

**Table 1.** Validity Test Result

Item	Total Score	V <sub>arithmetic</sub>	V <sub>table</sub>	Description
1	23	0,85	0,74	valid
2	22	0,82	0,74	valid
3	22	0,82	0,74	valid
4	21	0,78	0,74	valid
5	21	0,78	0,74	valid

Based on the table of validity test results, it can be concluded that all test items have been valid and fit for use as a data collection tool of the students' interpersonal communication skills, because  $V_{arithmetic} > 0,85$  and  $0,78 > V_{table}, 0,74$  on all test items.

While the instrument reliability test in this research is by using Product Moment. The table is attached in Table 2.

**Table 2.** Reliability Test Result

Description	Result
N	23
r <sub>xy</sub>	0,808
r <sub>table</sub>	0,353
Conclusion	Test instruments were reliable

Based on the above table, it is known that  $r_{arithmetic}, 0.808 > r_{table}, 0.353$  and therefore, it can be concluded that the test instrument is reliable and can be used as a data gathering tool of interpersonal communication ability. Normality test result is attached in Table 3.

**Table 3. Normality Test Result**

Description	SDN Pilangsari 3		SDN Ngarum 1	
	Pre test	Post test	Pre test	Post test
N		26		32
$\bar{X}$	2,423	2,703	2,665	2,946
S	0,49	0,33	0,3	0,09
$L_{arithmetic}$	0,119	0,065	0,032	-0,058
$L_{table}$		0,173		0,886
Decision Test	Ho received	Ho received	Ho received	Ho received
Conclusion	The sample comes from a population of normally distributed	The sample comes from a population of normally distributed	The sample comes from a population of normally distributed	The sample comes from a population of normally distributed

based on the table of normality test, it is known that the samples of both schools have normal distribution both on pretest and posttest. The statement is proved by  $L_{arithmetic} < L_{table}$ , with the critical area  $\{L \mid L > 0.173\}$  and  $\{L \mid L > 0.886\}$ . Because  $L_{arithmetic} \notin DK$ , it can be concluded that the samples come from a population that is normally distributed. Then homogeneity test result is attached in Table 4.

**Table 4. Homogeneity Test Result**

Description	SDN Pilangsari 3	SDN Ngarum 1
N	26	32
$S_1^2$	0,238	0,092
$S_2^2$	0,108	0,008
$S_p^2$	0,173	0,050
$b_{arithmetic}$	13,577	6,135
$b_{table}$	0,9246	0,9348
Decision Test	Ho received	Ho received
Conclusion	variance of population were homogeneous	variance of population were homogeneous

It is known that the pre-test and Post-test results of both schools have fulfilled the homogeneous requirements. The statement is proved by  $b_{arithmetic} > b_{table}$ , with the critical area  $\{b \mid b < 0.9246 \text{ and } \{b \mid b < 0.9348\}$ . Because  $b_{arithmetic} \notin DK$ , it can be concluded that the variances of the two populations are homogeneous.

The working hypothesis in this research is that problem-based learning model is effective to increase the students' interpersonal communication skills and the nil hypothesis is that problem-based learning model is not effective to increase the students' interpersonal communication skills. From the result of t-test which is attached in Table 5.

**Table 5. T-Test Result**

Description	SDN Pilangsari 3	SDN Ngarum 1
n	26	32
$\sum D$	7,286	9
$\bar{D}$	0,280	0,281
$S_d$	0,371	0,356
$t_{arithmetic}$	3,851	4,469
$t_{table}$	1,708	1,645
Conclusion	Problem-based learning model is effective to increase the students' interpersonal communication	Problem-based learning model is effective to increase the students' interpersonal communication skills

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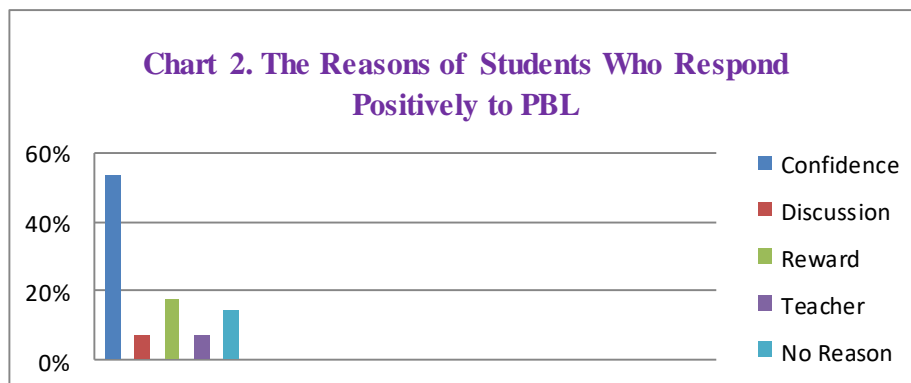
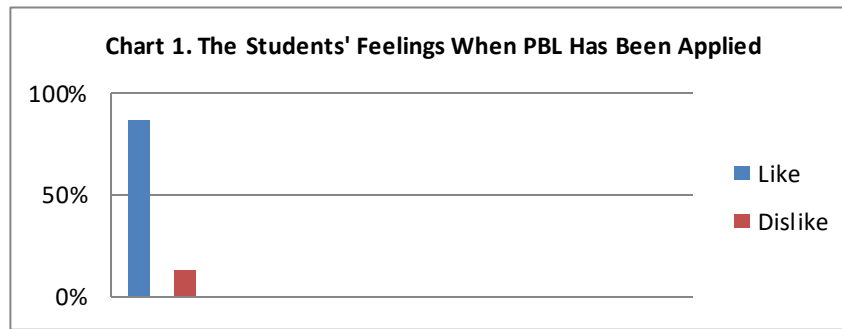
skills

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The obtained  $t_{arithmetic}$  in experimental class is 4.469 higher than  $t_{table}$  that is 1.645. Therefore, the test decision is  $H_0$  rejected and  $H_1$  accepted, meaning that the problem-based learning model is effective to increase the students' interpersonal communication skills.

**Interview Results**

While the results of the researcher's interview with fourth-grade students in State Primary School Ngarum 1 are:



On chart 1. it can be seen that 88% of students like problem based learning model, while 13% of students dislike problem based learning model. On chart 2. it is known that there are many reasons students like problem based learning model. Students who like this learning model provide several different reasons: 53.57% or 15 students are reasonable because this learning model makes them more confident and daring to speak up in front of the class; 7.14% or 2 students argue that this learning model allows them to study in groups and have a discussion; 17.86% or 5 students have a reason that they are happy because they get reward when they can solve problems; 7.14% or 2 students have a reason that they are happy because studying with a new teacher; and 14.29% or 4 students do not give a reason. While students who dislike this learning model argue that with this learning model, their class become crowded and less orderly.

Based on the results of the interview, it is known that most students like the problem-based learning model. In addition, students feel more confident to communicate with their friends i.e., they feel more comfortable communicating with their friends in study groups. The results of the interview with a fourth-grade teacher in State Primary School Ngarum 1 after the model has been applied are:

**Table 6.** Interview Results with a Fourth-Grade Teacher

Questions	Answers
The first question: what are the disadvantages, advantages, and mistakes made by	<b>The disadvantage</b> of learning model is the teacher difficulty in conditioning the class when applying this model.

the teacher when applying problem-based learning?	<b>The advantage</b> is to encourage students to be active and focus more on the teacher. <b>The error</b> does not abide.
The second question: how are the responses and activities of students when problem-based learning is applied?	<b>The form of students' responses</b> is that the students look happy and enthusiastic in learning. <b>Learning activities</b> become more active and creative.

### Observation Results

The obtained results of observation when the model is applied include:

**Table 7.** Observation Results

No.	Aspects	
	Advantages	Disadvantages
1.	Students are quickly adaptable	Less effective group collaboration
2.	Students are very critical and enthusiastic to solve the given problems	Limited time to present problem-solving results
3.	The value of students' activity is good (77.78).	The teacher is less able to condition the class

Based on this observation, it can be seen that the application of problem-based learning model has a positive impact on the students' interpersonal communication skills.

### RESULT, DISCUSSION, AND SUGGESTIONS

Based on the result of t-test which is attached in table 5, the obtained  $t_{arithmetic}$  in experimental class is 4.469 higher than  $t_{table}$  that is 1.645. Therefore, the test decision is  $H_0$  rejected and  $H_1$  accepted, meaning that the problem-based learning model is effective to increase the students' interpersonal communication skills. The statement is also supported by the difference of  $t_{arithmetic}$  (4.469) in State Primary School Ngarum 1 (experimental class) higher than  $t_{arithmetic}$  (3.851) in State Primary School Pilangsari 3 (control class) in which the control class applies conventional learning model, while the experimental class applies problem-based learning model. In addition, the difference number ( $\Sigma D$ ) of pre-test and post-test scores in the experimental class is higher than the control class, which is  $9 > 7.286$ . Thus, it can be concluded that the problem-based learning model is more effective to improve the students' interpersonal communication skills than the conventional model.

Based on the results of the interview, it is known that most students like the problem-based learning model. In addition, students feel more confident to communicate with their friends i.e., they feel more comfortable communicating with their friends in study groups. The statement is also supported by the opinion of Hatisaru and Küçükturan (2009: 721) that it is frequently stated that using problem-based learning in math increases students' self-confidence and interest in learning despite having some disadvantages. Students are also more open to express their opinions when the PBL is applied. Because in PBL, students are required to be able to solve problems together by accommodating all the opinions of group members to formulate a solution for the problem.

The statement is also reinforced by the opinion of Lairopuii (2014: 37) that students who have the ability of interpersonal communication will be open to the ideas of others and willing to express their views on important matters in the problem-solving process. Therefore, it can be concluded that the problem-based learning model improves the ability of interpersonal communication.

The advantages of PBL based on interview results are that PBL conditions the students to learn actively and increases students' concentration to teachers. The disadvantages of PBL are that it takes a lot of time and makes the class atmosphere become rowdy. However, it can be minimized by the presence of careful

planning, good class management ability, and the application of rewards and punishment to discipline the students. The statement about the disadvantages of problem-based learning model are supported by the opinion of Triyanto (2009: 97) that the disadvantages of problem-based learning include: (1) complex learning preparation (tools, problems and concepts), (2) difficulty in finding relevant problems, (3) the frequent occurrence of miss-conception, and (4) time consumption in which this model takes considerable time in the process of inquiry. The statement is also in line with Nata's opinion that the disadvantages of problem-based learning model are: (1) there is often difficulty in finding problems that match the level of students' thinking; (2) it needs more time; (3) there is often a difficulty in changing the learning habit (Saleh, 2013: 210).

Based on this observation, it can be seen that the application of problem-based learning model has a positive impact on the students' interpersonal communication skills. This statement is evidenced by the enthusiasm of students to solve problems in the group. The enthusiasm shows the interest of students, meaning that the students show an interest in communicating with their friends. The reason is that when solving problems, students and the process of interpersonal communication are inseparable. The interest of these students is a form of the immediacy emergence. This statement is supported by DeVito's opinion (2001: 138-149) that one of interpersonal communication indicators is the presence of immediacy) Immediacy implies interest and attention as well as a relationship with others.

Based on the results of the test, interview and observation, it can be concluded that the application of problem based learning model can effectively increase the students' interpersonal communication skills compared to conventional model. In addition, there is a positive response from students to the problem based learning model.

The suggestions of this reasearch are teachers should be able to encourage the students' interpersonal communication skills by presenting two-way learning and have an understanding of various learning models especially those that are in accordance with thematic elementary school learning to increase the students' interpersonal communication skills.

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