

The Effect of the Application of the Problem-Based Learning Model on Communication Problem Solving Ability in Students of the Communication Study Program FISIP UNAS Jakarta



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ABSTRACT: Problem-based Learning (PBL) is a learning method where students are faced with problems that exist in society in real life, to then be used as a trigger in learning. PBL is seen as more effective than the conventional curriculum, which only relies on lectures and practicums. Learning activities in PBL include expert lectures, discussions in small groups, practicum in the laboratory, and clinical skills practicum. Through this activity, it is hoped that students can achieve satisfactory learning achievements, considering that the concept carried by this system is so ideal.

Problem-based learning is learning with an approach oriented to a constructivist view that contains contextual characteristics, collaborative, metacognitive thinking, and facilitates problem solving. Students are able to learn meaningfully that can develop higher-order thinking skills through problem solving. Through this learning, it is hoped that it can increase understanding of meaning, increase independence, increase the development of higher-level thinking skills, increase motivation, facilitate relationships between students and improve skills in building teamwork when solving problems and finding solutions.

The design of this study uses a quantitative approach with a survey method through the distribution of questionnaires to communication students of the Communication Psychology course. The results of the research can be used as reference to universities, especially the Communication Study Program, Faculty of Social and Political Sciences, UNAS Jakarta, to implement The problem-based learning model plays an active role in the learning process, especially in this independent curriculum.

KEYWORDS: Problem Basic Learning, Problem Solving, Constructivist

INTRODUCTION

In Indonesia, there are still many teaching methods that a lecturer conveys to his students in higher education so far still using a conventional approach with the method of teaching repetition or repetition. With this method, the education and mastery of the material taught by lecturers to students is less than optimal, making students less able to think critically, less independent, and less innovative.

With the application of this conventional method, it has a weakness, in the context of knowledge, where the knowledge conveyed is also standard. This can be seen from the knowledge that has been poured out in textbooks with the only material. The teaching method is only about listening, taking notes and memorizing texts, and at the time of assessment or final assessment of semester exams, usually only through exams with questions *Essay* or multiple choice. Thus, students are not given the freedom to pour out their ideas, ideas and thoughts related to the questions given.

Seeing the lack of independence and critical thinking of students with conventional learning methods, it is necessary to have a teaching method *constructive*, which focuses more on the role of learning activities and experiences in shaping the learning process where students as agents of knowledge schemata or knowledge assets that must be developed. So that lecturers only play the role of facilitators who encourage students to be more interactive in the learning process.

Learning in the era of society 5.0. is an era of competency skills needed by students are skills that exist in the 21st century, as conceptualized by Trilling and Fadel (2009) that 21st century skills consist of three main types of skills, there are: (1) *life and career skills*, (2) *learning and innovation skills*, and (3) *information media and technology skills*. The 21st century skills socialized by the Director General of Higher Education of the Ministry of Education and Culture (2017) consist of four types of skills, there are: (1) critical thinking and problem-solving skills (*Critical Thinking and Problem Solving Skill*) (2) communication skills (*Communication Skills*), (3) creativity and innovation (*Creativity and Innovation*), (4) collaboration (*Collaboration*). (Dzakaria, 2022).

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The competencies of 21st century skills need to be learned to students in order to face the challenges and demands of life *era society 5.0*. 21st century competency learning can be carried out using a constructive, student-centered and experiment-based paradigm learning model, there are: inquiry training, inquiry jurisprudence, group investigation and project-based learning. (Dzakaria, 2022).

One of the models that is currently attracting attention among educators is the *Problem Based Learning* (PBL) is a learning model in which the target student is involved in trying to solve problems with several stages of scientific methods so that students are expected to be able to learn knowledge related to the problem and at the same time are expected to be able to have skills in solving problems. PBL will be a learning approach that seeks to apply problems that occur in the real world, as a context for students to practice how to think critically and gain skills to solve problems. (Ibrahim, M, and M. Nur, 2010.)

When compared to conventional systems that do not run tutorials, the benefits of tutorials at universities that run them are very clear. Here students as students are not only smart in theory, the ability to solve problems in a case is very good. Students who get tutorials in the lecture process have a very high level of creativity and innovation. This is because during the tutorial process, students are more active, free to ask questions about scenarios they don't know, free to express opinions (*Brainstroming*), and after that they are given time to find a solution to the problem that arises. (Dzakaria, 2022).

Problem-based Learning It is an approach oriented to a constructivistic view that contains contextual characteristics, collaborative, metacognition thinking, and facilitates problem solving. In this case, students get meaningful learning opportunities and can develop higher-level thinking skills through problem solving. *Problem-based learning* is an approach that learns students as students who are confronted with practical problems, in the form of *ill-structured* or *open ended* through stimuli in learning (Boud and Falletti, 1997 in Demitra, 2003).

In accordance with the opinion of Nurhadi, (2004), that problem-based learning (*Problem-based Learning*) It is a learning approach that uses real-world problems as a context for students to learn about critical thinking and problem-solving skills, as well as to gain essential knowledge and concepts from the subject matter.

Howard Barrows and Kelson quoted by Ibrahim, M and M. Nur (2010) stated that *Problem Based Learning* (PBL) is a curriculum and learning process, designed in various problems that require students to gain important knowledge, make them proficient in solving problems, and have independent learning strategies and have the ability to participate in teams. The learning process uses a systemic approach in solving problems or facing challenges that will be needed in career and daily life and developing independence and confidence.

Some of the characteristics of PBL learning include: (1) students must be sensitive to their learning environment, (2) the problem simulation used should be in the form of *ill-structured*, and provoke free discovery (*free for inquiry*), (3) learning is integrated in various subjects, (4) the importance of collaboration, (4) learning should foster students' independence in solving problems, (5) problem-solving activities should be representative of real situations, (6) assessment should reveal students' progress in achieving goals in problem-solving, (7) PBL should be the basis of the curriculum not just learning.

One of the universities that has begun to apply a learning model to solving this problem is the National University of Jakarta, based on the opinion of the Head of the Curriculum Development Agency Heni Jusuf (2024), said that a learning method that uses projects or activities as a medium. This method requires students to be able to explore, assess, interpret, synthesize, and information to produce various forms of learning outcomes. He continued, the purpose of this project base is to improve the collective thinking of groups, by engaging with each other, and building other ideas.

Research on learning models in solving communication problems

It is necessary to find out whether it is important to apply the problem-based learning model in learning in the Communication Science Study Program, Faculty of Social and Political Sciences, National University which aims to develop student activities in collaborating, having critical thinking skills and having the ability to solve problems, communication skills as well as creativity and innovation in solving and solving problems in the field of communication.

Based on the background of the problems regarding the PBL program (*Program Based Learning*) or the application of learning models in problem solving, especially solving problems related to communication for communication students in the Communication Science study program, the author with the title of this research "The Influence of the Implementation of *Model Problem Based Learning* on Communication Problem Solving Ability in Communication Study Program students of FISIP UNAS Jakarta"

Problem Based Learning

Problem based learning is learning in which the delivery is carried out by presenting a problem, asking questions, facilitating investigations, and opening dialogues". According to Halimatus, the learning model *problem based learning* is a learning model that uses problems as a focus for 6 developing problem-solving, material and self-organizing skills". According to Helmo-Silver (Yunin), "*Problem Based Learning* is a set of teaching models that use problems as a focus to develop problem-solving, material, and self-organizing skills". Abdullah (2013)

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Problem Based Learning (PBL) is one of the learning models that requires students' mental activities to understand a learning concept through situations and problems presented at the beginning of learning with the aim of training students to solve problems using a problem-solving approach (Utomo et al., 2014).

According to Arends (2008) "Problem-based learning aims to help students develop thinking skills and problem-solving skills, learn the role of adults authentically, enable students to gain confidence in their own abilities, to think and become independent learners". So in Problem-Based Learning, the teacher's task is to formulate tasks to students, not to present lesson assignments.

Implementation of Problem Based Learning Model

Model Problem Based Learning, is a learning model as proposed by Joyce and Weil quoted (Trianto, 2010) is a plan or pattern that can be used to form a curriculum (long-term learning plan), design learning materials and guide learning in the classroom or others. The meaning of the learning model is a conceptual framework that describes a systematic procedure in organizing learning experiences to achieve certain learning goals, and serves as a guideline/reference for learning designers and teachers in planning teaching and learning activities.

PBL is a learning that provides *platform* for students to think, be active, exchange ideas and learn yes come to the surface in class discussions or group learning and provide motivation (Padmavathy & Mareesh, 2013). In addition, in PBL, students gain knowledge when solving problems through independent and group learning (Fitriyah, 2017). Therefore, this model is suitable for training students to solve problems with their knowledge. In line with these opinions, several opinions state that the PBL model emphasizes problem-solving activities in learning so that it can hone students' thinking skills (Gunantara, Suarjana, & Riastini, 2014; Rahmadani & Anugraheni, 2017).

Based on some of the opinions above, it can be concluded that the model is a long-term learning design, which contains a conceptual framework that can be used as a guide to achieve learning goals. If added with a model *Problem Based Learning*, so actually this model contains various problem-based learning concepts, students are presented with various problems and given the opportunity to solve their own problems.

Model PBL (*Problem Based Learning*) according to (Slavin, R. E., 2008) aims to make participants resilient and independent, accustomed to taking initiative and skilled in using critical thinking to solve problems. What is interesting about this learning model is the involvement of students in learning, they are given various problems by the teacher then students are expected to analyze the problem, diagnose the problem, formulate alternatives/problem-solving strategies, determine and apply problem-solving strategies and then evaluate the problem. Therefore, educators in this case must be skilled in choosing and sorting out what problems are important in accordance with the learning goals to be achieved. Don't be given too broad a problem that allows students to be unfocused and lack concentration, so even if a small but sharp and deep problem is better than broad but not focused on the problem, try to make the problem really touching and realistic, not abstract that can confuse learners.

Problem-based learning if it is really carried out properly and correctly, students will gain knowledge and skills in solving problems, both individually and in groups, so that this model allows students to be active and participatory in various activities, especially in the decision-making process, then students are more independent and independent without being too dependent on others. If this is owned by students, then in the future they will be used to making decisions together, and are also used to making decisions in differences.

The PBL learning model prevents this kind of thinking and ideas, this model aims to involve everyone who is related and has interests, in decision-making. If explored further, PBL has actually been applied epistemologically for a long time, although it may not be intentional or planned.

One of the experts whose thoughts color the dimensions of education, including the problem-based learning model, is John Dewey. According to him, as rewritten by Trianto, (2010) that problem-based learning is an interaction between stimulus and response, which is a relationship between the two directions of learning and the environment. The environment provides input to students in the form of help and problems, while the brain's nervous system functions to interpret the help effectively so that the problems faced can be investigated, assessed, analyzed, and solved properly.

Based on the theory developed by Borrow, Min Liu in Azis Shoimin (2014) explains the characteristics of *problen based learning* that is:

1. *Learning is student-centered,*

The learning process in PBL focuses more on students as learners. Therefore, PBL is also supported by the theory of constructivism where students are encouraged to be able to develop their own knowledge.

2. *Authentic problem form the organizing focus for learning,*

The problems presented to students are authentic problems so that students are able to easily understand the problem and can apply it in their professional life later.

3. *New information is acquired through self-directed learning,*

In the process of solving problems, students may not know and understand all the prerequisite knowledge so students try to find themselves through the source, either from books or other information.

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4. *Learning occurs in small groups*

In order to have scientific interaction and exchange of ideas in an effort to build knowledge collaboratively, PBM is carried out in small groups.

The group created demands a clear division of tasks and clear goal setting. Teachers act as facilitators. In the implementation of PBM, teachers only play the role of facilitators. Even so, teachers must always monitor the progress of student activities and encourage them to achieve the targets they want to achieve.

Basic Learning in Constructivism Theory

The meaning of learning according to constructivism is an active activity, where students build their own knowledge, find the meaning of what they learn and is the process of completing new concepts and ideas with the existing and existing frame of mind (Sardiman, 2012). Constructivism theory is defined as generative learning, which is the act of creating a meaning from what is learned. Constructivism is actually not a new idea, what we have been going through in our lives so far is a collection and coaching of experience after experience. This causes a person to have knowledge and become more dynamic.

The constructivist approach has several general concepts such as: 1. Students actively build on existing experiential knowledge. 2. In the context of learning, students should build their own knowledge, 3. The importance of actively fostering knowledge by students themselves through the process of mutual influence between previous learning and recent learning. 4. The most important element in this theory is that a person actively builds his knowledge by comparing new information with his existing understanding. 5. Imbalance is the main motivating factor for learning. This factor applies when a student realizes that his ideas are inconsistent or in accordance with scientific knowledge. 6. The teaching materials provided need to be relevant to the student experience to attract students.

In constructing knowledge, students are required to have a basis on how to make hypotheses and have the ability to test them, solve problems, find answers to the problems they encounter, hold reflections, express ideas and ideas so that new constructions are obtained.

Communication troubleshooting

Problem-solving is defined as the use (i.e. transcendence) of existing knowledge and skills to answer unanswered questions or difficult situations. Solving a problem is an example of one's own thinking. In problem solving, we try to achieve a goal but still don't have a way to get it. (Latifah, 2012)

According to Robert L. Solso (Mawaddah, 2015), "problem solving is a thought that is directed directly to determine a solution or solution to a specific problem". According to Polya (Indarwati, 2014), "problem solving is an effort to find a way out of a difficulty and achieve a goal that cannot be achieved immediately"

According to Sri Wardhani (2010) in the problem-solving process, the steps can be done in sequence although sometimes there are steps that do not have to be sequential, especially in difficult problem solving.

1. Understanding the problem, this step strongly emphasizes the success of obtaining a solution to the problem. This step involves deepening the problem situation, sorting out the facts, determining the relationship between the facts, and making the formulation of the problem question. Every problem written, even the simplest one, must be read repeatedly and the information contained in the problem carefully studied. Usually students have to restate the problem in their own language.
2. Creating a Problem Solving Plan, this step needs to be done with confidence when the problem can be understood. The solution plan is built by considering the structure of the problem and the questions that must be answered. If the problem is a routine problem with the task of writing an open mathematical sentence, then it is necessary to translate the problem into mathematical language. If the problem faced is a non-routine problem, then a plan needs to be made, sometimes even a new strategy needs to be described.
3. Implementing the Problem Solving Plan, to find the right solution, the plan that has been made in the steps must be implemented carefully. To get through, an estimate of the solution made is very necessary. Diagrams, tables, or sequences are carefully constructed so that the problem solver won't get confused.
4. Looking (checking) Again, during this step, a solution to the problem should be considered. The calculation must be checked again. Performing a check can involve solving that determines the accuracy of the computation by recounting.

If you make an estimate, then compare it with the solution. The solution must still fit into the root of the problem, even if it seems unreasonable. An important part of this step is the extension. This involves finding alternative solutions to the problem. According to Polya (in Erwin: 2016), the indicators of problem-solving ability include the following: 1. Understanding the problem 2. Prepare a settlement plan 3. Completing the completion plan 4. Review the overall answer

With the dynamics and changes that occur in society that demand the improvement and development of various learning models and approaches. Conventional learning that assumes that students of the Communication Science program as learners who are studying for knowledge do not have anything, like a bottle, the contents do not exist yet, so they must be filled and given various

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sciences and knowledge about Communication Science from various types and perspectives. That's why conventional learning that has been applied has always made students mere subjects.

After the global development of the world of education and learning, the community, in this case students, is no longer happy to be given learning with conventional approaches such as *Teacher Centre learning Oriented*, they want change and apply learning that makes them more independent, innovative, creative, and have the ability to solve problems in communication science, thus students are given the freedom to think creatively and innovatively through an approach *Student Centre learning Oriented*.

With the problems described above, the author formulates the problem of this research is "Is there an influence of the application of *Model Problem Based Learning* on Communication Problem Solving Ability in students of the Communication Study Program FISIP UNAS Jakarta.

The benefits and virtues of this research are to obtain research results in the form of a model *problem based learning* In problem solving that can be applied in the Communication Science Study Program, where the author wants to know the results of the application of the Problem Based Learning model is by increasing the learning independence of each student which is not always in the form of face-to-face lectures as usual. In addition, students can be more active in the learning process because Critical thinking and problem-solving skills,

Another priority of this study is to find out the application of the learning model *problem based learning* whether it can increase student independence in learning, increase creative and innovative thinking, because the application of problem-solving-based learning provides many benefits for students such as being more independent, able to think critically, able to work in groups, and more innovative.

Based on the problems that have been described above, the purpose of this study is to find out and analyze whether there is an influence of the application of *Model Problem Based Learning* on Communication Problem Solving Ability in students of the Communication Study Program FISIP UNAS Jakarta.

Hypothesis

Ha : There is an effect of the Application of the Problem Based Learning Model on Communication Problem Solving Ability in students of the Communication Study Program FISIP UNAS Jakarta

H0 : There is no effect of the Application of the Problem Based Learning Model on Communication Problem Solving Ability in students of the Communication Study Program FISIP UNAS Jakarta

Operational Definition

Variabel X (Implementation of Problem Based Learning Model)

The application of the learning model in solving problems during lectures in class, with the following dimensions:

1. Learning is student-centered
The learning process in PBL in the classroom focuses more on students as learners so that they can develop their own knowledge.
2. Authentic problem form the organizing focus for learning
The problems presented through the basic learning problem model make students able to easily understand these problems and can apply them in their professional lives later.
3. New information is acquired through self-directed learning
By applying basic learning problems, students try to find themselves through the source, either from books or other information.
4. Learning occurs in small groups
With basic learning problems, there is scientific interaction and exchange of ideas in an effort to build knowledge collaboratively.

Variable Y (Communication problem-solving)

Students use their knowledge and skills to answer unanswered questions or problems or difficult situations in classroom learning, with the following dimensions:

1. Understanding the Problem
Students delve into problem situations, sort out facts, determine relationships between facts and make formulations of problem questions.
2. Creating a Troubleshooting Plan
Students are confident when the problem can be understood. The solution plan is built by considering the structure of the problem and the questions that must be answered.
3. Implementing a Problem Solving Plan
Students look for the right solution, with a plan that has been made that is carefully implemented.
4. Viewing (checking) Back

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Students recheck so that it can involve solving that determines accuracy and solves problems

METHODS

The type of research used is quantitative with explanatory analysis, where explanatory is research that puts one variable in a box with another variable to test the hypothesis (Bungin, B, 2011). Based on this type of explanatory analysis, the researcher will explain the relationship between variable X (Application of Problem Based Learning model) and variable Y (Communication problem solving), and explain whether there is an influence between the two variables.

The research method used in this study is a survey method, using a questionnaire as an instrument for collecting data, because there are variables that will be examined in relation and the purpose is to provide a structured, factual picture of the facts of the relationship between the variables studied. In accordance with Arikunto (2019) "Research methods are the main way that researchers use to achieve goals and determine answers to the problems posed."

The data collection used by the researcher is with primary data in the form of questionnaires obtained from the first data source or the first hand in the field. Primary data is data obtained from first-hand or first-hand data sources in the field. (Kriyantono, 2009).

RESULTS

The research was conducted in the even semester of 2023 in February – August 2024 with the research location at the Communication Studies Study Program, Faculty of Social and Political Sciences, National University. Fisip UNAS was established based on the Decree of the Minister of Education and Culture No. 0260/U/1976 on October 21, 1976 the Faculty of Social, Economics and Politics changed its name to the Faculty of Political Science.

The Faculty of Political Science then changed its name again on July 27, 1985 based on the Decree of the Minister of Education and Culture No. 0333/0/1985 to become the Faculty of Social and Political Sciences of the National University or abbreviated as FISIP-UNAS until now.

The Communication Science Study Program has 3 concentrations, there are; Journalism, Public Relations and Advertising. Since 2019 the Communication Studies Study Program has achieved A accreditation, based on the Decree of BAN PT number: 254/SK/BAN-PT/Akred/S/III/2019 dated March 5, 2019.

Characteristics of Responden

In this study, the subjects of the research are students of the communication science study program of the National University of all concentrations, there are; public relations, journalism and advertising who take courses *Creative Thinking*. The results of the study related to the characteristics of the respondents can be explained through the tables below:

Table 1: Gender

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
Man	20	43.5	43.5	45.7
Woman	25	54.3	54.3	54.3
Total	45	100.0	100.0	100.0

Table 2

Age of Respondents

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
19 Years	3	6.5	6.5	8.7
20 Years	27	58.7	58.7	67.4
21 Years	5	10.9	10.9	78.3
22 Years	8	17.4	17.4	95.7
23 Years	1	2.2	2.2	97.8
24 Years	1	2.2	2.2	
Total	45	100.0	100.0	100.0

Application of the Problem Based Learning Model (X)

Based on the results of the research in the previous chapter, it can be seen in the table below:

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Table 3: Implementation of Problem Based Learning Model (X)

n = 45							
No	Implementation of Problem Based Learning Model (X)	1 STS	2 TS	3 S	4 SS	Mean	Ket
1	Learning is student-centered	-	1	26	18	3,37	Agree
2	Authentic problem form the organizing focus for learning	-	-	28	17	2,98	Agree
3	New information is acquired through self-directed learning	-	2	26	17	3.33	Agree
4	Learning occurs in small groups	-	2	25	18	3,36	Agree

Based on the results of the study that can be seen in table 3, above, it can be seen for the dimensions *learning is student centered* or learning centered on the needs of students, on average (3.37) respondents agreed that they Students who are active and independent in their learning process, who are responsible and take the initiative to recognize their learning needs, search and find their own sources of information to be able to answer their needs, are able to build and present their knowledge based on their needs and resources found while studying independently in class.

For dimensions *authentic problem form the organizing focus for learning* or authentic problems that form the focus on organizing learning, on average (2.98) respondents agreed that in classroom learning, the problems presented to them are authentic problems so that they are able to easily understand and solve these problems and are able to apply them also in their professional life after they graduate.

Dimension *new information is acquired through self-directed learning* or new information obtained from independent learning outcomes, on average (3.33) respondents stated that classroom learning learns about their readiness to learn independently with several indicators such as the nature of initiative, learning without help from others, where the assistance provided is formulating learning objectives, identifying learning resources, determining learning strategies, and evaluating learning outcomes. Through independent learning, students can obtain various new information that they need to solve various problems that will be solved.

The dimension of learning occurs in small groups, on average (3.36) respondents agreed that the problem-solving process carried out by students in the class in groups with a small number of students with the aim of scientific interaction and exchange of ideas in an effort to build knowledge collaboratively. With learning carried out in small groups that are made to demand a clear division of tasks and clear goal setting.

Table 4: Communication Problem Solving (Y)

N = 45							
No	Communication Problem Solving (Y)	1 STS	2 TS	3 S	4 SS	Mean	Ket
1	Understanding the Problem	-	1	31	13	3,27	Agree
2	Creating a Troubleshooting Plan	-	3	26	16	3,30	Agree
3	Implementing a Problem Solving Plan	-	3	28	14	3,24	Agree
4	Viewing (checking) Back	-	2	27	16	3,31	Agree

Based on table 4 above, it can be seen that for the dimension of understanding the problem, on average (3.27%) students agree that in solving communication problems they must understand the problem Students delve into problem situations, sort out facts, determine relationships between facts, and make formulations of problem questions.

In table 4 above it is known for the dimensions making a problem-solving plan, on average (3.30%) students agreed that in solving communication problems it is necessary to make a plan in problem-solving. There needs to be a solution plan that is built by considering the structure of the problem and the questions that must be answered.

In table 4 above it is known for the dimensions implement a problem-solving plan, On average (3.24%) students agreed that in solving communication problems, they must implement the problem-solving plan that has been made. Students are looking for the right solution, with a plan that has been made that is implemented carefully.

In table 4 above it is known for the dimensions Seeing (checking) again, on average (3.31%) students agree that in solving communication problems must have problem solutions that must be considered. Calculations must be double-checked, doing a check can involve solving that determines the accuracy of the computation by recounting.

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Coefficient

Table 5

Coefficientsa

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.171	4.723		1.095	.280
Implementation of Problem Based Learning Model	.853	.117	.744	7.312	.000

a. Dependent Variable: Solving Communication Problems

Based on the results of data processing, table 5 above is known that column B in constan (a) is 5.171, while the value of the variable The application of the Problem Based Learning Model (B) is 0.853 so that the regression model equation can be written as follows:

$$Y = a + bX \text{ atau } 5,171 + 0,853$$

- a) With a regression coefficient of X of 0.853, it is stated that for every 1% increase in the value of the application of the problem-based learning model, the value of solving communication problems increases by 0.853. The regression coefficient has a positive value, so it can be said that the direction of influence of the application of the problem-based model (X) on communication problem solving (Y) is positive.
- b) Based on the significance value of the *Coefficients* table, a significance value of 0.000 was obtained, where the value was less than 0.05 or $0.000 < 0.05$, so it can be concluded that the application of the problem-based learning model (X) has an effect on solving communication problems (Y)
- c) Based on the value of t: it is known that the tcount value is $7.312 >$ from the ttable (n 45) which is 2.013 or $tcount >$ ttable, so it can be concluded that the application of the problem based learning model (X) has an effect on solving communication problems (Y)

Determination

Table 6: Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.744a	.554	.544	3.32942	.554	53.458	1	43	.000

a. Predictors: (Constant), Implementation of Problem Based Learning Model

Table 6 above explains the magnitude of the correlation or relationship (R) value, which is 0.744 and explains the magnitude of the percentage of influence The application of the problem-based learning model to solving communication problems is called the determination coefficient which is the result of the multiplication of R. A determination (R2) of 0.544 was obtained which means that the effect of the application of the problem-based learning model on solving communication problems is 55.4%. While the remaining 44.6% was influenced by other factors other than the factors or variables of the application of the problem-based learning model.

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Regression

Table 7: Regression

Model	Sum of Squares	df	Mean B.3 Square	F	Mr.
Regression	592.587	1	592.587	53.458	.000b
Residual	476.658	43	11.085		
Total	1069.244	44			

In table 7 above, it is known that F calculates = 53.458 with a probability significance level of $0.000 < 0.005$, then the regression model can be used to predict the variable of solving communication problems

CONCLUSION

The application of the Problem Based Learning (X) Model in the classroom, the average respondent agreed (3.26) if in the application of the model must pay attention to the following things; a) Learning should be more centered or based on student needs, b) Authentic problems that form a focus on organizing learning, c) New information obtained from learning outcomes independently, and d) Learning occurs or is carried out in small groups

Communication problem solving (Y) applied by students in class when applying the problem-based learning model, the average respondent agreed (3.28) by paying attention to the following: a) Understanding the problem, b) Making a Problem Solving plan, c) Implementing the Problem Solving Plan, d) Looking (checking) again

The regression coefficient is positive, so the direction of the influence of the application of the problem-based model (X) on the solution of communication problems (Y) is positive. Based on the significance value of the table *Coefficients* obtained a significance value of 0.000 where the value is less than 0.05 or $0.000 < 0.05$, so it can be concluded that the application of the problem-based learning model (X) has an effect on solving communication problems (Y)

Based on the value of t: it is known that the value of tcount 7.312 > from the table (N 45), which is 2.013 or tcalculated > the table, so it can be concluded that the application of the problem-based learning model (X) has an effect on solving communication problems (Y)

The effect of the application of the problem-based learning model on communication problem solving was 55.4%. While the remaining 44.6% was influenced by factors other than factors or variables in the application of the problem-based learning model.

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