

Process Development Process Problem Based Learning for Writing Students' Explanatory Texts in Class XI SMK PAB 03 Medan

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Abstract

This study aims to describe the process of developing problem-based learning models (Problem Based Learning) to write explanatory texts of students in class XI SMK PAB 03 Medan. This research was conducted at SMK PAB 3 Medan located on Jl. Mosque No. 1, Medan Estate, Medan, Medan Baru District. The research will be conducted in July 2019 to October 2019. The population of this research is all students of class XI SMK PAB 3 Medan in 2019/2020 academic year. The process of developing problem-based learning models on explanatory text writing material in class XI students of SMK PAB 03 Medan is in general aspects of the assessment given by reviewers, the product design of problem-based learning model development is very good (SB) with an average overall score of 89.5% with very good assessment criteria.

Keywords

problem based learning;
teks eksplanasi; SMK
PAB 03 Medan



I. Introduction

The learning model used by teachers in Indonesian subjects has not been able to provide conceptual knowledge optimally. The strategies and models used have not caused students' interest to better understand certain material.

The statement is in line with research conducted by Atikah (2015: 2) which states that there are still many teachers who carry out learning with only oriented to convey knowledge to students. Based on this thinking, many teachers choose lecture techniques, assignments, and exercises in delivering material to students. As a result learning becomes monotonous, less stimulating the development of children's potential, less motivating children to excel, thus impacting on the low competence of students.

One of the Indonesian material learned in class XI SMA / MA / SMK / MAK is explanatory text found in Basic Competence 4.2 "producing coherent explanatory texts according to the characteristics of the text to be made orally or in writing." This basic competency aims to make students able to write explanatory texts based on the characteristics of the text to be made.

Lack of enthusiasm of students in learning, especially in writing explanatory text material. The reason is that the learning model used by teachers in Indonesian subjects cannot provide optimal conceptual knowledge. When viewed from the teacher factor, teachers tend to use the same learning method repeatedly for all subject matter, namely the lecture, practice, question and answer, assignment, and teacher methods only use textbooks or worksheets that have been made by an agency in learning without any the desire to develop their own learning model.

Based on the above problems, researchers took the initiative to develop a problem-based learning model for explanatory text writing material to make students more easily write explanatory texts. The learning model that will be developed is the problem based learning model.

The problem based learning model is a model where the delivery is done by presenting a problem, asking questions, facilitating investigation and opening dialogue. The problem based learning model is learning that is obtained through a process towards understanding the resolution of a problem.

Based on this background, researchers are encouraged to develop a model of learning to write explanatory texts through a problem based learning model. Learning models that will be developed in the form of modifying the steps of the learning model. Development of learning models in the form of learning implementation plans (RPP) with RPP specifications that are different from the RPP contained in the previous model

II. Review of Literature

2.1 Learning Model

Weisinger and Arends (in Imelda 2019) explain that one of the recommended learning models in the 2013 curriculum that can be used to improve HOTS is Problem Based Learning (PBL). Problem-based learning is a student-centered learning approach that organizes curriculum and learning in unstructured situations and provides realworld problems.

The success of learning is largely determined by the learning model used. The importance of a model in learning is stated by Hosnan (2014: 338) as follows:

The learning model is a conceptual / operational framework, which describes a systematic procedure in organizing learning problems to achieve certain learning goals and serves as a guide for teachers in planning, and implementing learning activities.

Muryati (2011: 58), the learning model is a reference to a learning approach including its goals, syntax, environment, and management system. Arends (in Suprijono, 2013: 46) learning model refers to the approach used including learning objectives, stages in learning activities, learning environment and classroom management. Another opinion expressed by Joice & Weil (in Isjoni, 2013: 50) the learning model is a pattern or plan that has been planned in such a way and is used to arrange the curriculum, arrange subject matter, and give instructions to the instructors in their class. While Istarani (2011: 1) learning model is a whole series of presentation of teaching material that covers all aspects before, being and after learning by the teacher and all related facilities that are used directly or indirectly in the learning process. Sutanto (2017: 3), the learning model is a learning model is a conceptual framework that describes a systematic procedure in analyzing learning problems to achieve learning goals.

Joyce and Weill (in 2013: 73), describe learning models as plans or patterns that can be used to shape the curriculum, design instructional materials, which guide the teaching process in the classroom or in different settings.

Models of teaching are really models of learning. As we help students acquire information, ideas, skills, values, ways of thinking, and means of expressing themselves, we are also teaching them how to learn. In fact the most important long-term outcome of instruction may be the students' increased capabilities to learn more easily and effectively in the future, both because of the knowledge and skills they have acquired and because they have mastered learning processes (Joyce and Weill, 2009).

Sevenhuysen, et al (2014: 210) Volume: 9 Number: 1, year: 2016, in his research said that "Learning model is the design of learning tailored to the needs of students, There is knowledge of how specific aspects of the peer interaction contribute to learning and how to maximize the impact on learning outcomes "

Learning models are learning activities that are tailored to students' needs, knowledge about how to understand certain aspects of interaction and contribute to learning and how to maximize the impact on learning outcomes.

Muryati, (2011: 78) grouped the characteristics of learning models into six parts, namely:

- a. Based on educational theory and learning theory from certain experts. For example, the group learning model developed by Herbert Thelen based on John Dewey's theory. This model is designed to train student participation in groups democratically.
- b. Have a specific educational mission or objectives, for example the inductive learning model is designed to develop the inductive thinking process.
- c. Can be used as a guideline for improving teaching and learning activities in the classroom, for example the synaptic model is designed to improve creativity in composing lessons.
- d. Having parts of the model called (1) sequence of learning steps (syntax), (2) the principles of reaction, (3) social systems, (4) will implement a learning model.
- e. Has an impact as a result of applied learning models. These impacts include learning impacts, i.e. measurable learning outcomes, and accompanying impacts, i.e. long-term learning outcomes.
- f. Make teaching preparations (instructional design) with the learning guidelines chosen.

2.2 Development of Learning Models

Amri (2016: 257), Model is something that illustrates the existence of thinking patterns. A model usually describes the whole concept that is interrelated. In other words, the model can also be seen as an effort and to concretize a theory as well as an analogy and representation of the variables contained in the theory.

Amri (2016: 258) Development of learning, it requires at least five criteria that must be met in the learning model, namely:

- a. have goals
- b. harmony with purpose
- c. systematic
- d. have evaluation activities
- e. a lot of fun

The learning system can be likened to a production process consisting of an input-process-output part, which is integrated with one another.

Hamdani (2010: 24), the development of learning models is a series of processes or activities carried out to produce a learning model based on existing development theories. Imas and Berlin (2016: 19), stated as follows:

The concept of developing learning models, the teacher must be able to ensure that the teaching or learning model must contain a rationale that is based on theory, contains a series of strategic steps undertaken by both teachers and students, supported by a visiting system or learning facilities, and methods of evaluating student learning progress.

2.3 Problem Based Learning

According to Barrow (in Huda 2014: 271), a problem based learning model is learning that is obtained through a process leading to an understanding of the resolution of a problem. The problem is found first in the learning process.

The same opinion was also conveyed by Ridwan (2014: 127). Problem Based Learning model is a model which is delivered by presenting a problem, asking questions, facilitating investigation and opening dialogue.

Hosnan (2014: 295), he gave an understanding that the learning model Problem Based Learning is a learning model with a student learning approach to authentic problems so students can organize their own knowledge, develop higher skills and inquiry, independent students and increase self-confidence. The main objective of the Problem Based Learning model is not to convey a large amount of knowledge to students, but rather to develop critical thinking skills and problem solving abilities and at the same time develop the ability of students to actively build their own knowledge.

Problem based learning focuses on student learning and not on teacher teaching. Meanwhile, Lloyd-Jones, Margeston, and Bligh (1998: 494) explain the important features of problem based learning. They say that there are three basic elements that should emerge in the implementation of problem based learning, namely: the initial problem (initiating trigger), researching the issues identified earlier, and utilizing knowledge in further understanding the problem situation.

Problem based learning model with student learning approaches on authentic problems so students can organize their own knowledge, develop higher skills, independent students, increase student confidence, use real life problems as something students must learn to train and improve critical thinking and problem solving and gaining knowledge of important concepts.

2.4 Design Development of Problem Based Learning Models for Learning Text Explanations

Based on the steps of the problem based learning model that has been proposed by Hosnan (2014: 297), the researcher will develop the steps of the problem based learning model as follows:

- a. Student orientation to problems.
- b. Form a study group
- c. Organizing students to want to learn
- d. Guide individual and group investigations.
- e. Conceptualizing solutions (finding solutions) from problems.
- f. Develop and present the work.
- g. Analyze and evaluate the problem solving process.
- h. Revise work or writing.
- i. Give awards / rewards

The following learning activities are used for Basic Competence "producing explanatory texts verbally or in writing by paying attention to structure and language." This basic competency aims to make students able to write explanatory texts based on their structure and language.

2.5 Explanation Text

Explanation text contains the process or activity of an event. Blake Education (2006: 50) states, when the writer begins to write an explanation, the writer first sets the

phenomenon, then explains why or how the phenomenon occurred. The author must obtain a lot of content knowledge before starting to write explanatory texts.

There are various types of explanation based on the question of how and why. Examples of explanatory texts that explain an event or how something works, such as explaining how a lawn mower works, how technology explains a computer works, and how natural phenomena occur. Examples of explanatory texts that explain why something happens, including explaining why there is mist on the bathroom mirror when we shower, why the earth has gravity. But other types can explain similarities and differences between objects, explain the procedure to the reader how to do something and detail how it works.

III. Research Method

This research was conducted at SMK PAB 3 Medan located on Jl. Mosque No. 1, Medan Estate, Medan, Medan Baru District The research will be conducted in July 2019 to October 2019. The population of this research is all students of class XI SMK PAB 3 Medan in 2019/2020 academic year. Students are divided into three classes, as shown in table 1 below:

Table 1. Breakdown of the Total Population of Grade XI Students of SMK PAB 03 Medan Learning Year 2019/2020

No.	Class	Total students
1.	XIAK-1	27
2.	XI AP-1	28
amount		55

Sampling used in this study determined all students of class XI SMK PAB 3 Medan as many as 57 students. For a limited test, the study took 30% of the total number of subjects, 18 people were taken from class IX AP-1, then continued with all students for a limited trial.

The development of this learning model, was developed specifically to study explanatory text material. The model that will be developed in this study is one of the Student Centered Oriented learning models (learner-centered learning), which is a problem-based learning model. based on the research model and learning system development namely the 4-D model. stands for Define, Design, Develop, Disseminate.

IV. Discussion

4.1 Description of Data Process Development Process Problem Based Learning Model for Writing Explanatory Texts in Class XI BAO 03 Medan

a. Defining Phase

The development of learning models is needed by students in the learning process to improve the quality of learning. Next, the researcher planned to make a guidebook in the form of a problem-based learning model on explanatory text writing material.

Table 2. Observation Results Data at the Defining Phase Performed to the Teacher

No	Questionnaire	Answer	Frequency		Percentage
			Student	Total	
1.	The teacher has used the learning model in delivering explanatory text material?	- Yes	1	2	50%
		- No	1		50%
2.	The teacher has used a learning model that is in accordance with the explanatory text writing material?	- Yes	0	2	0%
		- No	2		100%
3.	The teacher has used a learning model that can help understand the learning process of explanatory text writing material?	- Yes	1	2	50%
		- No	1		50%
4.	The teacher has used a learning model that can meet the needs and motivate students in learning explanatory text writing material?	- Yes	1	2	50%
		- No	1		50%
5.	The teacher has applied the steps of the learning model that is used interestingly and is well used in learning explanatory text writing material?	- Yes	0	2	-
		- No	2		50%
6.	The teacher has implemented the presentation of the steps in the learning model systematically in learning to write explanatory texts?	- Yes	0	2	-
		- No	2		50%
7.	The teacher has applied a learning model that can arouse interest and confidence in learning explanatory text writing material?	- Yes	1	2	50%
		- No	1		50%
8.	The teacher has applied a learning model that students can learn independently for students in writing explanatory text material?	- Yes	0	2	-
		- No	2		100%
9.	The teacher has implemented a learning model that provides opportunities for students to	- Yes	0	2	0

	share with each other discussing in groups in writing explanatory text material?	- No	2		100%
10.	The teacher has applied a learning model that gives praise or reward to students who succeed in writing explanatory text material?	- Yes	0	2	-
		- No	2		100%

b. Design

The problem based learning model developed is an adaptation of the learning model proposed by Hosnan (2014: 295). The developed model features can be seen in Table 3 below:

Table 3. Features of the Problem Based Learning Model Developed

Learning Models Before Developing	Learning Model After Developed
<p style="text-align: center;">Phase 1</p> <p>Student orientation to problems.</p> <ul style="list-style-type: none"> ➤ Learning objectives ➤ Phenomenon / story ➤ Motivation 	<p style="text-align: center;">Phase 1</p> <p>Student orientation to problems.</p> <ul style="list-style-type: none"> ➤ Opening ➤ Phenomenon through pictures / videos: <ul style="list-style-type: none"> - Volcanic eruption - Global warming
<p style="text-align: center;">Phase 2</p> <p>Organizing students to want to learn.</p> <ul style="list-style-type: none"> ➤ Duty 	<p style="text-align: center;">Phase 2</p> <p>Form a study group.</p> <ul style="list-style-type: none"> ➤ Study groups ➤ Determine the theme
<p style="text-align: center;">Phase 3</p> <p>Guide individual and group investigations.</p> <ul style="list-style-type: none"> ➤ Gather problem solving information 	<p style="text-align: center;">Phase 3</p> <p>Organizing students to want to learn.</p> <ul style="list-style-type: none"> ➤ Motivation is actively involved, giving examples of cases and finding solutions. ➤ Give worksheets. ➤ Searching for information.
<p style="text-align: center;">Phase 4</p> <p>Develop and present the work.</p> <ul style="list-style-type: none"> ➤ Planning works 	<p style="text-align: center;">Phase 4</p> <p>Guide individual and group investigations.</p> <ul style="list-style-type: none"> ➤ Doing questions and answers or exchanging information obtained.
	<p style="text-align: center;">Phase 5</p> <p>Conceptualizing a solution</p> <ul style="list-style-type: none"> ➤ Finding and determining solutions to problems.
<p style="text-align: center;">Phase 5</p> <p>Analyze and evaluate the problemsolving process.</p>	<p style="text-align: center;">Phase 6</p> <p>Analyze and evaluate the problem solving process.</p>

➤ Reflection / Evaluation	➤ Reflection / Evaluation
	<p style="text-align: center;">Phase 7</p> <p>Analyze and evaluate the problem solving process.</p> <ul style="list-style-type: none"> ➤ Review the work of each group ➤ Explanation about overlapping matters or those that are not in accordance with the problem solving process.
	<p style="text-align: center;">Phase 8</p> <p>Make revisions to the work or writing.</p> <ul style="list-style-type: none"> ➤ Make writing improvements.
	<p style="text-align: center;">Phase 9</p> <p>Give awards / rewards.</p> <ul style="list-style-type: none"> ➤ Granting values and awards.

c. Development Phase

This stage of development is the final stage of the design process of developing a learning model. The development phase is the stage to produce product development which is carried out through two steps, namely :

- 1) Expert Appraisal is a technique to validate or assess the feasibility of product design. In this activity an evaluation is carried out by experts in their fields. The suggestions given are used to improve the learning material and design that has been prepared;
- 2) Development testing, is a trial activity that is limited trials in small groups and trials extended to the actual target subject. At the time of this trial the response data, reaction or comment were sought from the target user of the model. Test results are used to improve the product. After the product is repaired, it is then tested again until it gets effective results.

The product of this research is in the form of developing the steps of a problem based learning model so as to produce a problem based learning model with nine steps in learning to write an exposition text. The development of the learning steps is done by modifying the phases contained in the problem based learning model, as revealed by Hosnan (2014: 295) contained in Figure 1 below:

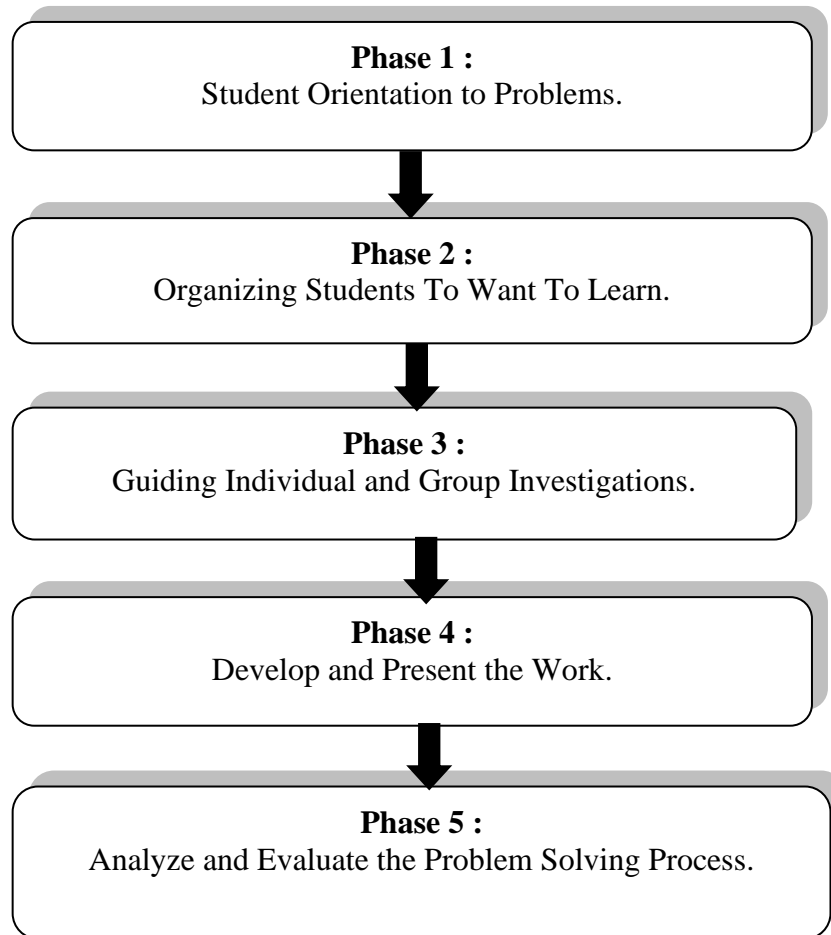


Figure 1 Steps of a Problem Based Learning Model Before It Is Developed

The assessment of development products from peers is an initial improvement given by co-workers (peers) who are teachers with the same educational qualifications. The reviewers are two teachers who both teach at SMK PAB 3 Medan, namely Rika Kartika, M.Pd and Lisa Andriani, S.Pd. The steps of this trial can be seen in Figure 2 below:

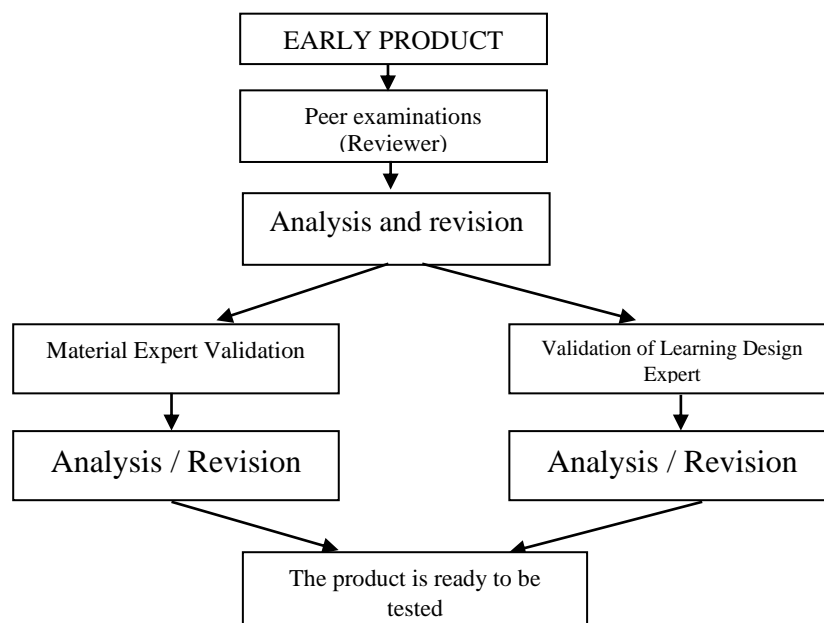


Figure 2 Implementation of the Design Stage

In this stage colleagues give suggestions and improvements to the initial product design products known as the aim to improve the quality of problem-based learning models for explanatory text writing material.

The revision results are in the form of an assessment score of the components of the learning implementation plan which can be seen in the following table.

Table 4. Peer Assessment Scores on Learning Designs

NO	COMPONENTS FOR LEARNING IMPLEMENTATION PLAN	Reviewer Results (Validation) in Scores	
I. Supporting Theory			
1.	The level of concordance between the theories supporting the formation of the PMB model.	4	4
2.	Coverage of comprehensive supporting theories.	4	4
II. Syntax			
3.	The stages of learning (syntax) are based on solid theories. That stage is: a) Apperception b) Student orientation to the problem. c) The teacher gives some problems with pictures. d) Forming study groups. e) Organizing students to want to learn. f) Guide individual and group investigations. g) Conceptualizing solutions (finding solutions) from problems. h) Develop and present the work.	5	5

	i) Analyze and evaluate the problem solving process. j) Revise the work or writing. k) <i>Give awards / rewards.</i>		
III. Social system			
4.	The sequence of learning activities reflects text-based problem solving.	5	5
5.	Coverage of important aspects in learning to write explanatory texts.	4	4
6.	Theoretically, the teacher embodies the implementation of syntax.	4	5
7.	Collaboration and collaboration with group interaction patterns.	5	5
8.	Democratic situation (atmosphere) (forming groups, discussing, asking questions, submitting opinions, respecting each other, arguing in solving problems.	5	4
IV. Learning Implementation			
9.	Details of planning tasks (goal setting and goal achievement strategies, model books, availability of problem banks, availability of learning tools and evaluation / assessment tools)	4	4
10.	Clarity of learning models.	5	5
11.	Clarity of the translation of student activities and the teacher's role.	4	5
V. Learning model			
12.	The suitability of the material with the Learning Model.	4	4
13.	The suitability of the learning model with the characteristics of students.	4	4
14.	The suitability of the learning model with a scientific approach.	4	4
15.	The learning model motivates students.	5	5
16.	The Learning Model developed makes it easier for students to understand the learning material.	5	5
VI. Assessment / Evaluation			
17.	Compliance with the techniques and forms of authentic assessment	4	4
18.	Compliance with indicators of competency achievement	4	4
19.	The suitability of the steps of the learning model with the material	5	5
20.	Compliance with scoring guidelines	4	5
Total score		88	90
Average Number of Scores		92,5	

Based on the amount of data obtained from the examination results of peers (reviewers) through a questionnaire, the quality of learning design is very good with an average score of

80% in general in the range of the assessment score percentage of $75\% \leq X \leq 100\%$ with very good criteria (SB).

The validation product is carried out to obtain information that will be used to improve learning models developed with aspects that exist in the assessment of learning in the form of corrections, criticisms, and suggestions are used as a basis for revising and refining learning tools. The results given by learning design experts can be seen in the following table 5.

Table 5. Data Validation Results in Learning Model Design

NO	COMPONENTS FOR LEARNING IMPLEMENTATION PLAN	Validator		%	Kriteria
		I	II		
VII. Supporting Theory					
1.	The level of concordance between the theories supporting the formation of the PMB model.	4	4	80%	
2.	Coverage of comprehensive supporting theories.	4	4	80%	Valid
VIII. Syntax					
3.	The stages of learning (syntax) are based on solid theories. That stage is: a) Apperception b) Student orientation to the problem. c) The teacher gives some problems with pictures. d) Forming study groups. e) Organizing students to want to learn. f) Guide individual and group investigations. g) Conceptualizing solutions (finding solutions) from problems. h) Develop and present the work. i) Analyze and evaluate the problem solving process. j) Revise the work or writing. k) Give awards / rewards.	5	5	100 %	Very Valid
IX. Social system					
4.	The sequence of learning activities reflects text-based problem solving.	5	5	100 %	Very Valid
5.	Coverage of important aspects in learning to write explanatory texts.	4	4	80%	Valid
6.	Theoretically, the teacher embodies the implementation of syntax.	4	5	90%	Very Valid
7.	Collaboration and collaboration with group interaction patterns.	5	5	100 %	Very Valid
8.	Democratic situation (atmosphere) (forming groups, discussing, asking questions, submitting opinions, respecting each other, arguing in solving problems.	5	4	90%	Very Valid
X. Learning Implementation					
9.	Details of planning tasks (goal setting and goal	4	4	80%	Valid

	achievement strategies, model books, availability of problem banks, availability of learning tools and evaluation / assessment tools)				
10.	Clarity of learning models	5	5	100 %	Very Valid
11.	Clarity of the translation of student activities and the teacher's role.	4	5	90%	Very Valid
XI. Learning model					
12.	The suitability of the material with the Learning Model..	4	4	80%	Valid
13.	The suitability of the learning model with the characteristics of students.	4	4	80%	Valid
14.	The suitability of the learning model with a scientific approach.	4	4	80%	Valid
15.	The learning model motivates students.	5	5	100 %	Very Valid
16.	The Learning Model developed makes it easier for students to understand the learning material.	5	5	100 %	Very Valid
XII.. Assessment / Evaluation					
17.	Compliance with the techniques and forms of authentic assessment	5	4	90%	Very Valid
18.	Compliance with indicators of competency achievement	4	4	80%	Valid
19.	The suitability of the steps of the learning model with the material	5	5	100 %	Very Valid
20.	Compliance with scoring guidelines	4	5	90%	Very Valid
Total score		88	89	179	
Average Number of Scores		89,5		Very Valid	

Based on the results of the validation conducted by the learning design expert as a validator for the product design developed, the percentage score obtained with an average score of 89.5%. This shows that the products developed are in the range of 75% <X <100% with very good criteria (SB).

The validation of the material contained in the learning model developed aims to obtain information. The information is used to see the feasibility of the material in accordance with the development of the learning model designed. Material expert validation carried out by two validators, namely:

- 1) Prof. Amrin Saragih, M.A., Ph. D. Lecturer of the Faculty of Applied Linguistics in English (LTBI) Medan State University with advice:
 - Because researchers majoring in Indonesian foreign writing are written in Indonesian.
- 2) Dr.Malan Lubis, M.Hum. Lecturer in the Indonesian Language and Literature Faculty, Medan State University with advice:
 - Display of material presented is relevant images in the worksheet so that the material presented as teaching material becomes more quality and attractive and is suitable for use.

The researcher will explain the product produced then the validator will assess the results of the researcher product and provide suggestions so that the product is better used in the learning process. The values given by experts in learning materials can be seen in table 6 below:

Table 6. Validation Instruments for Content

Sub Component	INDICATOR	Validator		%	Criteria
		I	II		
A. Material compatibility with SK and KD	1. The material is relevant to the competencies students have mastered	4	4	80%	Valid
	2. The depth of the material is relevant to the competencies students must master	5	4	90%	Very Valid
	3. The description of the material is sufficient to meet the demands of the curriculum	5	5	100%	Very Valid
B. Accuracy	4. The material taught is in accordance with scientific truth	5	5	100%	Very Valid
	5. The material taught is in accordance with the latest developments	5	4	90%	Very Valid
	6. The material taught is in accordance with daily life	4	4	80%	Valid
	7. Packaging material in accordance with scientific development	5	5	100%	Very Valid
	8. The accuracy of terms	4	4	80%	Valid
	9. Accuracy of library references	4	4	80%	Valid
C. Presentation Systematics	10. The flow of matter follows the flow of thinking from simple to complex	5	4	90%	Very Valid
D. Suitability for student-centered learning	11. Encourage student curiosity	5	5	100%	Very Valid
	12. Encourage interaction	4	5	90%	Very Valid
	13. Encourage students to build their own knowledge	5	5	100%	Very Valid
	14. The material is relevant to the competencies students have mastered	4	4	80%	Very Valid
E. Presentation Techniques	15. Conceptual noise	4	4	80%	Very Valid
	16. Systematic consistency of presentation in learning activities	4	4	80%	Very Valid
F. Learning	17. Student involvement	5	5	100%	Very

Presentation					Valid
	18. Learning	5	5	100%	Very Valid
	19. Stimulate students' ability to solve problems through examples	5	5	100%	Very Valid
G. Completeness of Presentation	20. Examples of explanatory texts in each learning activity	5	5	100%	Very Valid
	21. Learning assignment	5	4	90%	Very Valid
	22. assessment specs of learning to write explanatory texts	4	5	90%	Very Valid
H. Straightforward	23. The accuracy of sentence structure	4	4	80%	Very Valid
	24. The effectiveness of sentences	5	4	90%	Very Valid
	25. Rigidity of terms	4	4	80%	Very Valid
I. Communicative	26. Message readability	5	5	100%	Very Valid
	27. The correct use of language	4	4	80%	Very Valid
J. Dialogical and interactive	28. The ability to motivate messages or information	4	5	90%	Very Valid
	29. The ability to encourage critical thinking	4	5	90%	Very Valid
K. Conformity to the level of student development	30. Suitability of students' intellectual development	5	4	90%	Very Valid
	31. Conformity with the level of emotional development of students	4	4	80%	Valid
L. Tuning and cohesiveness of the mind	32. Chaos and cohesiveness between learning activities	4	4	80%	Valid
	33. Chaos and cohesiveness between paragraphs	4	4	80%	Valid
M. conformity with language rules	34. Spelling accuracy	5	4	90%	Very Valid
	35. Grammar accuracy	4	4	80%	Valid

Total score	157	154	311
Average Number of Scores	89%		Very Valid

The results of the validation conducted by learning material experts on the quality of learning materials are in very good criteria in the nine aspects of the learning design with the following description:

The results of the validation carried out by learning material experts as validators of the product designs developed obtained a percentage score with an average score of 89% with a conversion table of this number indicating that the products developed were in the range of 75% <X 100% with very good criteria (SB). The score of the assessment result from the learning material expert is then converted to the standard value to get the eligibility criteria from the learning material.

V. Conclusion

The process of developing problem-based learning models on explanatory text writing material in class XI students of SMK PAB 03 Medan is in general aspects of the assessment given by reviewers, the product design of problem-based learning model development is very good (SB) with an average overall score of 89.5% with very good assessment criteria. The problem-based learning model that has been developed makes practical contributions, especially in the implementation of the learning process for teachers, which can be used as learning resources to make it easier to deliver explanatory texts.

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