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5 Development Of Creativity Problem-Based Learning Models To Increase students Thinking Creativity In Elementary School core Of Medan City

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Abstract

This research is based on the problem of the learning model that causes the lack of creativity in students' thinking. There needs to be innovations that can help teachers create interesting learning and help students learn independently. The innovations carried out include the development of Civics teaching materials through the development of Problem Based Learning (PBL) learning models.

This research is purposed to aim to (1) find creativity problem-based learning model to increase students thinking creativity, (2) examine the practicality, validity, and effectiveness of PBL model.

This research is developmental research uses Plomp's approach by consisting of five phases, namely (1) initial investigation phase, (2) design phase, (3) realization phase, (4) test, evaluation, and revision phase, and (5) implementation phase. This study was carried out at the core elementary Schools in the Medan Area District, which consist of six elementary schools and the instrument employed in this research is a questionnaire. The development stages were pre-survey, pre-trial, and field trial.

The findings of research are: (1) problem based learning model to increase students thinking creativity as well as validated tools supporting, (2) the level of practicality of the PBL learning model obtained a value of 4.11 with the "high" category, (3) the level of effectiveness of the PBL learning model classified on "high". Based on the results of data analysis and research discussion, it can be summarized that the development of the PBL instruction model has fulfilled the level of validity, practicality and effectiveness to increase students' creativity.

Keywords: PBL model development, thinking creativity, Practicality, effectiveness, validity

Introduction

The prosperity of a state is characterized by education with high quality. Becoming a developed nation is needed evidence of high level of education. This is in accordance with the government's mandate that: "National education functions to increase abilities and form the character and civilization of a dignified nation in the sense of educating the people's life, aiming to perform the potential of students to become human beings who believe and fear God Almighty, have noble character, healthy, faithful, capable, creative, independent, and become a democratic and responsible citizen.

Teachers are hoped to apply approaches and media to achieve good learning quality. They can proactively include students and create a fun, interesting and interactive atmosphere in accordance with the development stage that is adjusted to the phase of development of thought, features and studying conditions of students. This condition is also very necessary in learning in elementary school education units (SD). Imade (2016) revealed that learning encourages the improvement of higher-order thinking skills in students, including analyzing, synthesizing, and evaluating using various theories and logic. Besides, the problem-solving process and the decision-making process are very important given the opportunity for students to practice building their

Learning in the 2013 Curriculum according to Permendikbud No. 57 states the application of integrated thematic learning, namely learning content in Elementary School/Madrasah Ibtidiah subjects organized into themes. The subjects in elementary schools as referred to in article 3 paragraph 1 of the Minister of Education and Culture Number 57 of 2013 are "grouped into general subjects group A and general subjects group B". They as referred to in paragraph (1) are curricular plans that aim to increase the attitude competence, knowledge, and skill competences of students as the basis,

and increasing of capabilities in the communities life, nation and state. Pancasila and Citizenship Education is one of the general subjects of group A.

Studying Pancasila and Citizenship Education (PKn) aim at forming a society that is aware of its obligations as citizens. Winarno (2014:36) explains that the purpose of Civics is to become learners into human beings who own a highly sense of nationality and love for the homeland that are internalized with the values of Pancasila, the 1945 Constitution of the Republic of Indonesia, the spirit of Bhinneka Tunggal Ika, and commitment to the Unity State of the Republic of Indonesia. Civics is a place to instill character educating at whole level of education. Civics emphasizes those aspects of moral development and noble morals of the nation that refer to the morals of Pancasila.

The purpose of Civics is to show that the development of human resources must be in accordance with the Indonesian ideology in knowledge, attitudes, and skills as citizens. For this reason, the competencies in Civics that must be mastered including the competence of attitudes, knowledge, and skills to be the main focus in learning. In Citizenship Education, these competencies are usually referred to as citizen knowledge (civic knowledge), citizen attitudes (civic dispositions), and citizen skills (civic skills).

Civics is not only a theoretical science that provides knowledge to students, but also must be interpreted as an adaptive science that examines phenomena in everyday life. Therefore, civic knowledge must be emphasized starting from basic education. Civics learning in elementary schools is currently not as expected. Eddy (2014: 64) says that the development of Civics teaching in Indonesia to date, both at the theoretical level and at the empirically level, there are very fundamental paradigmatic weaknesses. Unniah (2012: 5-7) explained the cases of Civics learning in elementary schools including (1) a curricular that is too heavy; (2) lack of ability to capture keywords in competency standards and basic competencies; (3) educating practice is still conventional; (4) studying is not reality; (5) educating based on textbooks (textbook center); (6) evaluation only leads to the rote aspect. Civics learning problems are very complex. Ardinata, et al (2014: 180) Civics learning in elementary schools still uses the lecture method, the teacher only delivers the material and does not act as a facilitator.

Researchers have made observations to see the learning of Citizenship Education for class V in elementary schools in the Medan area sub-district. Researchers took samples in November 2019. From the findings of the observations mentioned above, the researchers summarized that low creativity of students in state core schools in the Medan Area sub-district. Elementary school creativity data shown by indicators of originality, fluency, flexibility and elaboration, the results show the level of originality of students from 6 elementary schools, namely State Basic School 060800, State Basic School 060796, State Basic School 060791, State Basic School 060814, State Basic School 060826 and Private Basic School Al Washliyah with the average values for originality 37.2%, fluency 33.8%, flexibility 34.7%, and elaboration 30.2%. For further details, it can be watched in the following figure.

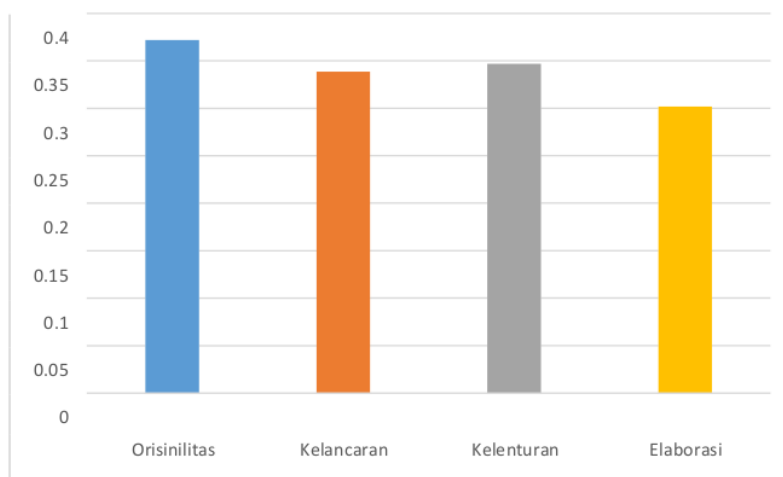


Figure 1. Student Creativity Data in 6 State Core Schools in the Medan Area District

According to H. Erman (2003:11), students are said to have completed learning, if students have achieved 65% absorption and 80% classical learning completeness, which means that a class's learning completeness has not reached 80%, it is necessary to carry out diagnostics and remedial before the material is continued. . Absorption is the percentage of mastery level scores for each student in a test.

Most teachers use books from the center as a learning resource. The findings of an interview with the chairman of the Technical Service Unit (UPT) of the Medan Area District education office, Mrs. Nurbaity on May 5, 2019 argued that students still have difficulty understanding the material in Civics learning. Most of the students still use the method of memorizing and listening to the teacher. Teachers have difficulty in teaching the material in the book because they do not understand the current curriculum. There is little material in the book so the teacher must develop it independently. Some elementary school teachers in this area are of the opinion that the material currently in the books is not yet fully capable of developing student competencies. In the cognitive aspect, students still memorize the material in the book. This affects student learning outcomes, because if students only focus on memorizing aspects, students have difficulty solving problems that require problem solving and reasoning aspects. This inability results in the low quality of learning as evidenced by student learning outcomes that are less than optimal.

Creativity is sometimes misunderstood as a privilege possessed by certain people and is carried from birth, even though creativity is the potential of every individual. According to Ahmad Susanto (2011: 114), creativity is essentially a someone's competence to identify and indicate something new, either in the features of ideas or real works that are more relatively different from those that exist earlier. Students' learning abilities are further improved if their creative abilities are involved, both formally and informally. Students' learning abilities are further improved if their creative abilities are involved, both formally and informally. Basically, all students have creative potential that must be developed both at school and at home. Students' creative abilities must be explored in order to achieve student success in the future so that they are able to realize potential and quality human resources.

Munandar (2004:104) states that "creativity is the ability to make new combinations, or see new relationships between elements, data, or things that already exist". During the learning process, teachers can use it to form students' creative thinking skills. And learning is more effective if there are two elements that interact in the teaching and learning activities (KBM) that take place, namely, elements of teachers and students. First, the teacher element where the teacher must help students in the teaching and learning activities, provide feedback by asking some challenging questions, these questions are expected to help students find new ideas and instructor are also hoped to create fun and conducive teaching and learning situations. Second, the student element is that students are expected in the final of the KBM process where students to be active in asking questions, expressing ideas, being able to respond questions proposed by teachers or students, being able to exchange information and other student learning activities. Learning methods that do not involve the active participation of students are less able to promote students' creative thinking skills. Less interactive and less fun instruction makes students' creativity less explored which then has an impact on students' low creativity.

Generating student instruction activities in the instruction process is to replace the learning model used in the instruction implementation in the classroom, like studying carried out with lectures and question and answer, this learning model makes students bored and not creative. The teaching and learning atmosphere that is expected to increase students' creativity is learning that can cause learners as subjects who can effort to deepen themselves, overcome problems themselves from a concept being learned, while the educator only behaves as a motivator and helper. The hoped studying atmosphere is a atmosphere that can make students improve their creative thinking skills (students are expected to play more roles).

The need for innovations is able to facilitate educators build interesting instruction and assist learners to learn independently. The innovations implemented include the development of Civics teaching substances. PBL is one method that is able to be employed for the enrichment of these instruction substances. The development of PBL-based teaching materials can be a solution to overcome the problems that occur.

The insight indicates that a instruction substance has to be prepared and noted with instructional principles because it is employed by educators to facilitate and encourage the instruction process through it. It is also able to be meant as the whole forms of substances that are arranged. Instruction substances or substances are fundamentally the "content" of the curricular, that is in the shape of subjects or fields of study with topics/subtopics and details (Ruhimat, 2011:152).

Looking at the elaboration above, we are able to see that the role of an educator in preparing or compiling instruction substances is important to the success of the learning and learning process through a teaching substance. It is also able to be meant as the whole forms of materials that are systematically arranged, that cause learners to learn independently and are prepared in accordance with the applicable curriculum. The instruction substances make the teacher comprehensive in his coaching actions to learners and all expected abilities are achieved.

The statement confirms that problem-based learning is very useful and ideal for heterogeneous classes, where students with mixed abilities can come together to create solutions. It provides contextual meaning in learning. Some teachers admitted that they did not know about PBL, this is because PBL is a learning method that is rarely used. Referring to the explanation in the primary and Secondary Education Process Standards, it is stated that to support learner's competence to achieve contextual work, both individually and in groups, it is highly suggested to apply an instruction method that achieves Problem Based Learning- based work. This opinion is strengthened by the opinion of Arend (2008: 41) PBL basically presents various

authentic and meaningful problem situations to them, it can serve as a springboard for investment and researching, beside that they will get used to answering questions based on problems that occur in real life.

PBL is hoped to be able to facilitate training, capabilities through each individual to solve existing problems. PBL-based Civics teaching materials as a supplement can help students to deepen the material. Students find it easier to learn independently. The problems in the book require students to use reasoning in finding solutions. In addition, students can learn according to their abilities. These teaching materials help maximize the improvement of Civics learning competencies, especially civic knowledge.

So far, there has never been a problem-based teaching material adopted in Civics learning in the district so that researchers are prefer to innovate by designing problem-based models to increase student activity in Civics learning so as to create learners who can solve existing cases related to citizenship and morals.

Referred to background mentioned above, it is crucial to hold a development research based on ProblemBased Learning (PBL) containing creativity. As a solution to the problems that have been put forward, this researcher conducted a research entitled "Development of a Creative-Based Learning Model with Problems to Increase Creativity of Elementary School Students".

METHOD

The method used in this research is qualitative approach with type kind of research and development (Research and Development). In this study, the instruction model, instruction tools, and instruments needed were developed. Asikin and Cahyono (2004), stated that R and D is purposed to obtain instruction products, such as syllabus, instruction substances, media, practicum modules, student work exercises, products to evaluate instruction abilities, products to evaluate instruction competences, and so on. Sukmadinata (2005:164) said, the kind of research and development is a procedure or phases to build a novelty product or upgrade an existing product, which can be judged for. From the various R&D theories that have been stated previously, in this study using the approach Plomp. Plomp's R&D study phases consist of five development phases, such as (1) step done at the time of beginning the development, (2) step done to plan the development, (3) step done to realization phase, (4) assessment, evaluation, and revision phase, and (5) step done to implement the development.

This research was carried out at the Core Elementary School in the Medan Area District, Medan City, which consisted of 6 elementary schools, namely State Basic School 060800, State Basic School 060796, State Basic School 060791, State Basic School 060814, State Basic School 060826 and Private Basic School Al-Washliyah.

The usage of data analysis aims at seeing the possibility of the learning pattern in increasing learners' thinking creativity. In this case, descriptive data analysis, namely the exposure of product feasibility, is carried out after the score data given by experts and educational practitioners on the feasibility of the developed product by calculating the average score. Furthermore, the criteria for evaluating the feasibility by experts and practitioners of education on learning models in improving students' thinking creativity could be viewed on the table as follows:

Table of Eligibility Assessment Criteria by Experts and Practitioners Education Against the PBL Model

ScorInterval	Criteria
3,50 – 4,00	Very Worthy
3,00 – 3,49	Worth without revision
2,50 – 2,99	Worth revising
2,00 – 2,49	Not worth revising
1,00 – 1,99	Not feasible

The criteria for the feasibility of the model to solve the problem in increasing student's creative thinking by education experts and practitioners is if the average score is 3.00. Furthermore, the criteria for individual, small group and field group trials on the PBL model in improving students' thinking creativity developed could be viewed in the following table:

Table of Assessment Criteria for Individual, Small Group and Tests Field Group Against the PBL Model

ScorInterval	Criteria
--------------	----------

3,50 – 4,00	Very Worthy
3,00 – 3,49	Worth without revision
2,50 – 2,99	Worth revising
2,00 – 2,49	Not worth revising
1,00 – 1,99	Not feasible

The criteria for the feasibility of the PBL model in increasing learner's thinking creativity with individual trials, small group trials and field group trials is if the average score is 3.00.

FINDINGS AND ANALYSIS

The presentation of the factual data from this study is in accordance with the stages of development have been carried out, including pre-survey, pre-trial, and field trials. The application of the learning procedure that has been done is in accordance with the operational stages described in the research method.

The data of the general value of the preliminary test achievements for the creativity level of the fifth grade elementary school students in the Core District of Medan Area is at a low level (1.43). When analyzed based on the creativity indicator, it turns out that the average value for the originality indicator is 1.86; for fluency indicator is 1.43; for the flexibility indicator is 1.29; and for the elaboration indicator is 1.14. This needs to be improved immediately, considering that creativity is the result of the logic and creative thinking skills.

Refer to the findings of the analysis of the preliminary survey on the condition of learner studying outcomes mentioned above, it is crucial to promote a learning model based on problems that often arise in the natural life (concrete) of learners every day. The learning model is the Problem Based Learning Model (PBM) or Problem Based Learning (PBL).

In general, the findings of the discussions of the current studying tools (pre-survey results) show that the learning process of core basic school students in the Medan Denai sub-district is still teacher-centered. Teachers are more trying to teach students, students have not been trained to experience a concrete learning process based on real-life problems. For this reason, it is crucial to design a studying process that orients towards increasing student activity in learning, so that in the end it will increase student creativity.

The PBL designed is a series of studying stages consisting of 5 stages of learning, including (a) Student focusing on and formulating to problems, (b) To organize learners to study, (c) Directing individual and group study, (d) Designing, developing and presenting results works, (e) Analyzing and assessing the problem solving process.

Instruction tools consist of a syllabus, lesson plans (RPP), teacher handbook designs, student book designs, student worksheets (LKS), evaluation instruments, and learning media. The studying equipment in this study are lesson plans, BPG, BS and problem-based worksheets.

The design of the Student Creativity Test Sheet is prepared based on the creative thinking rubric that has been discussed in the theoretical study chapter. To obtain data about the creativity of students used tests that were distributed to the sample in this case students. The instrument made refers to the nature that existed before. The number of items for the creativity test is 30 items.

Departed from the findings of revisions as well as changes to the instruction model, instruction equipments and instruments used in the developed PBL learning model, it was determined that the PBL learning model along with all studying equipment and assessment instruments had met the validity criteria and could be tested in the field (classroom learning).

The whole instruments in this study were tested for feasibility/validated by experts/practitioners before being used to evaluate the validity, practicality and effectiveness of the developed PBL Instruction model. The feasibility of each instrument is based on 4 aspects, namely: 1) formulation of objectives, 2) instructions for using the instrument, 3) material, including content and language and 4) general assessment (conclusion).

TableResult of Feasibility Test of Research Instruments

No	Instrument Type	Assessment Aspect				
		Purpose	Instructio n	Conte nt	Languan ge	Conclus ion
1	PBL learningmodel contentvalidationsheet	V	V	V	V	LDP
2	Observation sheet on the implementation of the PBL learning model	V	V	V	V	LDP
3	RPP validation sheet	V	V	V	V	LDP
4	Teacher's Handbook validation sheet	V	V	V	V	LDP
5	Student's Handbook validation sheet	V	V	V	V	LDP
6	Student Activity Sheet validation sheet	V	V	V	V	LDP

7	PBL Learning Model Implementation Assessment Sheet	V	V	V	V	LDP
8	PBL Learning Model effectiveness assessment Sheet	V	V	V	V	LDP
9	Student response questionnaire	V	V	V	V	LDP
10	Teacher response questionnaire	24	V	V	V	LDP
11	Creativity test validation sheet	V	V	V	V	LDP

Information:

V = the result of the expert's assessment stating "Valid"

LDP = conclusion from expert judgment that the instrument used is "Appropriate to Use with Improvements"

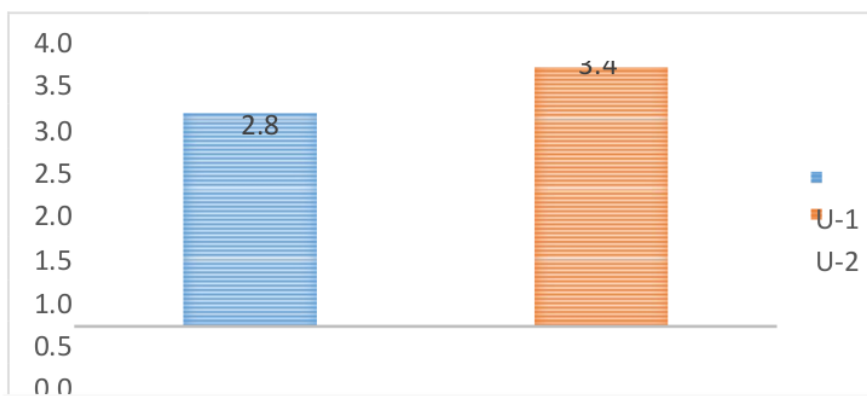
The process of validating the PBL Learning model is carried out by means of an assessment by 3 experts. Each expert provides scores and input/suggestions on the validating sheet. The table on below is the average value of the validation findings given by the validator contained on table 2:

Table Average Value of PBL Learning Model Validation Results

No	RatedAspect	Expert			Number	Average
		1	2	3		
1.	Supporting Theory	4,0	4,0	4,0	12,0	4,00
2.	Syntax	4,0	4,0	4,0	12,0	4,00
3.	Social System	4,0	4,0	4,3	12,3	4,11
4.	Management reaction principle	4,0	4,0	4,0	12,0	4,00
5.	Support System	4,0	4,0	4,0	12,0	4,00
6.	Instructional impact and accompaniment	4,0	4,0	4,0	12,0	4,00
7.	implementation of learning	4,0	4,0	4,0	12,0	4,00
8.	evaluation	4,0	4,0	4,3	12,3	4,11
	Number					32,22
	Average					4,03

Overall, the results of trial-2, when referred to the requirements for practicality and effectiveness of the PBL Instruction model developed according to chapter III, turned out to have met the requirements for the validity, practicality and effectiveness of the instruction tools developed.

Refer to the findings of data analysis, it is recognized that the grade of creativity of learners during the 1st trial of the PBL learning model was 2,3 and after being given the 2nd trial of the PBL learning model was 3.6 (maximum scale 4). If these values are referred to the criteria for the level of creativity according to the provisions in chapter III, it is concluded that the level of creativity of students is at the "Medium" level. The rise in the average value of students' creativity from before the learning trial and after the learning model trial increased by 0.6.



Picture The Level of Student Creativity in the 1st Trial of the Learning Model (U1) and the 2nd Trial of the PBL Learning Model (U2)

After processing the data from the validation test results, practicality tests, and effectiveness tests on the developed PBL learning model, the overall results are obtained as written on Table 2 as follows.

Table Results of Validation Test, Practicality Test, and Effectiveness of the PBL Learning Model

No	RatedAspect	Evaluation	
		Value	Categori
1.	Learning Model Book Validation	4,03	Valid
2.	Learning Tool Validation		
	RPP	4,13	Valid
	Teacher'shandbook	4,31	Valid
	Student'shandbook	4,23	Valid
	Studentworksheet	4,45	Valid
3.	PracticalLearning Model	4,11	High
4.	EffektivenessLearning Model		
	Teacher'sabilitytomanagelearning	3,12	High
	Teacher'sresponse (%)	93,33	High
	Studentresponse(%)	85,00	High
	Studentcreativity	3,40	High

1 According to the whole data displayed on the table 3 above, it is understood that the PBL instruction model and tools designed have fulfilled the requirements of validity with whole aspects of validity, practicality, effectiveness that were categorized as high.

CONCLUSION

Refer to findings of data and research analysis, it is able to be summarized that the promotion of the PBL instruction pattern has fulfilled the grade of practicality, validity, and effectiveness to promote learner's creativity. The PBL instruction pattern and equipments designed had fulfilled the requirements of validity with whole aspects of practicality, validity on the high classification and effectiveness on the high classification as well.

The grade of validity of the PBL learning pattern obtained a value of 4.03 with a valid classification, the grade of validity of the RPP product with a value of 4.13 with the "Valid" classification, the grade of validity of the Teacher's handbook product with a value of 6.1 with the "Valid" classification, the grade of validity Student Handbook product with a value of 4.23 with the "Valid" classification and the grade of validity of the Student Worksheet product with a value of 4.45 with the "Valid" classification. The grade of practicality of the PBL learning pattern obtained a value of 4.11 with the "High" category. The grade of effectiveness of PBL

Studying which consists of 4 aspects, namely the teachers competences to manage instruction obtained a value of 3.12 with a "High" category, Teacher Responses obtained a value of 93.33% with a "High" category, Student Responses obtained a value of 85.00% with "High" category, and the creativity of students with a value of 3.40 in the "High" category.

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