

# Development of Teaching Materials for Thematic Companions Based on Problem Based Learning Models in Theme 3 Figure and Discovery in Grade 6<sup>th</sup> Elementary School

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**Abstract:** *This study aims to Development of Teaching Materials For Thematic Companions Based on Problem Based Learning Models in Theme3 Figure and Discovery in Grade 6<sup>th</sup> Elementary School that are valid, practical, and effective. This type of research is development research. This study uses the ADDIE model which consists of 5 stages, namely: the stage of analysis, design, development, and implementation, and evaluation. The research data from the validity test is obtained through the teaching material validation sheet. Practical data is collected through the implementation observation plan lesson sheet, teacher and student response questionnaire. Effectiveness seen from the activities and student learning outcomes. The collected data was analyzed descriptively. The results of the validity tests conducted indicate that the integrated thematic teaching materials produced are valid. The results of observations and questionnaires, teaching materials are declared practical. At the effectiveness test stage, the results of the average activity of students are in the very high category. The results of the assessment on the aspects of skills have also been in a very good category, and the results of the assessment indicate that more than 85% of students have succeeded in achieving the Minimum Completion Criteria (KKM). Based on these results, it can be concluded that the integrated thematic companion teaching material is based on Problem Based Learning (PBL) on the theme III Figure and Discovery in grade VI of elementary school. which has been produced can be declared valid, practical, and effective.*

**Keywords:** Teaching Materials; Integrated; Thematic; Problem Based Learning

## 1. Introduction

Education is a major factor in the formation of the human person. Education is very instrumental in shaping the good and bad of human persons according to normative measures. Realizing this, the government is very serious about the education sector. This is because a good education system is expected to emerge the next generation that is qualified and able to adapt to live in a society, nation and state.

One form of the government's seriousness in dealing with the education sector is by always developing a curriculum in Indonesia. The latest curriculum implemented in Indonesia is the 2013 curriculum. 2013 curriculum for elementary schools, is thematically integrated. The learning process emphasizes spiritual aspects, social knowledge, and skills.

Textbooks in the 2013 curriculum, especially at the elementary school level, have been provided by the government. Textbooks are in the form of teacher manuals and student manuals.

The hope of the government with the existence of teacher manuals and student manuals, can make the teacher pass on the message of learning, increase the activity and creativity of students in the learning process. Conditions on the ground show a different reality, not all government designs go according to plan. Thematic learning carried out by the

teacher still emphasizes the concepts contained in the book, which only tend to move information or theory, so that it does not provide an opportunity for students to observe, investigate and build their own knowledge so that it influences students' understanding.

From the aspect of using teaching materials, teachers and students only use handbooks (teacher books and student books) as the only material. The unavailability of supporting teaching materials for students causes students' insights and knowledge about the material to be limited to the knowledge contained in the handbook. In fact, students are required to have better learning skills, both in terms of intelligence and creativity. Actually some teaching materials besides thematic handbooks, namely textbooks or textbooks for class VI, are available in the library. These package books can be used as supporting teaching materials for students. However, the package books available are less relevant to the applied curriculum. Because, package books still contain gem material lessons. Another observation result is that there is no evaluation of sub-themes to measure students' abilities for six lessons. This is considered not in accordance with Government Regulation Number 32 of 2013 which states that the assessment of learning outcomes by educators is carried out continuously to monitor the process, learning progress, and improvement of student learning outcomes.

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Based on the background above the formulation of the research problem is expressed as follows: 1. Weakness of learning resources used by students who have not been optimal in building understanding, developing curiosity, creativity, and cooperation in each meeting 2. Teachers and students only use handbooks (books teacher and student book) as the only material. The unavailability of supporting teaching materials for students causes students' insights and knowledge about the material to be limited to the knowledge contained in the handbook. In fact, students are required to have better learning skills, both in terms of intelligence and creativity. 3. There is no evaluation of sub-themes to measure students' abilities for six lessons.

The problem above can be overcome by the teacher by developing integrated thematic companion teaching materials based on the Problem Based Learning model. According to the Murray (2007) study, PBL has a very positive direct effect on students' persistent behavior. Whereas according to research, Chuen Yeh (2015) shows that PBL is a teaching approach to train students in high-level thinking that is able to make students competent. According to John R. Savery (2006) PBL models provide opportunities for students to explore collecting and analyzing data in full to solve problems faced. Through the PBL model students actively think, communicate, search and process data and finally conclude. PBL model, prioritizes the process in learning, so students have the basic ability to develop optimally.

## 2. Method

This type of research is development research. Development research is research carried out to produce or improve existing products. According to Setyosari (2015: 275) development research is "research directed at producing products, designs, and processes". The development model used is the ADDIE model, this model consists of five stages, namely analysis (analyze), design (design), development (development), implementation (implementation), evaluation (evaluation).

The development model used is the ADDIE model, ADDIE emerged in the 1990s developed by Reiser and Mollenda. The ADDIE development model was chosen, because it was in accordance with the problems behind this research. The need analysis, it is expected that this model can develop teaching materials for class V Elementary School that are valid, practical, and effective in order to improve learning activities and student learning outcomes. This model consists of five stages, namely analysis (analyze), design (design), development (development), implementation (implementation), evaluation (evaluation).

The trial subjects in this study The trial subjects in this study were class VIA students at SDN 03 Batung Bungus Tk Kabung, Padang City. The criteria used to select the test subjects are as follows:

- 1) The condition of the student according to the needs of the study.

- 2) School environment that supports the implementation of research, so it is possible to obtain research data.

Types of data taken in this study The type of data taken in this study is primary data. The first data is in the form of validation of teaching materials given by the validator. The second data is obtained from the implementation of the trial. In this trial data was taken in the form of: (1) the results of observations on the implementation of the RPP from the observer; (2) the results of the teacher's response to the teaching materials used; (3) student responses after the teaching material has been tested; and (4) student learning outcomes in terms of aspects of reading skills and test results.

The instrument used in this development research was a questionnaire. Questionnaires are used to obtain data on validity, practicality, and effectiveness of teaching materials.

Data analysis techniques The data analysis technique used is descriptive data analysis, which describes the validity of teaching materials, the practicality of teaching materials, student competencies that show the effectiveness of teaching materials. The results of validation from the validator on all aspects assessed are presented in table form. To measure the calculation and the final value of the results of validity used the formula from Muliyardi (2006: 82), namely as follows:

$$R = \frac{\sum_{i=1}^n V_{ij}}{nm} \times 100$$

R : Average assessment results from experts / practitioners

V<sub>ij</sub> : Score of the results of the evaluation of the Jth experts / practitioners against the criteria i

N : Number of experts / practitioners who judge

M : Number of criteria

## 3. Finding and Discussion

The results of the study on the Development of Teaching Materials for Thematic Companions Based on Problem Based Learning Models in Theme3 Figure and Discovery in Grade 6<sup>th</sup> Elementary School that are valid, practical, and effective.

### 1. Validity

Validation was carried out on integrated thematic companion teaching materials based on Problem Based Learning emphasizing content and constructs. Validation of teaching materials is viewed from several aspects, which consist of aspects of content, language, presentation and graphics. Validation in this study was carried out by expert validators in accordance with the field of study, namely content and linguist expert validators, expert graphic and presentation validators, and practitioner validators from elementary school teachers. Validation is said to be complete, if the validator states that it is valid for the teaching material, so that it is ready for trial. The results of the validation from the expert validator showed that the integrated thematic companion teaching material obtained a percentage of 88.25% with very valid criteria. Meanwhile, practitioners' validators received a percentage of 92.00% with very valid criteria. The validity of integrated thematic companion

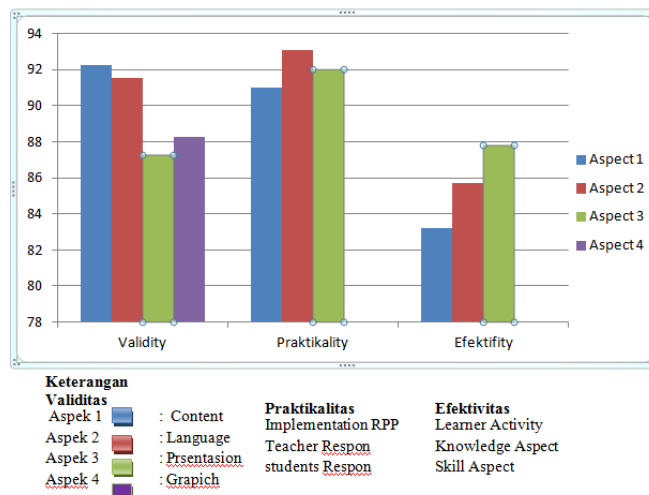
teaching materials based on the Problem Based Learning model in grade VI Elementary School developed in this study is valid in terms of content and construct. This is in accordance with the results of validation from expert validators and validators of education practitioners. This result illustrates that the teaching material developed has been valid and can be used in the learning process.

**2. Practicality**

After the validation process with experts and education practitioners is completed, a trial is carried out to see the practicality of teaching reading comprehension materials. The trial was conducted in 3 meetings, which were observed by 2 observers. Practicalities observed were the level of implementation of the Learning Implementation Plan (RPP), teacher response questionnaire, and questionnaire responses of students to the practicalities of the learning device. The results of observations during the trial showed that learning was carried out in accordance with the planning that had been made with the percentage obtained 91.0% in a very practical category. While the results of the questionnaire from the teacher's response obtained a percentage of 93.05% with a very practical category, and the results of the questionnaire responses of students obtained a percentage of 92% with a very practical category. This shows that the integrated thematic companion teaching material based on the Problem Based Learning model developed is very practical to use in the thematic learning process in grade VI of elementary school.

**3. Effectiveness**

Teaching materials are said to be effective if they have an effect or a good influence on the achievement of learning objectives. The effectiveness of teaching materials is seen from the activities of students during the learning process and the assessment of the thematic learning process of the activities of students when the learning process for the experimental class gets a percentage of 82.14% in the very active category, while the class at the distribution stage gets a percentage of 83.21%. very active, then on the aspect of knowledge during the trial obtained the percentage of completeness 82% and at the time of distribution to 85.71%. In the aspect of skills during the trial obtained an average of 86.18 and when the spread of 87.79 was in the excellent category. The results of this study can be seen in the following tables and diagrams:



**4. Other Recommendations**

Based on the development and trials that have been carried out on integrated thematic companion teaching materials based on the Problem Based Learning model in Grade VI Elementary School that the development of thematic teaching materials based on the Problem Based Learning model from the aspect of validity, shows that the teaching material has very valid criteria, both from both in terms of content and in terms of constructs. This is in accordance with the results of validation from expert validators and validators of education practitioners. These results illustrate that the thematic teaching materials developed have been valid and can be used in the learning process. Practical results show that teaching materials are very practical, both in terms of wear and implementation. These results are seen from the implementation of the lesson plan, the results of the teacher's response questionnaire, and the results of the questionnaire responses of the students. The effectiveness of learners shows that the development of thematic teaching materials based on the Problem Based Learning model in class VI elementary school has been declared effective to improve the achievement of learning outcomes and skills of students. Based on these results, it can be concluded that thematic teaching materials based on the Problem Based Learning model are declared valid, practical, and effective. Therefore, it is expected that this teaching material can be used or used as a reference in integrated thematic learning in grade VI of elementary school.

No.	Aspect	Percentage	Categories
1.	Validity	Contents	92,25% Very Valid
		Language	91,50% Very Valid
		Presentasian	87,25% Very Valid
		Graphics	88,20% Very Valid
2.	Practicality	Implementation RPP	91,00% Very Practical
		Teacher response	93,05% Very Practical
		Student Response	92,00% Very Practical
3.	Effectivity	Student Activities	83,21% Very High
		Knowledge	85,71% Very High
		Skill Aspect	87,79% Very High

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