

DEVELOPMENT OF THEMATIC TEACHING MATERIALS BASED ON THE PROJECT MODEL BASED LEARNING (PjBL) FOR CLASS IV STUDENTS OF ELEMENTARY SCHOOL

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Abstract

This research is a developmental research that aims to produce teaching materials based on the PjBL model that can be used by fourth grade students of SD 07 Koto Besar, Dharmasraya Regency as learning materials. Knowing the quality of teaching materials based on the PjBL model, validity, practicality, and effectiveness tests were conducted. Based on the validity test of the assessment conducted by media experts, materials and learning experts, the development model used is 4D consisting of 4 main stages, namely, define (delimiters), design (design), develop (development) and disseminate (dissemination). The development of teaching materials based on the PjBl model begins with an analysis of student needs, analysis of content standards followed by collection of learning material references, then drafting of teaching materials, and making teaching materials in the form of learning books. The teaching materials that have been made are consulted and assessed by experts, namely learning material experts, media experts, linguists, and large class students.

Keywords: Thematic Teaching Materials, PjBL Learning Model

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INTRODUCTION

Learning materials in schools are usually provided in the form of integrated thematic teaching materials. With thematic teaching materials, teachers can deliver material according to the demands of the curriculum and the needs of students. Integrated thematic learning is not only applied in Indonesia (Amini, 2017; Desyandri, Purnamasari, & Yunisrul, 2018; Marta, Fitria, Hadiyanto, & Zikri, 2020). But other countries also carry out integrated thematic learning such as China (Wu & Chang, 2015), Saudi Arabia (Md-Ali, Karim, & Yusof, 2016), America (John, 2015). Some of these countries apply integrated thematic learning because this learning has a good impact on students and can motivate students in the learning process.

The improvement of integrated thematic learning can be pursued by teachers by developing teaching materials. Teachers can develop or enrich other materials and activities in accordance with the learning objectives that have been set (Kemendikbud, 2014). This aims to make it easier for teachers to carry out integrated thematic learning, but that does not mean that the book is perfect. These teaching materials still need further development. These teaching materials can be developed according to needs. The teaching materials that have been provided still have some shortcomings in their development.

Based on the analysis of teacher books and student books with theme 3 subtheme 1 Class IV curriculum 2013 revised 2017 edition which is a teacher's guide in teaching starting in the 2020/2021 school year, some of the problems found are 1) Indicators of a KD still need to be added and developed, because many from 1 KD there is 1 indicator, even though from the KD several indicators can be developed. 2) The learning objectives contained in the teacher's book still have errors, namely they are still not using degree 3) The teaching materials in the student book are not complete and there are still too few and not yet To meet the demands of learning objectives, teaching materials should contain what is in the learning objectives so as to arouse students' interest in reading these teaching materials.

The development of teaching materials in the 2013 curriculum uses a scientific or scientific approach. Meanwhile, the learning models used in the 2013 curriculum are Problem Based Learning (PBL), Discovery Learning (DL), and Project Based

Learning (PjBL). The use of learning models is very helpful for teachers to easily arrange learning steps that will be applied to students. Appropriate learning activates students to work in groups, one of which is by using the Project Based Learning (PjBL) learning model. The project based learning model is a form of learning that not only emphasizes mastery of material concepts, but also implements the role of knowledge and technology in various people's lives and fosters a sense of social responsibility for the impact of science that occurs in society. The use of the PjBL model is the model that is preferred by students in improving quality. In addition, students' control over their learning makes the experience in acquiring knowledge more valuable (Amini, Handayani, & Fitria, 2019). Therefore, the researcher wants to develop integrated thematic teaching materials based on the PjBL learning model. In Class IV Elementary School 07 Koto Besar, Dharmasraya Regency

RESEARCH METHOD

This type of research is a development that refers to a 4D model, this model was developed by S. Thiagarajan, (Taufik Taufina & Arwin, 2018) explaining the stages of a 4-D model, including: defining, designing, developing, develop), and dissemination (disseminate). However, due to the author's limited manpower, cost, and time, the dissemination stage was only carried out on a limited scale, namely grade IV Elementary School according to the author's needs

FINDINGS AND DISCUSSION

Teaching materials are a source of learning materials used by teachers during the learning process to focus the objectives of learning materials to be discussed in accordance with the learning indicators to be achieved by the teacher. Integrated teaching materials based on the PjBL model have certain components that are interrelated with each other. Seperti yang diterangkan oleh Hamdani (2011:122) yaitu beberapa komponen yang terdapat pada suatu bahan ajar di antaranya: a) judul, mata pelajaran, standar kompetensi, kompetensi dasar, indikator, dan tujuan. pembelajaran, b) petunjuk belajar (petunjuk siswa dan guru), berisi tentang penjelasan cara penggunaan suatu bahan ajar yang akan dipelajari dalam sebuah proses pembelajaran, c) informasi pendukung, d) lembar kerja, dan f) evaluasi.

The teaching materials that have been designed and developed are continued with validation activities by

educational experts in accordance with their field of study consisting of 3 expert validators. Based on the results of the discussion and suggestions from the the language and appearance of the teaching materials developed. The results of this revision are used to improve the PjBL-based integrated thematic teaching materials that have been made by including all the suggestions given by the validators or giving consideration of the results of the discussions that have been carried out whether or not they need to be revised. From the results of the revision, there are several things that need to be improved and considered so as to produce valid teaching materials. At this stage, validation is carried out on integrated thematic teaching materials based on the Project Based Learning (PJBL) model carried out by education experts. Following are the names of validators who validate integrated thematic teaching materials based on the Project Based Learning (Pjbl) model developed.

PjBL-based teaching materials that have been revised by experts are returned to the validator. Validators are asked to provide an assessment and opinion on integrated thematic teaching materials based on the PjBL model that has been designed. Validation is complete when the validator has stated that the teaching materials designed are valid and ready to be tested. The validation of PjBL-based thematic teaching materials was carried out on several aspects including aspects of content feasibility, linguistic aspects, presentation aspects, and graphic aspects. The results of the revision of teaching materials are described in table 2 and the results of the calculation of the level of validity can be seen in table 5 below.

validator, the teaching materials were then revised. Revisions were made twice, especially those related to

Table 1. Results of Revised Integrated Thematic Teaching Materials Based on PjBL IV SD

Developed PjBL-Based Thematic Teaching Materials	
Before Revision	After Revision
1. Writing nouns, conjunctions, adjectives, punctuation is still wrong	1. Writing has been corrected according to suggestions
2. Add tasks or activities that students will do in groups	2. Activities have been added to the tasks that have been done by discussing groups
3. The use of red and yellow colors is limited because it can make students' eyes tired	3. The color has been replaced with a softer color
5. font size is still under 12	4. font size is above 12

Table 2. Validation Results of Integrated Thematic Teaching Materials Based on PjBL Model Aspects of Feasibility of Content

No.	Rated aspect	Average	Category
1.	Teaching materials refer to the 2013 curriculum, KI, KD and indicators.	3.6	Very Valid
2.	Teaching materials provide learning materials that contain explanations, examples to support understanding draft.	3.4	Valid
3.	Thematic teaching materials based on the PjBL learning model that contain materials that suit student needs	3.8	Very Valid
4.	The material in PjBL-based thematic teaching materials provides tasks/activities that are carried out in groups	3.8	Very Valid
5.	Explanation of the material is emphasized by pictures and reading text	3.8	Very Valid
6.	Materials can improve the quality of learning	3.4	Very Valid
Rata-rata		3,7	Very Valid

Table 3. Results of the Validation of Teaching Materials Based on the PjBL Model of Linguistic Aspects

No	Rated aspect	Average	Category
1.	Legibility	3,8	Very Valid
2.	Information clarity	4	Very Valid
3.	Conformity with good and correct Indonesian language rules	3.8	Very Valid
4.	Effective and efficient use of language (clear and concise)	3,2	Valid
Rata-rata		3,7	Very Valid

Table 4. Overall Interactive Multimedia Validation Results

No	Aspects Assessed	Total Rating Score from Validator					Total	Average
		V1	V2	V3	V4	V5		
1	Content eligibility	21	21	21	23	21	107	3.6
2	language	15	15	15	14	15	74	3.7
3	Presentation	14	15	15	13	15	72	3.6
4	Graphics	18	19	17	17	19	90	3.6
Skor								
				343				
				3.6				
Overall Average								85,7%

Based on the data above, it is known that the average value of the validation score for teaching materials based on the PjBL model is 85.7%, the category is very valid. It was concluded that the thematic teaching materials based on the PjBL model in grade IV SD were valid in the very good category..

Table 6. Analysis of Student Responses to Thematic Teaching Materials based on the PjBL Model

No (1)	Question (2)	Answer (3)	Category (4)
1.	I quickly understand the material by using this Teaching Material	3,6	Very Practical
2.	I am motivated to follow the learning process by using this Teaching Material	3,3	Practical
3.	I can hone my collaboration skills by using this Teaching Material	3,8	Practical
4.	I can hone my communication skills by using this Teaching Material	3,4	Practical
5.	I can increase my knowledge by using this Teaching Material	3,7	Very Practical
6.	I can do the questions easily in this Teaching Material	3,6	Very Practical
7.	Thematic Teaching Materials Based on the PjBL Model are interesting to learn	3,7	Very Practical
8.	Letters, words, and sentences in teaching materials are easy to read	3,6	Very Practical
9.	Problems in teaching materials are simple and interesting to learn	3,5	Very Practical
10.	Instructions for easy-to-understand teaching materials	3,7	Very Practical
Rata-rata		3,6	Very Practical

Based on table 6, it can be seen that each statement that describes practicality indicates a level of practicality that is in the range of 3.3-4.0 which is included in the practical to very practical category. Thus, the percentage of practicality obtained from the results of the student response questionnaire is 3.6. This means that integrated thematic teaching materials based on the PjBL model in grade IV elementary schools can be categorized as very practical. Based on the explanation above, it is known that valid, practical and effective teaching materials include titles, subjects,

competencies and core, basic competencies, indicators, learning objectives, learning instructions (teacher and student instructions), containing an explanation of how to use a material. teaching materials that will be studied in a learning process, supporting information, worksheets, and evaluations. Teaching materials are equipped with pictures and descriptions, technical instructions, explanations and examples, displaying attractive colors. PjBL-based thematic teaching materials used by teachers are adapted to the applicable curriculum where the current curriculum is the 2013 curriculum.

The conclusion of this study shows that the design and manufacture of PjBL-based thematic teaching materials have gone through the feasibility test stage. The results of the feasibility test state that this media is valid and reliable to be used as a whole in integrated thematic learning in elementary schools

CONCLUSION

Thematic teaching materials using the PjBL Model in Grade IV Elementary School are very valid. This is seen based on the results of the validation of teaching materials by expert validators and educational practitioners that have been carried out, both in the lesson plans and the developed teaching materials. Teaching materials are said to be practical seen from the implementation of teaching materials and lesson plans by observers to teachers who teach in very practical categories. Teaching materials are said to be effective in this study seen from student activities and learning outcomes.

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