The Validity of Teaching Materials Using the Problem-Based Learning Model of Independent Curriculum Social Sciences Materials in Mobility Elementary Schools

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Abstract

This research is a development carried out to produce a product in the form of a teaching material model with the PBL model of IPS content independent curriculum for students in elementary school. Based on the theoretical studies and field studies carried out, initially a draft teaching material package model was produced with the PBL model of independent curriculum IPS content, which contains the identification of SK and KD, identification of indicators, and identification of learning objectives. Furthermore, the teaching materials are reflected and revised according to user needs and expert input to obtain the final product. This development is carried out based on the Plomp model which emphasizes the needs of users according to the context (teachers and students), meaning that the packages and development models are developed collaboratively (active user involvement) in selected environments. Products are revised based on authentic process data according to user needs (process/formative evaluation), and expert tests and small group tests are carried out to perfect the product (summative evaluation). The results of the validation of model teaching materials with the PBL model of independent curriculum IPS content show that the developed teaching materials have been declared valid with an average of 3.75 reaching a percentage of 93.75% with a very valid category, declared practical and effective.

Keywords: Problem-Based Learning (PBL) Model, Social Studies Learning, Elementary School Students

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For citation:

Introduction

Teachers have the task of planning, implementing, and evaluating the learning process. The learning process is inseparable from the important role of teaching materials. Teachers must be able to develop teaching materials from the government as support for the success of the independent curriculum (Baharuddin, 2021; Evi Hasim, 2020; Nehe, 2021). The development of teaching materials is necessary to help teachers and students. Thus, the teacher should be able to properly facilitate the process according to the needs of his students. One of the needs of students is facilities in the form of teaching materials. To support concrete learning according to (Desyandri et al., 2019; Dewi & Desyandri, 2021; Fitria et al., 2019) in his research, First, teachers must care about the methods or processes of children's thinking so that the result of thinking in himself. Second, the teacher must provide a variety of activities that allow the active involvement of students with their initiative (Desyandri et al., 2018; Rahmadani & Taufina, 2020; Sapitri et al., 2019). Third, teachers should not emphasize learning activities that require children to think like adults (Fitria et al., 2017; Putra et al., 2019). Fourth, teachers must care about the speed and level of cognitive development of each student in carrying out a lesson so that each student can learn optimally (Amini, 2014; Anggraini & Nursyirwan, 2016; Damayanti et al., 2017).

For this reason, from the explanation above, it can be seen that learning media is needed that supports student learning activities to learn optimally. Starting from the Republic of Indonesia Law. No. 20 of 2003, regional governments are obliged to fulfill educational facilities in the form of learning media for all units and levels of education in their area which are the responsibility of the region (Bentri et al., 2014; Hidayati et al., 2017; Subandi, 2014). The government needs to identify the quality and quantity of learning media currently in elementary schools. Does the existence of this learning media meet the required standards or not? The extent to which the use of existing learning media. In the learning process, interactive multimedia is included in learning media, where interactive multimedia is everything that exists around the learning environment that can be functionally used to help optimize learning outcomes. Optimization of these learning outcomes can be seen not only from the learning outcomes (output) but also seen from the process in the form of student interaction with various learning media that can stimulate learning and accelerate understanding and mastery of the knowledge they learn (Barnard et al., 2018; Dudung, 2018; Ministry of Education and Culture, 2013).

Teaching materials are used as a medium for transferring information or knowledge from teachers to students. Teaching materials are all materials (both information, tools, and text) that are systematically arranged, which display a complete figure of the competencies that will be mastered by students and used in the learning process with the aim of planning and studying the implementation of learning (Alimuddin, 2014; Hernawan et al. al., 2008; Husada et al., 2020; Nurmalasari et al., 2016). Teaching materials are materials or learning materials that are arranged systematically and are used by teachers and students in the learning process at school. The teaching materials used determine the achievement of each set of basic competencies. Teaching materials that meet good criteria will give birth to an effective learning process (Khairani et al., 2017; Prastowo, 2013; Wahyudi et al., 2021). But on the contrary, if the teaching materials do not match the criteria then what will be born are various problems in learning.

Furthermore, teaching materials are all forms of materials used to assist teachers in carrying out the learning process (Gustiawati et al., 2019; Winarso, 2017). However, the teaching materials used should not only help the learning process but see as a whole the achievement of basic
competencies developed. The use of teaching materials is one of the determining factors for the success of a learning process. Teaching materials that meet good criteria will give birth to an effective learning process. On the other hand, if the teaching materials used are not by the criteria and demands of basic competencies, various problems will arise in learning.

In the independent learning curriculum, there is independence for students in applying the learning process experienced by students. The social studies subject is one of the subjects that is now being implemented in the independent learning curriculum (Rio et al., 2016). IPS learning which is abstract in nature contains social humanities materials. Social studies subjects implemented in the independent learning curriculum are no longer implemented in themes or can be said to have stood alone so that students and teachers adapt to the independent curriculum social studies material (Achmad et al., 2022; Daga, 2021; Desyandri & Vernanda, 2017; Ministry of Education and Culture, 2019). Social studies learning implementation should use a learning model. One of these learning models is Problem-Based Learning (PBL).

The results of consultations with experts will be used as input for product revisions. After revision, individual and small group evaluations were carried out, followed by trials in selected schools. When tested, the usability and implementation of the teaching materials will be observed. After the product is revised based on input from the teacher or observer, it is continued with trials at the next school to see the effectiveness of the product. Next, the assessment (assessment stage) at the end of the process, asked for responses from teachers and students and tested the effectiveness of using teaching materials (T. (S

**Results**

This study aims to produce model teaching material products with a valid, practical, and effective independent curriculum IPS content PBL model (Creswell, 2016). To produce such a product, a research procedure was carried out consisting of three stages, namely (1) preliminary research (preliminary analysis), (2) prototyping phase (design stage), and (3) assessment stage (assessment stage). Results of research product development (Riduwan, 2009; Sugiono, 2007; Sugiyono, 2013). This curriculum analysis was carried out on the learning objectives of Competency Standards (SK) and Basic Competence (KD) in the social studies subject of the independent curriculum. This analysis is carried out to see the scope of the material, the objectives to be achieved from learning, and the learning strategies used in learning. The results of this analysis are used as a basis for developing the content of the teaching material model with the PBL model of independent curriculum IPS content for learning so that it is by the SK and KD contained in the independent learning curriculum in elementary schools. The curriculum used in this study is the independent learning curriculum.

After analyzing the curriculum relating to SK and KD in social studies subjects, various concepts were learned by elementary school students in semester I. This concept analysis aims to determine the content and material needed in learning. IPS material is needed to achieve competency achievement indicators. The results of the analysis of the characteristics of the students that were carried out were that the age of the students at SDN 11 Gadut, Agam Regency, was between 6-12 years. The ability of students in this school is average. This is inferred from the ranking of schools within the sub-district. Students at this school can argue, already have complex language structures, and can understand various grammar rules that are good and right. The characteristics of students at SDN 11 Gadut, Agam Regency are happy to play, they are happy with something new and interesting, have a high curiosity about this new thing. In addition, the characteristics of students in elementary school also show that they like pictorial and colorful objects.
The proof is that when given two types of story books (with pictures as well as in color, and without pictures and color), students are much more motivated and have a great desire to develop their talents. Based on the description above, it can be seen that the characteristics of class students at SDN 11 Gadut are happy to play, have a high enough curiosity, like something new and interesting, and like objects to pictures and colors. Based on the character of these students, research was carried out which presented different learning tools than those used before, namely pictorial and colored, as well as developing students’ curiosity in a positive direction, which is closely related to the development of students’ attitudes. The learning tool presented is a teaching material model with the PBL model of independent curriculum IPS content.

The next activity that was carried out after conducting analysis, interviews, and observations in the preliminary stage was to design and develop a prototype (art talent teaching material) which was designed for the first semester in elementary school. The results of this initial prototype design were named Prototype 1. The characteristics of the teaching material model with the PBL model of IPS content, the independent curriculum that has been designed contains open-ended problems to improve student learning outcomes and contains images obtained online from the internet. The type of font used in the model teaching materials with the PBL model of the independent curriculum IPS content is Arial Narrow. The font size used is 14-16. The presentation of teaching materials for the development of artistic talent begins with a description of the material being studied. Each teaching material learning meeting contains the title of the material, the goals to be achieved by students, the words of motivation for happy learning and enthusiasm, and the title of the teaching material. The format of this teaching material is modified from existing teaching materials, according to the Ministry of National Education which consists of (1) cover, (2) preface, (3) table of contents, (4) instructions for use, (5) SK and KD which will be achieved, (6) the title of the material, (7) the objectives to be achieved, (8) tasks or activities, (9) supporting information, (10) reflection, (11) student value column, and (12) bibliography. From the results of the revision, several things need to be corrected and considered to produce valid teaching materials.

Table 1. Results of Content Eligibility Validation by Expert Validators

<table>
<thead>
<tr>
<th>Rated aspect</th>
<th>Validation Value</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>The design of teaching materials is by SK, KD, and indicators</td>
<td>3.60</td>
<td>Very Valid</td>
</tr>
<tr>
<td>IPS material is by the implementation of the independent learning curriculum</td>
<td>4</td>
<td>Very Valid</td>
</tr>
<tr>
<td>IPS material is by the implementation of the independent learning curriculum</td>
<td>3.60</td>
<td>Very Valid</td>
</tr>
<tr>
<td>Teaching materials according to the steps of the PBL model</td>
<td>4</td>
<td>Very Valid</td>
</tr>
<tr>
<td>The sequence of material in teaching materials is by a logical learning flow</td>
<td>3.60</td>
<td>Very Valid</td>
</tr>
<tr>
<td>Teaching materials provide opportunities for students to learn social studies in elementary schools</td>
<td>3.30</td>
<td>Valid</td>
</tr>
<tr>
<td>Number of Content Eligibility</td>
<td>21.70</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.61</td>
<td>Very valid</td>
</tr>
</tbody>
</table>

The results of the validation of teaching materials from the feasibility of the content assessed by experts as in the table described can be seen that the average validation result in general is 3.61 with a very valid category. Based on the aspects assessed, it was found that the design of teaching materials by SK, KD, and Indicators was 3.6, Conformity with the development
of students scored 4. Teaching materials were by IPS material in the independent curriculum with a value of 3.6. The order of material in teaching materials is by a logical learning flow with a value of 3.6 and teaching materials provide opportunities for students to develop their knowledge with a value of 3.3. This means that the teaching materials in terms of content feasibility are valid.

Table 2. Results of Language Validation by Expert Validators

<table>
<thead>
<tr>
<th>Rated aspect</th>
<th>Validation Value</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legibility</td>
<td>4</td>
<td>Very valid</td>
</tr>
<tr>
<td>Information clarity</td>
<td>3.30</td>
<td>Valid</td>
</tr>
<tr>
<td>Conformity with good and correct Indonesian rules</td>
<td>4</td>
<td>Very valid</td>
</tr>
<tr>
<td>Effective and efficient use of language (clear and concise)</td>
<td>3</td>
<td>Valid</td>
</tr>
<tr>
<td>Total</td>
<td>15.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.57</td>
<td>Very valid</td>
</tr>
</tbody>
</table>

The results of language validation assessed by experts as in the validation results table described can be seen that the average result in general is 3.57 with a very valid category. Based on the aspects assessed, legibility was obtained with a value of 4, clarity of information with a value of 3.3, conformity with good and correct Indonesian language rules with a value of 4, and the effective and efficient use of language (clear and concise) with a value of 3. Its meaning is linguistically very suitable for elementary school students.

Table 3. Results of Presentation Validation by Expert Validators

<table>
<thead>
<tr>
<th>Rated aspect</th>
<th>Validation Value</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>The clarity in the formulation of achievement indicators</td>
<td>4</td>
<td>Very Valid</td>
</tr>
<tr>
<td>Systematic serving order</td>
<td>3.60</td>
<td>Very Valid</td>
</tr>
<tr>
<td>Teaching materials can provide motivation and attraction</td>
<td>4</td>
<td>Very Valid</td>
</tr>
<tr>
<td>Interaction (giving stimulus and response)</td>
<td>4</td>
<td>Very Valid</td>
</tr>
<tr>
<td>Completeness of information</td>
<td>4</td>
<td>Very Valid</td>
</tr>
<tr>
<td>Total</td>
<td>19.60</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>3.92</td>
<td>Very Valid</td>
</tr>
</tbody>
</table>

The results of the presentation validation as a whole have an average value of 3.92 which means it is very valid. Its meaning in terms of clarity in the formulation of achievement indicators, systematic order of presentation, and teaching materials can provide motivation and attraction, and completeness of the information is appropriate for elementary school students.

Table 4. Results of Learning Graphic Validation by Expert Validators

<table>
<thead>
<tr>
<th>Rated aspect</th>
<th>Validation Value</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of fonts: proportional writing type, which uses the MT Light Footlight typeface</td>
<td>3.60</td>
<td>Very valid</td>
</tr>
</tbody>
</table>

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Use of fonts: proportional writing size, namely using size 18 on the contents and 48 on the cover of the book & 4 & Very valid
- Lay out or good layout (cover represents the contents of the book) & 4 & Very valid
- Illustrations, pictures, and photos are clear & 3.30 & Very valid
- Illustrations, pictures, and photos credit the source & 4 & Very valid
- Illustrations, pictures, and photos use the figures of Indonesian SD students & 4 & Very valid
- The display design is attractive or not monotonous with color gradations & 4 & Very valid

<table>
<thead>
<tr>
<th>Total</th>
<th>26.90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>3.84</td>
</tr>
</tbody>
</table>

The graphic validation results assessed by experts as in the graphical table is 3.84 with a very valid category. Based on the aspects assessed, it was found that graphical activities consisted of activities using fonts: proportional type of writing, namely using the MT Light Footlight typeface, using fonts: proportional writing sizes, namely using size 18 on the content and 48 on the book cover, Layout or good layout (cover represents the contents of the book), illustrations, pictures, and photos are clear, illustrations, pictures, and photos include sources, illustrations, pictures, and photos use Indonesian elementary school student figures, and the design looks attractive or not monotonous with gradations color, its meaning in terms of graphics is by the characteristics and learning in elementary school.

**Discussion**

The PBL model has several characteristics that distinguish it from other learning models. The salient characteristic of this model is the use of problems as learning materials and learning is done in group discussions. More details expressed by Rusman 13 (2016), namely: (1) problems are the main source of learning, (2) the problems users are problems that exist in everyday life, (3) problems contain multiple perspectives, (4) challenge knowledge owned by students, (5) the main focus is on self-direction, (6) utilization of various sources of knowledge, their use, and evaluation, (7) collaborative, communicative, and cooperative, (8) developing discussion and problem-solving skills, (9) learning contains synthesis, and (10) uses evaluation and student experience and the learning process (Chiang & Lee, 2016; Efendi et al., 2021; Sada et al., 2016).

Learning with the PBL model begins with a problem, then students deepen their knowledge of what they already know and what they need to know to solve the problem. The existence of real problems that are given will make learning centered on students and become active and meaningful learning (Rahmadani & Taufina, 2020). With these real problems, students try to find solutions to problems and the knowledge that accompanies them, to produce truly meaningful knowledge. Learning by solving problems can improve students' reasoning and the ability to think freely in other words learning problem-solving trains students' cognitive skills to find and solve problems without the help of others. Furthermore, with the application of PBL, it is hoped that students will have skills in discussing and solving problems. The teacher acts as a facilitator and guide, while students must be actively and independently involved in learning by optimizing their thinking skills. In other words, the use of PBL can improve students' thinking skills and independent learning about what they learn.
Through PBL students are required to be skilled at asking questions and expressing opinions, finding relevant information, looking for alternative ways to get solutions, and determining the most effective way to solve problems. This is in line with research conducted (Taufik Taufina & Arwin, 2018) which states, the application of PBL requires students' high-level thinking skills in learning mathematics. Mathematics learning outcomes can also be influenced by student factors, namely higher-order thinking skills.

Conclusion

The development of model teaching materials with the PBL model of independent curriculum IPS content has resulted in the following: 1) The development of model teaching materials with the PBL model of independent curriculum IPS content in elementary schools based on the analysis of KI and KD, then indicators of competency achievement are born which are divided into 2 lessons with a time allocation of 3 x 35 minutes each. Each lesson is developed by looking at three main activities, namely initial activities, core activities, and final activities. 2) Applicative guidelines for teachers in model teaching materials with the PBL model of IPS content in the independent curriculum in elementary schools. 3) The development and preparation of applicable guidelines produced in the form of model teaching materials with the PBL model of independent curriculum IPS content have been declared valid, practical, and effective.

Author Contributions

Conceptualization, Diana Gusti Alfiyanti, and Yeni Erita; methodology, Yeni Erita; validation, Diana Gusti Alfiyanti, and Yeni Erita; formal analysis, Yeni Erita; investigation, Diana Gusti Alfiyanti, and Yeni Erita; resources, Diana Gusti Alfiyanti and Yeni Erita; data curation, Diana Gusti Alfiyanti; writing-original draft preparation, Diana Gusti Alfiyanti, and Yeni Erita; writing-review and editing, Yeni Erita; visualization, Diana Gusti Alfiyanti, and Yeni Erita; supervision, Yeni Erita; project administration, Yeni Erita; funding acquisition, Yeni Erita, and Diana Gusti Alfiyanti. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

No Conflicts of interest.

References:


Ronggeang Rantak Saiyo. *Ekpresi Seni*, 16(2), 131–147.


Putra, H. W., Taufina, & Adnan, M. F. (2019). The Development of Learning Materials to Write a Poem with Cooperative Learning Methods Type Two Stay Two Stray in the Fifth Grade


