

Thematic Textbook Based on Local Wisdom Combined with Animation Media Using Barcode Scanning Technology

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Abstract. The purpose of this study was to see the feasibility of thematic textbook based on local wisdom combined with animation media using barcode scanning technology. This research method refers to the theory of Borg and Gall, using seven steps or implementation, namely potential research and problems, research planning, initial product development, field trials, revisions, validation, and final improvement. The data techniques used were observation, interview, and questionnaire techniques. The analysis used in this research is quantitative and qualitative analysis including observation of learning and validation of teaching material products. Sources of data in this study were fifth grade students and teachers in Sedan district. The feasibility of the product is seen from the results of the validation of material experts and linguists and responses with the results of responses from teachers and students. From the material validation process, an average result of 3.4 with a proportion of 84% and very good category. The validation of linguists obtained results of 85% with an average of 3.4 and very good category. Based on these results, the animation media in the thematic textbook based on local wisdom of Rembang were declared suitable for use in the learning process.

1. Introduction

The curriculum currently used by the Indonesian nation is the 2013 curriculum. The implementation of the 2013 curriculum at elementary school is done through learning with a thematic approach from grade I to grade VI. Thematic learning method is a method which is present the learning process using themes and sub themes[1][2]. Thematic learning is defined as a learning that uses themes to link some subjects to provide meaningful experiences to the students[3]. Meaningful means that in thematic learning students will understand the concepts they learn through direct and real experience that connects concepts within and between subjects. Thematic integrative based learning is a learning approach which integrates various competencies from various subject matters into various themes[4]. When compared with conventional approaches, thematic learning appears to emphasize the involvement of students in the learning process. Thematic model is a learning model that uses themes to link several subjects so as to provide meaningful experiences to students[5]. Success in learning depends on the teacher's ability to package learning. Teachers need to innovate in choosing methods

and designing fun learning strategies, of course, this requires creative ideas[6]. The learning process that is carried out actively and fun is expected to be more effective in achieving the learning goals that have been set previously[7].

In the modern era like today, a teacher is not only in charge of transferring knowledge to their students. Teachers are also required to be creative and able to use whatever resources and media are available around them to support learning in the classroom[8]. That As educator of the generations to continue the nation, teachers have an important role as facilitator of strength and motivation in the development of the attitude required for the attainment of educational objectives and goals[9]. The way to achieve learning objectives is by using learning media. The use of instructional media is very effective in the process of delivering information and understanding of educational material to all students in the school[10]. This media can be used as a teacher as a tool that can make it easier for teachers to provide information during learning. The use of media is expected to have a positive impact, such as the emergence of a more conducive learning process, feedback in teaching and learning, and achieve optimal result[11]. Good learning media can also support learning activities in the classroom according to the expected goals. In addition to the use of media, thematic learning must also be supported by textbook that are in accordance with the characteristics of students so that learning objectives are achieved. The textbook are considered as one of the most reliable resources for active and effective learning[12]. Currently in the 2013 curriculum the government only provides teacher books and student books[13]. The use of limited learning resources makes learning less meaningful. Learning media always consists of two important elements, that are the elements of equipment or hardware (hardware) and the elements of the message element inside (message / software). The textbook are one of the learning media that can be one of the learning resources of students[14].

The use of information technology in the use of instructional media can be an alternative for teachers in creating attractive media and arouse new desires and interests for students, generate learning motivation, and even have a psychological influence on students. Besides being able to increase student motivation, the use or utilization of media that utilize information technology can also increase students' understanding of lessons. One example of the use of information technology in the use of learning media is animation media. Media in the form of animation was needed by the students so that the learning situation was more concrete, interesting, and fun[15]. By combining animation media in textbook that raise local wisdom is an example of the use of technology that teachers can use to improve students' conceptual understanding. Now many young people forget about local wisdom. The introduction and comprehension of local culture can be done through education[16]. Local wisdom appears as a guard or filter (shield) of the global climate that affects human life[17][18]. The local wisdom values such as tolerance, mutual cooperation, and traditional herb is the glue to maintain the unity of nation in difference and variety[19]. Local wisdom can be defined as a culture created by the sector through an iterative process, through the internalization and interpretation of religious and cultural teachings which are socialized in the form of norms and used as guidelines in everyday life for the community. The formulation of the problem in this research is how is the need for animation media in local wisdom-based thematic textbook and how to design animation media development in thematic textbook based on local wisdom.

2. Research Methods

This research uses research and development, or is called Research and Development. This research refers to the theory of Borg and Gall with 10 steps of research, but due to time constraints the researchers only used 7 steps, namely, (1) information gathering, (2) research planning, (3) initial product design development, (4) design validation. product, (5) revision of product design, (6) product testing, (7) revision of product test results. The data used in this research are quantitative data and qualitative data. While the data collection techniques used observation, interviews, and respondent

questionnaires. The qualitative data instruments consist of interviews and validator suggestions, while the quantitative data instruments consist of product validation scores and respondents' questionnaire scores.

Product validation by linguists on August 31, 2020 and material experts on September 7, 2020. The data collection instruments used in this study were expert validation, teacher response questionnaires, student response questionnaires, observation guidelines and interview guidelines. The validation analysis uses a type rating scale with the following stages. (a) The validator gives a score on each question item. The answer scores include the categories very good (4), good (3), sufficient (2), and less (1). (b) The total score for each validator is added up on all indicators. To find the results of the validity value using the formula

$$P = \frac{(\sum f \times 100\%)}{n}$$

Information :

P: Final grade

f: Obtained score

n: Maximum Score

The results obtained are interpreted by the following criteria

Table 1.Criteria for the Validity of the Assessment Tool

Number	Score	Category
1	81-100%	Very Good
2	61-80%	Good
3	41-60%	Enough
4	21-40%	less

The thematic textbook developed is said to be suitable for use if the percentage obtained from the validation process is more than 61%.

3. Result and Discussion

The results of this study include the need and the development of thematic textbook based on local wisdom combined with animation media using barcode scanning technology.

3.1 The Need For Thematic Text Books Based On Local Wisdom Combined With Animation Media

This research begins with an analysis of the need for thematic textbook based on local wisdom combined with animation media using barcode scanning technology for grade V SD in Rembang Regency. Analysis of the needs of thematic textbook based on local wisdom combined with animation media using barcode scanning technology was carried out by observing and interviewing fifth grade students of SDN 1 Karas and teachers in Sedan District. The observation activity was carried out on February 27, 2020, attended by 22 students. Meanwhile, the interview was held on March 7, 2020.

The results of observations on the need for thematic textbook based on local wisdom combined with animation media using barcode scanning technology obtained different values in each aspect. In the aspect of students' enthusiasm in participating in thematic learning in class, an average score of 2.6 was obtained. This shows that students still need motivation to increase their enthusiasm for learning. The second aspect of using textbook in classroom learning is a score of 2.5 in the sufficient category. This shows that teachers and students still need more sources of learning. The third aspect is students' enthusiasm for using textbooks. Based on the research results, it was obtained an average value of 2.45 in the sufficient category. This shows that students still need varied textbooks as a learning resource. The fourth aspect is the textbook that makes it easier for students to learn to get an average score of

2.6 in the sufficient category. This shows that in the learning process students still need innovation that can increase student motivation. Based on the average data of 2.53, it can be concluded that the school scores less than 3 in the sufficient category

The results of these observations were strengthened by the results of the interviews. The interviews conducted included content and graphic aspects of thematic textbooks. From the aspect of material and content needs, students rarely get material that is contextual according to local wisdom of Rembang Regency so that students do not know the culture and tourist attractions in Rembang Regency. In addition, textbook containing animation are very rarely found in schools. In general, schools only use teacher books and student books provided by the government. In terms of graphics, clear and easy to understand writing and attractive images are needed.

The results of interviews with the needs of animation media in thematic textbook for fifth grade teachers in Sedan District. Interview covers aspects of textbook needs, textbook content and textbook graphics. In the aspect of needing thematic textbook, teachers still need textbook that are easy to understand and contextual. This is because textbook in schools have not included Rembang culture and there are no textbook that contain animation technology.



3.2 Thematic Textbooks Based On Local Wisdom Combined With Animation Media Using Barcode Scanning Technology

The development of textbook containing animation media and based on local wisdom needs to be done to support the achievement of competence and more meaningful learning. This is in accordance with the 2013 curriculum approach. The developed textbook contains animation media that is integrated with local wisdom in Rembang Regency so that later the benefits of learning can be felt by students, and learning becomes more meaningful. The steps for developing animation media in textbook are as follows: potential and problems, analysis of learning resources, analysis of competence and design of textbook products

Thematic textbooks based on local wisdom combined with animation media using barcode scanning technology were developed in terms of content components, physical design, visual design, and animation design. Design of thematic textbooks based on local wisdom combined with animation media using barcode scanning technology are presented in Table 2.

Table 2. Design of thematic textbooks based on local wisdom

Components	Explanation
Content Components	<p>The content components of the thematic textbooks based on local wisdom consist of an introduction, contents, and closing.</p> <p>Introduction The introduction to this textbook contains components of instructions for use, core competencies, basic competencies, competency achievement indicators, an introduction, and a table of contents.</p> <p>Contents The content section contains (1) work instructions including observing, reading, writing, discussing, practicing, experimenting, telling stories, reflecting, and working with parents, (2) the material in the textbook is related to local wisdom of Rembang, (3) Sola training at the end of the sub-theme, (4) Animation media in the form of a game to find treasures of knowledge by getting to know tourist attractions in Rembang Regency</p> <p>Closing The closing section consists of a bibliography and author's biography</p>
Physical design	<p>Product size The size of the development product used is 220 x 260 mm, making it</p>

	practical and easy to carry. The thematic text book cover uses illustrations in animation media, namely the character of Kartini who is a heroine from Rembang.
Visual Design	<p>The images used in thematic textbooks are related to aspects of local culture in Rembang Regency. This aims to foster a love for one's own culture. Cover thematic textbook presented Figure 1.</p>  <p>Figure 1. Cover Thematic Textbooks</p>
Animation design	<p>Animations are made using power points and converted into a video. The animated video invites students to play to find treasures of knowledge and get to know tourist attractions in Rembang. Animated videos can be played by scanning the barcode on the book.</p>  <p>Figure 2. Animated opener design</p>

3.3 Expert Validation Results

Expert validation is carried out to provide an assessment. Textbook are seen in terms of material and linguistic aspects as well as to get criticism and suggestions from validators and to revise textbook products. The results of the validation of material experts and linguists can be seen in the following table.

Table 3. Material Expert Validation Results Data

Assesment Indicators	Assesment Item	Score
a. Suitability of material with KI and KD	5 item	20
b. Material Accuracy	7 item	21
c. Material Update	4 item	14
d. Characters Assesment	1 item	3
Total	17 item	58
Average	3,41	
Percentage	85%	
Category	Very Good	

Table 4. Linguist Validation Results Data

Assesment Indicators	Assesment Item	Score
a. Straightforward	2 item	6
b. Communicative	1 item	4
c. Interactive	1 item	4
d. Conformity with the development of students	1 item	3
Total	5	17
Average	3,4	
Percentage	85%	
Category	Very good	

Based on the results of the needs analysis, it was found that thematic learning requires textbooks containing animation media and sourced from the local culture of the area where students live. In this case, it turns out that many students are not familiar with the local culture of Rembang. With the development of animation media in thematic textbooks based on local wisdom of Rembang, it is hoped that students will get to know the local culture of Rembang. With the textbook that contains animation media, it is hoped that it will increase learning resources for teachers and students. The development of thematic textbooks is developed based on the 2013 revised edition of the curriculum in 2018 with integrated thematic learning. Learning outcomes are in accordance with student interests and local wisdom in Rembang. One example is the content of Pancasila and Citizenship Education at competence 3.3. about the socio-cultural diversity of the community. The material prepared was to invite students to watch the Rembang regional dance video. The contents of local wisdoms could be inserted in the texts and students' activities, in effort to make the students understand, both directly and indirectly, and preserve the existing local wisdoms[20];

Animation media in textbooks based on local wisdom of Rembang are developed with interesting and fun characteristics. This attraction can be seen from the content, physical, visual and animation components. The validation results were analyzed using quantitative data, namely the number of questionnaire scores and qualitative data in the form of suggestions from the validator. Based on the results of the two questionnaires that have been filled in by each criterion validator, it is declared valid. The highest score for each item given by the validator is 4 (very good) and the lowest score is 3 (good). Expert validation assessments covering material aspects obtained a score of 58 with an average score of 3.41 with a percentage of 84% in the very good category and the linguistic aspect obtained a total score of 17 with an average score of 3.4 percentage 85% in the very good category. From these results it can be concluded that the animation media in the thematic textbooks developed is feasible both in terms of language and material. In the validation process the researcher also received suggestions from the validator. Suggestions from the validator in product development include the drawing in the book made clearer and bigger in size. Animation media in thematic textbooks based on local wisdom of Rembang are suitable for thematic learning. With the existence of thematic textbooks that contain animated media based on local wisdom, students can love the local culture where they live. This is also in line with the results of research conducted by [19] with the results of local wisdom in a local curriculum based on local needs in each school in accordance with the needs of the environment that supports educational goals to create a civilized nation. The same thing is also explained by [14] who stated that the transformation of local wisdom is an effort to inherit local cultural wealth in society in the form of values and norms that apply in the local area.

4. Conclusion

The conclusion of this study is the results of the analysis of the need for animation media in thematic textbooks based on local wisdom show that teachers and students of grade V Elementary School need

thematic textbooks that contain animation media based on local wisdom. The development of animation media in thematic textbooks based on local wisdom of Rembang Regency carried out by researchers includes potential and problems, competence analysis, analysis of learning resources, and design of animation media development in thematic textbooks. The validation results show that the animation media in thematic textbooks based on local wisdom of Rembang are valid for use in learning.

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