

Optimizing The Competence Of Elementary School Teachers Through Local Agriculture-Based E-Books In Jember

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Abstract: *Curriculum 2013 is a curriculum designed to develop learners' competencies ranging from the domains of attitude, knowledge, and skills. The process of achieving learning by integrating the three domains through an integrated thematic learning approach. According to the Ministry of Education and Culture (2013), integrated thematic books, or learner books, are books intended for students to be used as a guide for learning activities, to facilitate students in mastering certain competencies through active, creative, meaningful learning, and critical thinking in accordance with noble values. Each subject is integrated into predetermined themes. The use of the theme aims, so that students can understand various concepts easily and clearly. Through the development of e-book teaching materials based on local Jember agriculture, it can strive for students to know many sources of knowledge, and love local wisdom in the area where they live. Elementary students really need to be given contextual learning, obtained from their own experiences, and actualized in everyday life. The local wisdom of Jember that is integrated in the teaching materials are Batik typical of Jember, Lahbako Dance, Petik Kopi Dance, Can-Macanan Kadduk, JemberFashion Carnaval (JFC), Patrol Music, Jaran Kencak, Jember Sari bridal dress, Gudang Atag, tape and processed tape products, and edamame and processed edamame products. Suggestions that can be given, namely for teachers are expected to be able to develop a teaching material according to the material needed, in order to attract the attention of students, and can invite students to be more active in learning, so that student learning outcomes can be achieved well. For students, learning by using e-book teaching materials based on local Jember agriculture, can make learning fun, and make it easier for students to know local Jember agriculture. For other researchers, it is hoped that this development research can be used as input for further research, and used as a theory in similar studies, so that further material development can be carried out better. This research is a development research that aims to produce a product. Borg and Gall stated that educational research and development (R & D) is a process used to develop and validate educational products. Meanwhile, Seals and Richey define development research as a systematic study of the design, development and evaluation of learning programs, processes and products that must meet the criteria of validity, practicality, and effectiveness. Main Output Promise is National Journal Publication and Sinta 3. Target TKT is TKT 8 The system is complete and eligible. The suitability of the Featured Research is Education, Arts and Culture while the suitability of the Featured Theme is Character Education and Competitiveness and the suitability of the Featured Sub Theme is the Development of Multicultural Education based on Local Wisdom.*

Keywords: Optimization, E-Book, Jember Local Agriculture

INTRODUCTION

The 2013 curriculum is a curriculum designed to develop learner competencies ranging from the realm of attitudes, knowledge, and skills. The process of achieving learning by integrating the three domains through an integrated thematic learning approach. Integrated thematic learning is a learning approach, which integrates various competencies from various subjects into themes. The main teaching material used in learning in elementary school, to support the achievement of the curriculum objectives is an integrated thematic book. According to the Ministry of Education and Culture (2013), integrated thematic books, or learner books are books intended for learners to be used as a guide for learning activities, to facilitate learners in mastering certain competencies through active, creative, meaningful learning, and critical thinking in accordance with noble values. Each existing subject is integrated into predetermined themes. The use of the theme aims, so that students can understand various concepts easily and clearly. The seventh theme in class IV is Beautiful Diversity in My Country and in theme 7 there are 3 subthemes, one of which is subtheme 2 Beautiful Diversity of My Country's Culture. Subtheme 2 there are 5 subjects to be studied, namely Indonesian Language, Social Studies, SBdP, PPKn, and Science. This subtheme introduces students to the diversity of cultures in Indonesia, such as the diversity of traditional ceremonial activities in Indonesia, the diversity of traditional houses in Indonesia, the diversity of dance arts in Indonesia, the diversity of traditional clothing in Indonesia, to the diversity of traditional musical instruments in Indonesia. Therefore, this theme is a very important substance as an effort to introduce learners to cultural diversity in Indonesia that must be known, proud of, and preserved.

The fact of education today, teachers only race on thematic books provided by the government in the learning process, have not developed teaching materials creatively, most teachers today are only pursuing the completion of basic competencies (KD) contained in the curriculum, and actually the textbooks provided by the government also have shortcomings, and it is the obligation of a teacher to develop creative ideas in learning. This is similar to the results of research conducted by Su'udiah, Degeng, and Kuswandi (2016: 1744), that the characteristics of thematic coursebooks are in fact still lacking contextualization, the material taught by teachers needs to be related to the area around students so that learning is more contextual, because the books used by students

today tend to discuss areas outside the students' residence. According to Akbar (in Wijiningsih, Wahjoedi, and Sumarmi, 2017: 1031), thematic textbooks should be able to accommodate and use real situations that occur in the environment of students, so that they can help students understand the learning material being taught, and make learning practices meaningful.

METHODS

This research is a development research that aims to produce a product. Borg and Gall state that educational research and development (R & D) is a process used to develop and validate educational products. Meanwhile, Seals and Richey define development research as a systematic study of the design, development and evaluation of learning programs, processes and products that must meet the criteria of validity, practicality, and effectiveness.

The design chosen as a reference in the research development of e-books based on local wisdom of Jember. Jember local wisdom-based e-book development research is the Research and Development (R&D) development model by Borg & Gall. The stages in development research according to Borg & Gall (in Masyhud, 2016: 227), are as follows.

1. Preliminary research
2. Product development planning
3. Development of initial product design
4. Product design validation
5. Revision of initial product design
6. Trial use
7. Product design revision
8. Effectiveness trial
9. Final product and mass product
10. Product dissemination and implementation

The existence of time constraints makes this development model modified into 7 stages adapted to the development research conducted. The following are the 7 stages of Borg and Gall development (in Gooch, 2012: 85), which are as follows.

1. Needs analysis stage (Research analysis, needs assessment and proof of concept)
2. Product planning and design stage (Product planning and design)
3. Production stage / implementation of initial product development (Preliminary product development)
4. Preliminary validation stage (Preliminary field testing)
5. Product revision stage (Product revision)
6. Main field testing stage
7. The final product revision and dissemination stage.

RESULTS AND DISCUSSION

This research produces a product packaged in an e-book entitled "Elementary Learning Supplement Book Based on Local Agriculture in Jember Regency" which contains local agriculture in Jember Regency. If integrated into the learning process, this book can be used as a support in IPAS subjects, especially Chapter 6 Indonesia Rich in Culture. The product in this study was made with the help of the Canva application. This product is packaged in the form of an e-book so that it is easily accessible via smartphone, laptop or computer so that it can be used as a means of introducing local wisdom in Jember Regency.

This research and development uses the Research and Development (R&D) method using the ADDIE development model (Analysis, Design, Development, Implementation, and Evaluation), the stages that have been carried out are as follows.

4.2.1 Analysis Stage

At the analysis stage, needs assessment and material analysis were carried out by direct observation, unstructured interviews, and distributing survey questionnaires. Interviews were conducted with fourth grade teachers in each elementary school where the research aimed to find out information about the availability of teaching materials, learning media, and to find out the problems and needs needed by teachers and students during the learning process, especially IPAS lessons on biological local wisdom in Chapter 6 Indonesia Rich in Culture. Then material analysis is carried out about everything needed in learning activities. In addition, this activity is carried out to find out information on students' knowledge of local agriculture around them. Based on interviews and observations, it is known that some problems and potential experienced by teachers and students. The problems found are that students do not know the local agriculture in Jember Regency, learning is still about local wisdom globally or in general, so it is not related to the surrounding environment of students, and limited time in developing learning media based on local wisdom of students. In addition, it is also known that some of the potential possessed by students and teachers, including students have personal cellphones, schools allow students to bring cellphones with the aim of being used as one of the sources and learning media.

4.2.2 Design Stage (Design)

Based on the problems that have been explained, planning and product design are then carried out to solve problems in integrating local agriculture in Jember Regency with IPAS material. This product was developed in the form of an e-book based on local agriculture in Jember Regency. The planning stage is related to product design planning, which includes determining the title, material content and appearance of the material. Meanwhile, the research planning stages include formulating the research title, research problem, research objectives and benefits, design planning, and learning outcomes planning.

a. Formulate the title

The title of the development product is adapted to the material used in this research, which is related to the local wisdom of Jember Regency, especially local agriculture, so the title of the development product is "Learning Supplement Book for Elementary School Based on Local Agriculture of Jember Regency".

b. Formulate the problem

The results of interviews with fourth grade teachers at SDN Jember Lor 05, SDN Tegal Gede 01, and SDN Mulyorejo 01 generally show that the teaching materials used are not based on local wisdom in Jember Regency so that students do not understand the local wisdom in Jember Regency. The teaching materials used are IPAS package books published by the Ministry of Education and Culture which generally contain local wisdom in Indonesia.

c. Formulate objectives and benefits

Based on these problems, the aim of developing e-book-based teaching materials containing local agriculture in Jember Regency aims to provide alternative support to teachers in Jember Regency so that it can make it easier to introduce local wisdom in Jember Regency, especially local agriculture, to students. The benefits of this research are students and teachers

You can use this e-book as teaching material to get to know local agriculture in Jember Regency, increase knowledge regarding local wisdom of Jember Regency, especially local plants in Jember Regency, and help students to take advantage of technological developments in a positive direction.

d. Content planning

This plan is adapted to the selected material, namely CHAPTER 6 My Indonesia is Rich in Culture, the contents of the fourth grade science and science lesson in the independent curriculum. Even though the material is about cultural diversity, the e-book is designed to focus on local agriculture in Jember Regency. The material description is explained through an introduction that Indonesia is known as an agricultural country, the location of Jember Regency, various types of local Jember agriculture which are equipped with pictures about local agriculture in Jember Regency so that students can know and see them through the pictures that have been presented.

e. Product Design Planning

Making product designs takes into account the tastes and abilities of fourth grade elementary school students in order to attract students' interest. This local agricultural e-book is designed by adding pictures that match the material to make it more meaningful and interesting, explanations about local agriculture in Jember Regency, and communicative language. The hope is that it can help students to recognize and understand the material presented in it. Apart from that, at this stage the application that will be used to design the e-book is also determined. The applications used are Microsoft Word, Canva, and Power Point.

4.1.3 Development Stage

The media development stage begins with assembling the learning content contained in Microsoft Word. The following are the steps in developing an e-book.

a. Determine the title of the book

The title of the e-book in this research is "Learning Supplement Book for Elementary School Based on Local Agriculture in Jember Regency".

b. Making cover and background designs

The cover and background were created using the Canva application by paying attention to the selection of attractive colors, writing and images. The cover contains the title and level of education. After making the cover, continue with creating the background using the Canva application.

c. Contents of e-books

The contents of the e-book relate to all material related to local agriculture in Jember Regency and is equipped with pictures.

4.1.4 Implementation Stage

1. Validation Stage

Products that have been developed need to be validated before being implemented in learning activities. The aim is to find out whether the learning media developed for testing is valid or not. If the validation score is below adequate, then revisions or

improvements need to be made according to the validator's suggestions. Product validation is carried out by expert validators, namely one PGSD lecturer and one agriculture lecturer. Details of the validators in this research are as follows.

a. Media validator

The media validator in this research is Rizki Putri Wardani, M. Pd, one of the PGSD lecturers at Jember University.

b. Validator of material containing content and language

The material validator in this research is Intan Kartika Setyawati S.P., M.P. is an agriculture lecturer at Jember University.

Based on the assessment carried out by the validator, the results of the validation of the e-book based on local agriculture in Jember Regency were obtained as follows.

a. Rizki Putri Wardani, M. Pd

E-book based on local wisdom of Jember Regency is suitable for use with revisions.

b. Intan Kartika Setyawati

E-book based on local wisdom of Jember Regency is suitable for use with revisions.

Validation was carried out to obtain the feasibility of developing an e-book based on local agriculture in Jember Regency. The validation results obtained from the validator show whether or not the development of this e-book is feasible. The following is an analysis of data obtained from validation sheets from material experts and media experts.

This type of research uses R&D (Research and Development) research with the ADDIE model. The ADDIE model was chosen because the ADDIE model is more specific, consisting of five stages, namely Analysis, Design, Development, Implementation and Evaluation. The research developed teaching materials in the form of an e-book based on local agriculture in Jember Regency entitled "Primary Learning Supplement Book Based on Local Agriculture in Jember Regency". This teaching material was developed in accordance with the learning outcomes in the class IV science course content of science understanding. If teachers use interesting and contextual teaching materials, they can help students understand the material. This local wisdom-based teaching material can be used for learning and as a supplement or support for student books published by the Ministry of Education and Culture, so that learning is more meaningful because it is related to the students' real environment. Apart from that, by utilizing this local agriculture-based e-book, it can make it easier for students to get to know the local wisdom that exists in their environment.

The research subjects used in this research were students in class IVA and IVB at SDN Jember Lor 05, totaling 41 people, consisting of 20 people from class IVA and 21 people from class IVB. The development of teaching materials must meet several criteria so that they can be said to be good and usable teaching materials, namely valid and effective.

The development of e-book teaching materials begins with the first stage, namely the analysis stage. At the analysis stage, a needs assessment and material analysis was carried out using direct observation, unstructured interviews, and distribution of survey questionnaires. Through this activity, information was obtained that students did not know about local agriculture in Jember Regency, learning was still about local wisdom globally or generally, so it is not related to the environment around students, as well as limited time in developing learning media based on students' local wisdom. Apart from that, it is known that students have personal cellphones, the school allows students to bring cellphones with the aim of using them as a source and learning medium.

The second stage is the product planning (Design) stage. The planning stage is related to product design planning, which includes determining the title, material content and appearance of the material. Meanwhile, the research planning stages include formulating the research title, research problem, research objectives and benefits, design planning, and learning outcomes planning.

CONCLUSION

a. E-book Development Process Based on Local Agriculture in Jember Regency Based on research on the development of e-books based on local agriculture in Jember Regency, it can be concluded that the teaching materials developed have followed the ADDIE model which includes five stages, namely (1) analysis stage (Analysis); (2) planning stage (Design); (3) development stage (Development); (4) implementation stage; And (5) evaluation stage. The products that have been made are then tested for validity and effectiveness. Validity testing is carried out by material validators and media validators, while effectiveness testing is carried out by testing student learning outcomes and student response questionnaires.

b. Results of the Validity and Effectiveness of E-books Based on Local Agriculture in Jember Regency. The results of the validity test for e-book development from the two validators obtained an average validity score of 76.67 in the feasible category. In the small group test, the average percentage score was above 80%, so that the Jember Regency local agriculture-based e-book that was developed did not need to be revised and was worthy of further testing in product effectiveness tests. The effectiveness test is obtained from student learning outcomes and the results of student response questionnaires. The results of calculating student learning outcomes are classified as very effective with an effectiveness percentage of 82.93%. Meanwhile, the results of the student response questionnaire regarding the development of e-books based on local agriculture in Jember Regency obtained a score of 85.30 and was included in the very effective category because it was in the range 81.00 – 100.00.

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