

Development of Bookwidgets-Based Educational Games Contained With Madura Local Wisdom For Indonesian Language Learning

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Abstract. Internalization of local wisdom values in learning in the current era is when it is needed. This aims to introduce regional local wisdom to students through learning. One way that can be done is to combine educational games based on book widgets and local wisdom, especially in the Madura area, to improve the ability to write report texts on observations of Indonesian language learning. Book widgets based educational game focuses on jigsaw puzzles and crossword puzzles. These features can be used to arouse the imagination and creativity of students in writing activities. The content to be used in jigsaw puzzles and crosswords is historical or artistic places in Madura. The development model used is the 4D model define, design, develop, and disseminate.

Keywords: educational games, bookwidgets, local wisdom, indonesian language learning.

1 Introduction

The internalization of local wisdom in the 21st century is crucial. This aims to preserve and protect local wisdom so that it is not forgotten due to changing times. Forms of local wisdom such as folklore, dances, arts, traditional ceremonies, and cultures that are characteristic of a region can be internalized in various ways. One method that can be used is by utilizing the convenience of technology as a means of delivery.

This technological convenience can be integrated into the field of education by focusing on teachers and students. Teachers can develop technology-based media by incorporating local wisdom content. Based on a preliminary study of Indonesian language teachers at MA Mambaul Ulum 2, teachers rarely incorporate local wisdom content in their teaching, resulting in a lack of contextual learning in the classroom. Additionally, the use of media in the classroom is also infrequent, leading to less varied learning experiences for students.

The preliminary study conducted by the researchers serves as the fundamental reason for developing media that can internalize local wisdom and assist teachers in achieving successful learning outcomes. Media becomes an important alternative in achieving learning success. This aligns with the opinion of Budiarti and Haryanto [1], who explain that media is a tool that can be used by teachers to support the realization of learning objectives.

The media development carried out by the researchers is directed towards educational games using bookwidgets. This educational game was chosen based on the consideration that the enjoyable characteristics of games are expected to foster interest in learning Indonesian language, specifically in writing observation report texts. In line with this, Malero et al. in their research [2] also suggest that the use of game media has a positive impact on improving student performance and motivating students to learn new things.

This media development not only focuses on fun educational games but also integrates Madurese local wisdom as content in the game. The Madurese local wisdom used as content is historical places or iconic sites in Madura. The educational game containing local wisdom is developed using the bookwidgets web platform. Bookwidgets is one of the websites available to help teachers develop media. The features in bookwidgets consist of many games, but those used in this research are jigsaw puzzles and crosswords.

The selection of jigsaw puzzles and crosswords is based on the consideration that several studies have concluded that both games are effective for classroom learning. These studies include Widyatmoko [3], who explains that local wisdom-based puzzle games are suitable for use in learning. Moreover, Sababalat [4] in their research suggests that crossword puzzles are effective in increasing students' interest in learning, leading the researchers to decide on developing educational games of jigsaw puzzles and crosswords in bookwidgets.

Based on the above description, the researchers developed a bookwidgets-based educational game containing Madurese local wisdom with the aim of internalizing regional local wisdom to students. Additionally, the development of game media is also tailored to the needs of teachers and students.

2 Method

This research is a development study using the theory proposed by Thiagarajan, Dorothy, and Melvyn [5]. This theory divides media development into 4 stages: define, design, develop, and disseminate. In this article, the researchers have completed the development at the definition and design stages. The development of educational games using BookWidgets that incorporate elements of Pamekasan's local wisdom requires systematic and structured steps. This process begins with a needs analysis of students and Indonesian language teachers to identify the requirements and challenges faced in the learning process. Subsequently, data is collected on historical sites and arts in Pamekasan to ensure relevant and locally enriched content.

The next stage is the design phase, where the educational game media is designed with careful consideration of content, language, and appearance that are engaging and culturally appropriate. This media is then thoroughly assembled before entering the development phase, which involves expert reviews to assess the material and graphic aspects. Following this, field testing is conducted with 10th-grade high school students to measure effectiveness and gather feedback.

In the dissemination phase, the developed educational game is distributed to students, teachers, and validators for further trials. This process aims to ensure that the BookWidgets-based educational game, integrating Pamekasan's local wisdom, is well-received and effective in enhancing learning. Thus, the combination of educational technology and local culture can provide a richer and more contextual learning experience for students.

3 Results and Discussion

Definition Stage. This stage is obtained by creating the concept of the bookwidgets educational game and the concept of local wisdom in Pamekasan that will be used as content. To support this concept, the researchers conducted a needs analysis study of students and Indonesian language teachers at SMA Mambaul Ulum 2. The analysis of students' needs was carried out by distributing a Google Form questionnaire (<https://bit.ly/3Zt9C9Y>) containing questions related to the obstacles faced in writing observation report texts, local wisdom in Pamekasan that students want to use as observation objects, and the desired use of media.

Based on the results of the student needs questionnaire regarding the obstacles faced in writing observation reports, out of 20 people, 12 answered that they had difficulty in composing sentences, particularly in arranging words with each other. 6 people answered that they had difficulty in determining the observation object. 2 people answered outside the question. These results became the basis for researchers in developing game media that can help students compose sentences and facilitate students in determining observation objects.

Furthermore, the results of the student needs questionnaire regarding local wisdom objects they want to observe mostly answered the Arek Lancor Monument. Arek Lancor is a historical monument in the center of Pamekasan city. This monument depicts five original traditional Madurese weapons standing upright, representing the steadfastness of the Madurese people in facing challenges. The researchers documented the Arek Lancor monument, which is used as content for students in writing observation report texts. The image of the Arek Lancor monument becomes content in arranging jigsaw puzzles for students. In addition, the story of Arek Lancor is packaged with a crossword puzzle game. Students complete the Arek Lancor-themed crossword puzzle as a stimulus in composing sentences because objects close to students make it easier for them to describe.

The results of the student needs questionnaire regarding the desired media in learning to write observation report texts is game-based media. The questionnaire data is as follows.

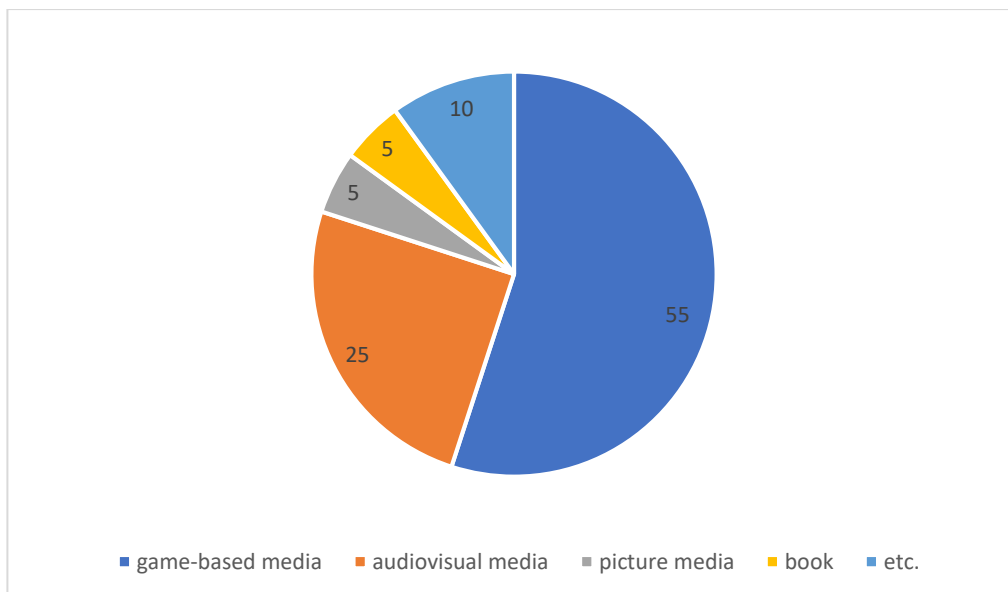


Fig. 1. Student Needs Analysis

The diagram above shows that 55% of students answered that game media is needed in learning to write observation report texts, while 25% answered audio-visual media, 5% pictures and books, and 10% answered other options. Based on this data, the development of game media carried out by the researchers is in accordance with the needs of the students.

In addition to analyzing student needs, the researchers also conducted open interviews with teachers aimed at understanding student needs from the teacher's perspective. The interview results show that teachers rarely use learning media in the classroom. Game media is considered effective and suitable for the character of MA Mambaul Ulum 2 students. Moreover, the integration of local wisdom in learning is also considered lacking, so the development of bookwidgets-based educational games containing Madurese local wisdom can be a solution to students' needs in writing observation report texts.

Design Stage. At this stage, the researchers designed by collecting data according to the needs of students and teachers. Data collection of student observation objects was carried out using documentation techniques. The researchers took direct images related to the Arek Lancor Monument, which is used as content in jigsaw puzzles and crossword games. The Arek Lancor monument is as follows.



Fig. 2. Arek Lancor Monument

Next, the researchers inserted this image into bookwidgets to design the jigsaw puzzle layout. The researchers arranged it in a horizontal format with 3 sections and a vertical format with 2 sections. They used a white background, added a title, and included a congratulatory message for students after they successfully complete the puzzle.

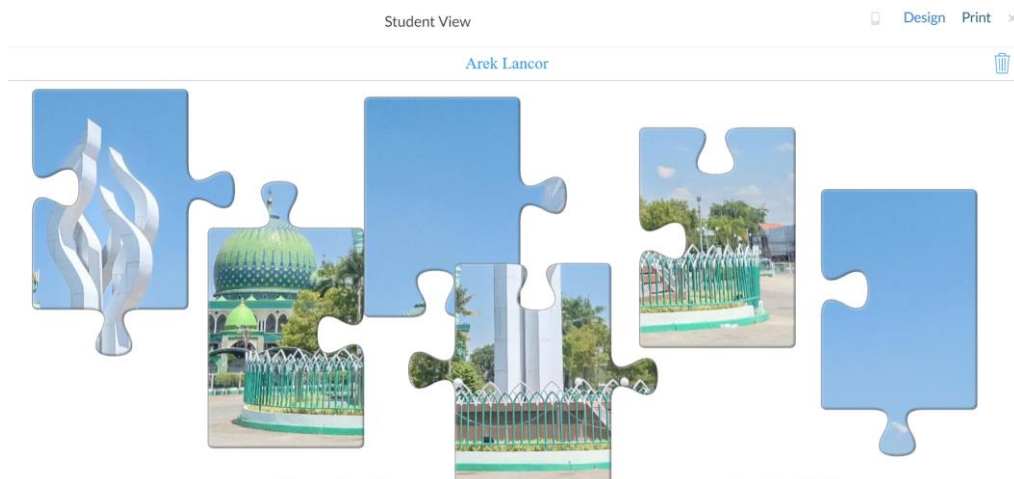


Fig. 3. Arranging Random Images

The design of the crossword puzzle was done by first collecting data related to the Arek Lancor monument. The researchers conducted a literature study of reference sources concerning the Arek Lancor monument. The data obtained includes the location of the monument, which is in the center of Pamekasan city in front of the Asy-syuhada Grand Mosque. The form of the monument consists of five traditional Madurese weapons arranged to form a flame. The implicit meaning in the monument is a symbol of the tireless struggle of the Madurese people, like a blazing flame. The symbol of traditional Madurese weapons signifies the steadfastness of the Madurese people who are ready to face challenges. Based on this data, the researchers created a crossword puzzle that accommodates the story of the Arek Lancor monument.

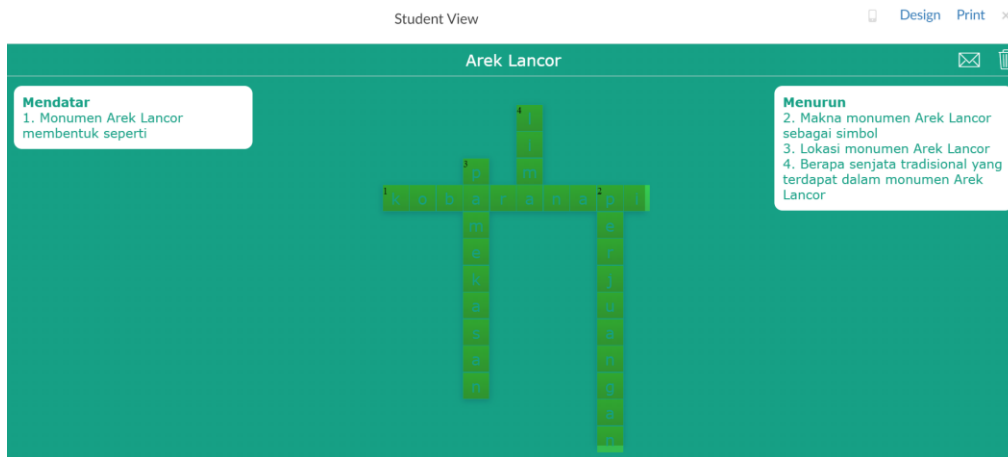


Fig. 4. Crossword puzzle

The crossword puzzle is arranged with 1 across question and 4 down questions discussing the Arek Lancor monument. The font type used is Times New Roman. The background is blue. This crossword puzzle is used as a stimulus to help students write observation report texts. This aligns with Khalilullah's opinion [6], which explains that crossword puzzles can be used as a means to assist students' writing skills. Furthermore, according to Halim [7], crossword puzzles also influence student learning outcomes.

Based on the explanation above, it can be concluded that the development of the bookwidgets-based educational game containing Madurese local wisdom has been completed at the definition and design stages. The definition stage has been carried out by the researchers by collecting student and teacher needs analysis as a foundation for developing the game. The researchers have also documented one of the local wisdoms in Pamekasan, namely the Arek Lancor monument, as an observation object for students. The researchers have also designed bookwidgets-based game media by adjusting to the needs of students as shown in the image above.

4 Conclusions

This development research has produced a bookwidgets-based educational game incorporating Madurese local wisdom, specifically the Arek Lancor monument, for teaching observation report text writing. Through the definition and design stages, this study identified student and teacher needs, and designed two types of games: jigsaw puzzles and crosswords. This development aims to address students' difficulties in composing sentences and determining observation objects, while integrating local wisdom into learning. The media is expected to improve students' writing skills, internalize local wisdom, and provide interactive learning. Further development and dissemination stages are needed to test the effectiveness and refine this learning media.

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