MAJAPAHIT TROWULAN MUSEUM CATALOG AS HISTORICAL TOURISM EDUCATION AND CULTURAL HERITAGE PRESERVATION FOR ELEMENTARY SCHOOL

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Abstract: Limitations on the use of instructional media in the learning process in the classroom, students' lack of insight into history and teachers having difficulty teaching social studies content so that a media catalog was developed. This research is a development research using the ADDIE model which has five stages, namely analysis, design, develop, implementation, and evaluation. The purpose of this development research was to determine the validity, attractiveness, and effectiveness of the developed catalog learning media. The validity of the media catalog was obtained from design expert validators, material experts and media experts so that an average of 80% was obtained in the valid category. The attractiveness of the media catalog was obtained from a teacher and student response questionnaire in a large group trial with a percentage of 94.63% and 90.87% in the very attractive category. The effectiveness of the media catalog was obtained from observing teacher activity with a percentage of 91.66%, observing student activity 88.75%, student test results amounting to 83.3% with a very effective category. Based on the research results, the media catalog can be said to be valid, very attractive and very effective. Therefore, the media catalog is appropriate for use in theme 4, sub-theme 1, learning 3 and 4 in class V SDN Kebontemu.

Keywords: Media, Catalog, ADDIE, Majapahit Trowulan Museum

INTRODUCTION

Modern education demands broader and contextual learning. Ki Hajar Dewantara, has reminded us of the importance of learning not only in the classroom, but also in the family and community environment. Ki Hajar Dewantara emphasized that education should be sustainable and collaborate with the nature of Indonesian society itself, converge with the outside world, and finally unite with the universal world (Suparlan, 2015). The role of the teacher is expected to be able to support these three domains and be able to carry out interesting and meaningful learning for students so that teachers are required to be creative in utilizing all the potential that exists in the classroom and in the community to support learning activities.

Museums as an educational facility outside the classroom are known as educational tourism. Educational tourism is a program where participants in tourism activities travel to a certain place in a group with the main goal of getting direct learning experiences related to the locations visited (Saeroji, 2022) . Educational tourism activities invite students to travel while studying. Such learning activities are not boring and very interactive so as to foster student enthusiasm for learning. One of the educational tourist attractions that is located far from the school is the Majapahit Trowulan Museum which is located in Mojokerto Regency, East Java. The Majapahit Trowulan Museum can be a solution for students to assist in learning. Museums and the collections contained therein can be used as learning resources and media for students which can provide cognitive experiences if properly designed.

In addition, the museum aims to preserve cultural heritage objects from the historical heritage of the Majapahit kingdom and also as a center for scientific and educational studies. Cultural heritage is an effort to protect, develop and utilize cultural heritage objects through policies regulating planning, implementation and supervision for the greatest possible welfare of the people. Cultural heritage has important values for history, science, education, religion and culture. Therefore, the cultural heritage needs to get special attention from the government and also requires the participation of the community to maintain its sustainability. This research will introduce the Majapahit Trowulan museum as historical tourism education and cultural heritage preservation by designing a museum catalog book as an effort to introduce tourism education using photography techniques so that it makes it easier for students to know the history of the museum and collections of historical heritage during the Majapahit era.

The use of catalogs as learning media can be innovated into the learning process to support learning. Catalogs intended to support learning in museums can become facilities for museums, as well as learning media that support the learning process. With the existence of a catalog book that can include the collections in the Majapahit Trowulan museum as well as an explanation of the benefits or uses of each collection of objects. In addition, it can inform visitors directly who want to know the history and historical relics of the Majapahit museum.

Based on the results of the interviews with the fifth grade teacher at SDN Kebontemu, it was stated that there were problems found, namely students' interest in thematic subjects, especially in social science content. Social science content includes lesson content that is saturated and unattractive to students in learning. In addition, the value obtained is not satisfactory. Many students do not understand the lesson so that the grades obtained are not good. This poor score is an indication that the material presented has not been well absorbed by students. So the teacher must have one competency in order to help overcome problems that hinder the learning process. This competency is using learning media.

Based on the results of a questionnaire from 30 students, it was found that: (1) 53% of students felt that the most difficult content was Social Science content. This is because the content of Social Sciences contains a lot of reading and also a lot of history that must be known, causing students to find it difficult to understand learning; (2) 40% of students understand history; (3) 17% of students who know about cultural heritage; (4) 60% of students know museums that are far from school; (5) 10% of students know that the museum is a cultural heritage and; (6) as much as 80% of students like something with pictures.

Based on the results of observations made at the school, it was found that the condition of the class was still lacking in terms of learning facilities and infrastructure. There are no computers, LCDs and speakers / loudspeakers as tools for using audio-based learning media. In addition, learning resources in the student learning process are only fixated on books provided by the school. Submission of material on social science content does not use learning media so that it affects students' lack of understanding of the material that has been given. The number of learning media contained in the classroom is still very limited. So we need a learning media that can be used to help students understand learning material.

Learning media occupies a very important position as a component of the learning system. The media is very important to attract students to be more active in responding to the material presented by the teacher. Interesting media will increase students' curiosity and can give a positive impression to students in responding to learning, so that it can also affect student learning outcomes. The selection of media is also a support in the success of learning so that educators must be able to choose suitable media when teaching.

Based on the description above, it is necessary to use catalog media as an alternative to solving problems or obstacles in the social studies learning process at SDN Kebontemu. Through the development of Catalog media, it is hoped that it can help and facilitate the learning process for students and teachers. Students are expected to be able to obtain interesting media and make it easier to understand learning material, and teachers are also assisted in delivering learning material. Correspondingly, the research sought to address the following research questions what is the validity, attractiveness and effectiveness of the Majapahit Trowulan Museum catalog?

METHOD

The research method used in this research is Research and Development (R&D). Research and Development is a research and development method, a method used to produce certain products and test the effectiveness of these products. (Sugiyono 2013:297). The researcher chose the research and development method because the researcher wanted to produce a learning media

product in the form of a catalog and test the effectiveness of the product. The researcher took the initiative to create a learning media in the form of a catalog with the aim that it could be implemented in the thematic learning process for grade 5 on theme 4 Sub-theme 1 Learning 3 and 4 SDN Kebontemu.

Research and development of catalog learning media uses the ADDIE development model. The reason researchers use the ADDIE development model is that this model can assist researchers in designing a product in the form of media to help students improve their understanding of the material presented by the teacher. The ADDIE model has 5 stages including: 1) Analyze, 2) Design, 3) Development, 4) Implementation, and 5) Evaluation.

There are two subjects in this study, namely expert test subjects and target trial subjects. Expert trial subjects consisted of material, media, and learning design experts. Then for the target trial subjects consisting of small group trials there were 6 students and for large group trials there were 24 students (Saputra, 2021: 32).

Data collection techniques used in this study were interviews, questionnaires, observation and documentation. Then, the instruments used in this study were interview guides, observations, questionnaires, and documentation. The research instrument was used to obtain data regarding the validation of experts and students' responses to the developed catalog. Questionnaires will be distributed to each student who has finished carrying out thematic learning using the catalog that has been developed.

There are two types of research, namely qualitative data analysis and quantitative data analysis. This qualitative data analysis is an analysis carried out by a researcher to describe data processing from the results of responses, criticisms and suggestions obtained from experts to improve product deficiencies. Meanwhile, quantitative data analysis was obtained from the validation results of experts to determine the validity, attractiveness, and effectiveness of the development of the media catalog.

Validity analysis was obtained from the results of product development validation questionnaires given to material experts, linguists, learning media experts, learning design experts who were processed using the following formula:

$$Vah = \frac{TSe}{Tsh} x 100\%$$

Information :

Vah: Expert Validation

Tse : Total empirical score obtained (expert judgment)

Tsh : Maximum total score

The results of calculations from each expert are used to calculate the combined validity. The validity criteria of each expert validity are presented in the following table:

Table 1. Expert Validity Criteria

No.	Validity Criteria	Validity Level
1.	81,25 % ≤ x ≤ % 100 %	Very valid
2.	62,50 % ≤ x < 81,25 %	Valid
3.	43,75 % ≤ x < 62,50 %	Enough valid
4.	25,00 % ≤ x < 43,75 %	Not enough valid

Source: Modification Akbar (2017: 82) by researchers

Effectiveness data is obtained from the results of user activity observation sheets, namely teachers and students, which are calculated using the following formula:

$$OAP = \frac{Tse}{Tsh} \times 100\%$$

Information:

OAP : Observation of user activity

Tse : Total empirical score obtained (final assessment)

Tsh : Maximum total score

The calculation results from the user activity observation sheet are used to calculate the combined validity. The validity criteria of the user observation sheet are presented in the following table:

Table 2. Catalog Product Effectiveness Criteria

No.	Criteria	Leel of Effectiveness
1.	81,25 % ≤ x ≤ % 100 %	Very effective
2.	62,50 % ≤ x < 81,25 %	Effective
3.	43,75 % ≤ x < 62,50 %	Enough effective
4.	25,00 % ≤ x < 43,75 %	Not Enough effective

In addition, effectiveness data is obtained from cognitive learning outcomes. The completeness of student learning outcomes is adjusted to the Minimum Completeness Criteria that has been set at SDN Kebontemu. Scoring is done by the formula:

$$KB = \frac{\text{Score obtained}}{\text{Maximum score}} \times 100\%$$

Table 3. Minimum Completeness Criteria

Mark	Information
75 ≤ Score ≤ 100	Complete
Score < 75	Not complete

The test results of each student who has been classified based on their completeness will be calculated with their classical completeness. After knowing student scores, the percentage of student learning completeness will be analyzed using the classical learning mastery criteria as follows:

Table 4. Criteria for Mastery of Classical Learning

Completeness Criteria	Information
85 % ≤ KBK ≤ 100 %	Students classically fulfill learning completeness
KBK < 85 %	Students classically fulfill learning completeness

Source: Depdikbud (in Trianto, 2012: 241)

Attractiveness data was obtained from teacher and student response questionnaires to catalog media. The response questionnaire is calculated using the following formula:

$$ARP = \frac{Tse}{Tsh} \times 100\%$$

ARS/ARG : User Response Questionnaire

Tse : Total empirical score obtained (final assessment)

Tsh : Maximum total score

The results of calculations using the formula above are analyzed to determine the level of attractiveness of catalog products. The following are the attractiveness criteria for catalog products developed by researchers.

Table 5. Catalog Attractiveness Criteria

No.	Criteria	Attractive level
1.	81,25 % ≤ x ≤ % 100 %	Very attractive
2.	62,50 % ≤ x < 81,25 %	Attractive
3.	43,75 % ≤ x < 62,50 %	Enough attractive
4.	25,00 % ≤ x < 43,75 %	Not enough attractive

Source: Modification Akbar (2017: 82) by researchers

RESULTS

1. *Validity of the Majapahit Trowulan Museum catalog*

After the catalog media product is finished, the product will then be validated by expert validators to determine the validity of a development product before being tested. In this development research using media expert validation, material expert validation and learning design expert validation. The results of expert validation are presented in the following table 6 below.

Table 6. Recapitulation of Expert Validation Results

No	Validation	Validation Value	Category
1.	Learning Media Expert	82,5	Very Valid
2.	Material Expert	85,4%	Very Valid
3.	Learning Design Expert	75%	Valid
Average		**80%**	**Valid**

2. *Effectiveness of the Majapahit Trowulan Museum Catalog*

The results in the large group trial included the teacher activity observation sheet of 95%, the average learning achievement test was 89.1%, and the response questionnaire was 96.4%.

3. **Attractiveness of the Majapahit Trowulan Museum Catalog**

After carrying out the validity test to the experts, the researcher implemented catalog to the students who were divided into small group tests of 6 students and large group tests of 24 students. This study conducted a limited trial, which was only carried out in class V students at SDN Kebontemu. In the questionnaire the teacher's response obtained a percentage of 96.42% and in the student response questionnaire obtained a percentage of 93.75% which was categorized as very attractive.

DISCUSSION

Catalog learning media is learning media that is presented in the form of print media with the ADDIE development model. Based on the results obtained from the assessment of the validators, the Media Catalog gets valid results for use after performing calculations using the formula from Akbar (2017: 83). Obtaining the results of a questionnaire from learning media experts obtained 82.5% indicating very valid criteria. Obtaining the results of the questionnaire from the learning design expert obtained 75% indicating valid criteria. Obtaining the results of a questionnaire from learning material experts obtained 85.4% indicating very valid criteria. Obtaining an average result of getting a validity percentage of 80.96% indicates valid and good criteria to use.

The material presented in the catalog is of good accuracy. The information provided is factual, well-researched, and corroborated by multiple reliable sources. Referring to Brame (2016), Educational media should present information that is factually correct and up-to-date. This ensures that learners are receiving accurate knowledge. Frederiksen and White (2004) state that the validity of assessments is a critical aspect in ensuring that the assessments carried out actually measure what they are supposed to measure and provide useful information for teaching and learning.

Analysis of media effectiveness is measured from activities in learning where there are teacher activities and student activities in the implementation of learning such as attitudes and user response reactions (Wahyuddin, 2018: 83). In Mulyatingsih's book (2019: 198) to find out the

effectiveness of the learning catalog, namely from student learning outcomes obtained by giving test questions. In the large group trial the results of observing teacher activity obtained a percentage of 91.66% and in observing student activity a percentage of 88.75%. So that it is categorized as very effective and student learning outcomes are obtained and are included in the complete category. Barman and Jena, 2021 state that content relevance, level of engagement, and technological interactivity as the main criteria for effective educational media.

There is a relationship between the validity and effectiveness of the media catalog. This linkage can be seen from the results of the material validation questionnaire. The developed catalog has achieved the criteria of being effective because it has gone through a series of development stages, one of which is the validation stage where indicator number 3 of the material validation questionnaire says that the evaluation questions developed are relevant to the competencies to be achieved. So this supports effectiveness and gets an 'effective' category.

Media attractiveness was measured using a teacher and student response questionnaire. Teacher and student response questionnaires were given after carrying out learning using catalog media. In the questionnaire the teacher's response obtained a percentage of 96.42% and in the student response questionnaire obtained a percentage of 93.75% which was categorized as very attractive. Educational media can be designed to be both effective and attractive to learners by focusing on usability, interactivity, relevance, and the incorporation of social elements (Huang, Spector, & Yang, 2019).

Based on the percentages that have been obtained from the results of the product trials described above, catalog learning media can be said to be media that is suitable for use and gets good responses to be used as learning media. This can also be seen from all aspects of validity, attractiveness, and effectiveness. Therefore the catalog learning media that has been developed in terms of the aspects of the assessment results from expert validators, teachers and students of this media are suitable for use as learning media in class V theme 4 sub-theme 1 at SDN Kebontemu.

CONCLUSION

Development of learning media catalog This media can be implemented in Theme 4 Sub-theme 1 Learning 3 and 4. This media has been tested on fifth grade students at SDN Kebontemu. Based on the results of the research and development carried out, the Media Catalog is at a valid, very effective, and very attractive, meaning that this product is suitable for use in learning. This can be proven:

1. The percentage validity of the media catalog is based on the results of the experts who have an average percentage of 80% with a valid category.

2. The percentage of attractiveness from the media catalog based on the results of the teacher and student response questionnaire obtained the percentage results of 90.87% and 88% with very attractive categories.

3. The percentage of effectiveness of the media catalog based on the results of observations of teacher activity 91.66% of observations of student activities obtained a percentage of 88.75 in the very effective category. In student learning outcomes get a percentage of 83.3% and declared complete.

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