DEVELOPMENT OF INFOGRAPHIC GEOGRAPHY LEARNING MEDIA IN LEARNING MATERIAL CLASS XI IN SENIOR HIGH SCHOOL STATE PURWODADI

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ABSTRACT: Learning media is one component of learning support. Learning media has the benefit of increasing student interest and creativity, besides that learning media also influences student learning interest. The media used should follow current developments in science and technology. This study aims to (1) produce infographic learning media, (2) determine the feasibility of infographic poster-based learning media. Making this infographic learning media uses the Borg & Gall development model which consists of ten manufacturing steps. Making this learning media using a supporting application, namely Canva. The development of this learning media produces a product, namely infographic media. Based on the results of the media development carried out, infographic media is suitable for use as a geography learning media based on; (a) The validation results of the material experts obtained a feasibility percentage of 73.66% with eligibility criteria, (b) The media expert validation results obtained a feasibility percentage of 92.72% with very feasible criteria, (c) The small group trial results obtained an eligibility percentage of 83, 30% with very feasible criteria (d) The results of the large group trial obtained an eligibility percentage of 82.65% with very feasible criteria. Based on the results of the validation of material and media experts as well as the results of trials on students, it can be concluded that infographic learning media is suitable for use as geography learning media.

Keywords: *Learning Media, Infographics, Creative, Feasibility*

1. INTRODUCTION

The current development of science and technology influences the development of learning media. Conventional learning media is replaced with information technology-based media [1]. Utilization of technological advances, as a tool or intermediary in the learning process as well as learning media can be considered in order to realize effective learning [2]. Learning is an interaction relationship between students and teachers and learning resources in a learning environment. Learning must be held interactively, inspiring, fun, challenging and motivating students to develop their potential, creativity and independence [3].

Learning media is one of the five important components in teaching and learning, the media also has a main function that can influence the conditions, motivation, and learning environment and as a liaison for information from sources to students . Media is needed as a visual embodiment that helps explain abstract concepts into concrete [4-5].

In this digital era, students can access information from various sources, this can develop students and increase knowledge in learning. Information accessed by students can be in the form of text, images, or graphics. One of them is the internet facility that can be used as a learning medium which can have a positive impact on the development of Geography learning media [6]. Based on existing research, information that is easily processed by humans is 75% visual [7]. Visuals can help students improve memory.

Infographics are the presentation of information in the form of media in the form of visuals and graphics [8-9]. Infographics are also used as interesting student learning media [9]. Students create infographics by processing information on learning materials obtained that are not directly used raw, but are generalized first and then presented in infographic form. The results can be used both individually and in groups with other students.

Infographics help visualize complex data and

information be easy to read and easy to understand, especially for information with long text, important pictures, and important figure data [10]. Besides that, supported by creativity, beauty, and the right illustrations, infographics become interesting and easy to remember. Such as Image selection, color selection, selection symbols, as well as color composition are the basic components in the presentation of infographics [11]. Making interesting infographics can increase students' interest in learning geography material.

Learning by using infographic posters is one of the appropriate learning media for students. Using learning media can help students and educators understand the concepts learned through systematic learning activities, especially Hydrology material. Geography learning in high school above aims to design and help students develop their understanding about geographical phenomena in social, environmental and regional contexts complex [12]. Based on the background above, the aims of this research are (a) to develop infographic media for geography learning (b) to find out the feasibility of infographic media in learning.

2. METHODS

This study uses research and development (R&D) methods. According to [13]. there are ten stages of development, but in this study researchers only limit the three stages in the development of infographic poster media, namely the planning stage, the stages development, and testing stages. The test subjects in this study were educators and students of class XI IPA which are divided into two stages of trials, namely trials small group and large group trials. The small group trial was followed by 10 students while the large group trial was attended by 36 students.

The data collection technique used in this study was a questionnaire or questionnaire in the form of a checklist (√). Questionnaires are used to assess product results development that is addressed to material experts, media experts, and eye teachers geography lesson. While the participants were asked to give a response or feedback about the product being developed.

This study uses descriptive data analysis techniques. Descriptive analysis used to analyze the feasibility assessment results data by calculating the average flat. Data analysis techniques were carried out to obtain the feasibility of the media learning, namely an infographic poster that has been revised. Results obtained used as a material in fixing infographic posters.

The data collected is in the form of quantitative data and qualitative data in the form say. Descriptive results are used to determine the

feasibility level of the product development in the form of infographic posters for class XI Purwodadi State Senior High School students. Data regarding opinions or responses to products collected through a questionnaire were analyzed with descriptive statistics. Non-test instrument in the form of a questionnaire using a Likert scale.

Table 1. Scoring Rules [8]

Category	Score
SB (Very Good)	5
B (Good)	4
C (Enough)	3
K (Less)	2
SK (Very Less)	1

Source: Sudijono, Anas (2012)

Determination of the results of the percentage score of the assessment The Likert scale table determines the percentage of the results of the assessment of whether or not the product is feasible to be used as learning media. By using the eligibility standards as in the following table.

Table 2. Feasibility Scale Table [8]

Eligibility Score	Criteria
0 – 20%	Not feasible
21% - 40%	Less Eligible
41% - 60%	Decent Enough
61% - 80%	Worthy
81% - 100%	Very Worth it

3. RESULTS AND DISCUSSION

3.1 Infographic Media Design

Preliminary research prior to the development of infographic media was a needs analysis and the preparation of the initial draft of the infographic poster media so that it could determine the material to be used in the development of learning media and could design the development of the infographic poster media to be developed.

The poster media format developed in this study is A4/F4 size posters. In the development stage of learning media, this infographic poster will be assisted by using the Canva application to design the media being developed.

3.2 . Infographic Media Feasibility

After the product has been developed, the next step that is carried out by the researcher is to test the feasibility of infographic poster media by means of validation. Product validation will be carried out by two experts, namely media experts and material experts.

1. **Material Expert Validation**
    The results of the questionnaire validation from material experts can be seen in the following graph (Figure 1).
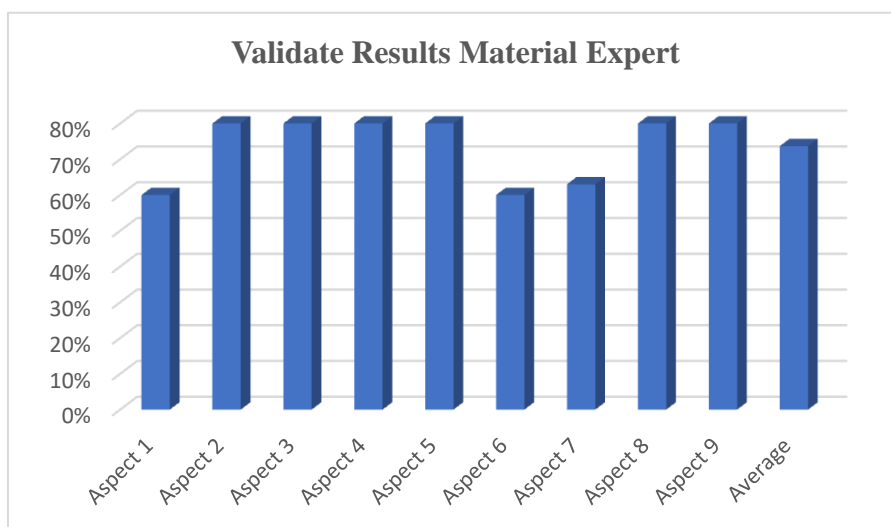

Fig. 1 Material Expert Validation Results

Based on the assessment chart by the material expert validation above, it can be seen that in aspect 1 the clarity of user instructions gets an eligibility percentage of 60%, aspect 2 about the clarity of cultural diversity material in infographic learning media gets an eligibility percentage of 80%, aspect 3 about the depth of material in infographic posters gets percentage of 80%, aspect 4 regarding the language used in accordance with Indonesian language rules gets an eligibility percentage of 80%, aspect 5 regarding the suitability of the material with core competencies and basic competencies gets an eligibility percentage of 80%, aspect 6 regarding the material according to the mindset of students gets a percentage eligibility 60%. Aspect 7 regarding easy-to-understand material gets a percentage of 63%, aspect 8 regarding overall interesting learning media gets a feasibility percentage of 80% and aspect 9 regarding media that is developed is suitable as a learning media gets a feasibility percentage of 80%. The total score for the material expert validator's assessment is 9 assessment criteria. The average rating with a feasibility percentage of 73.66%. Can be categorized as feasible.

1. **Media Expert Validation**
    The results of the questionnaire validation from media experts can be seen in the following graph (Figure 2).
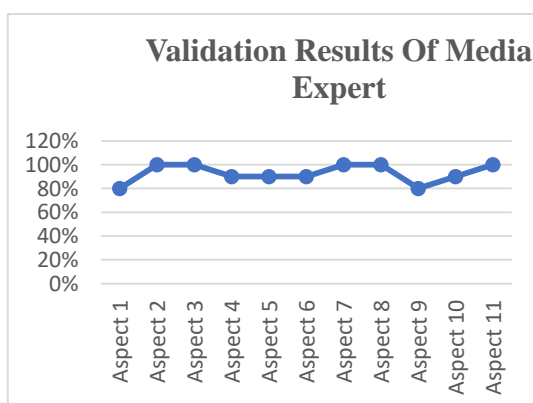

Fig. 2 Graph of Media Expert Validation Results

Based on the figure above, it is known that aspect 1 regarding the clarity of user instructions gets an eligibility percentage of 80%, aspect 2 about the suitability of the material with the background gets a percentage of 100%, aspect 3 about the clarity of images on learning media

infographic posters gets a percentage of 100%, aspect 4 about selection the type of font on infographic learning media gets a feasibility percentage of 90%, aspect 5 about font size and color on infographic poster learning media gets a feasibility percentage of 90%, aspect 6 about attractive color combinations gets a feasibility percentage of 90%, aspect 7 about the type of letters used can be seen clear and legible get a percentage of 100%, aspect 8 about pictures gives a positive impression so as to attract interest in learning gets a feasibility percentage of 100%, aspect 9 about the uniqueness of the design on infographic posters gets a feasibility percentage of 80%, aspect 10 about all interesting learning media gets a feasibility percentage 90%. and aspect 11 about the media being developed is suitable as a learning media to get a feasibility percentage of 100%. The total score for the assessment of the media expert validator is

11 assessment criteria. The average assessment of the media expert validator with a feasibility percentage of 92.72% and can be categorized as very feasible.

Trials of infographic learning media products that have been validated were conducted in class XI MIPA 3 at SMA Negeri Purwodadi. The trials on students were attended by all students of class XI MIPA 3 of Purwodadi State Senior High School, totaling 36 students. This learning media trial was carried out in 2 stages, namely a small group tryout which was attended by 10 students and a large group tryout which was attended by 36 students.

2. Small Group Trial

Small group trials were conducted on 10 students in class XI MIPA 3 at SMA Negeri Purwodadi. The following is a graph of the results of small group trials.
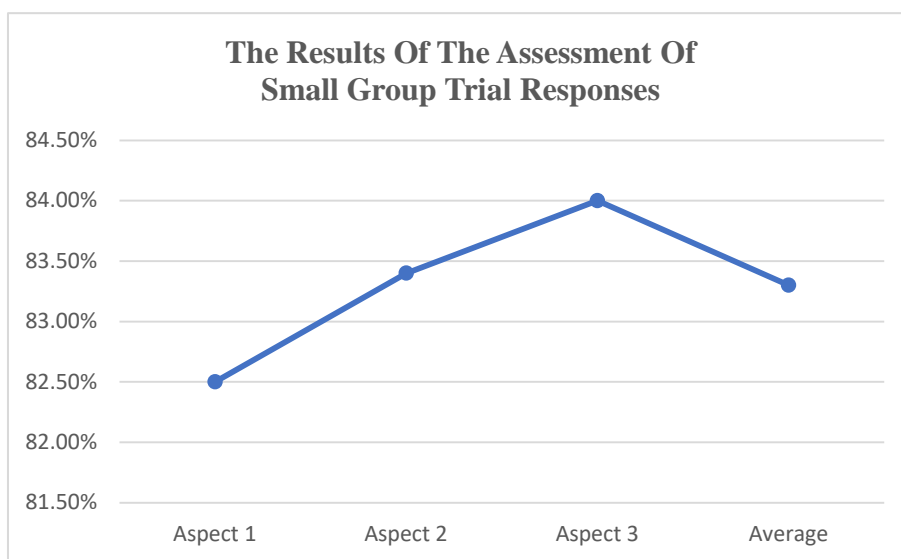

Fig. 3 The results of the assessment of small group trial responses

Based on the graph above, it is known that in aspect 1 regarding instructions for use, a feasibility percentage of 82.5% is obtained, in aspect 2 regarding media, an assessment per aspect is obtained with an eligibility percentage of 83.4%. Furthermore, in aspect 3 regarding the material, it gets an assessment with a percentage of 84% with an average of 83.3% for all aspects. This means

that in a small group trial, infographic media is categorized as very feasible media.

3. Large Group Trial

Large group trials were conducted on students with 36 students. Based on the questionnaire assessment obtained from the large group trial, it can be seen in the following graph (Figure 4).
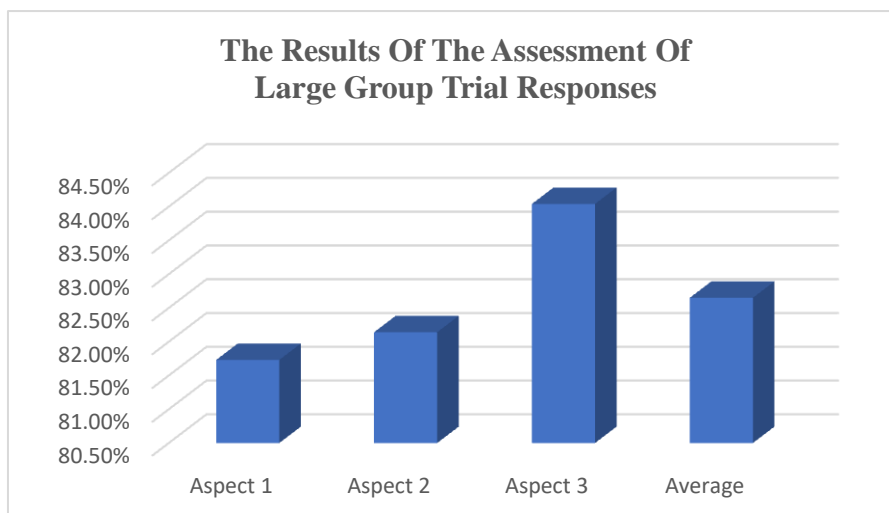
Fig. 4 The Results Of The Assessment Of Large Group Trial Responses

Based on the graph above, it is known that in aspect 1 regarding instructions for use, a feasibility percentage of 81.78% is obtained, in aspect 2 regarding media, an assessment per aspect is obtained with an eligibility percentage of 82.14%. Furthermore, in aspect 3 regarding the material, it gets an assessment with a percentage of 84.04% with an average of 82.65% for all aspects. This means that in the large group trial, infographic media is categorized as very feasible.

4. CONCLUSION

Based on the results of the student trials, the highest score was obtained on the material aspect with a score of 84.27%, while the lowest score was found on the instructional aspect, which was 82.30%. Based on the assessment of each aspect, the average student trial results reached 82.65% so that the learning media products developed were suitable for use as geography learning media.

Development of infographic learning media for cultural diversity material that is appropriate for use in learning based on the validation results of material experts and media experts. The validation results carried out by material experts obtained a feasibility percentage of 73.66% in the feasible category. In the validation carried out by media experts, the average feasibility percentage was 92.72% with a very decent category.

5. ACKNOWLEDGMENTS

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