

Development of a Geography Booklet as Learning Media Based on Subject Literature

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Abstract. This research aims to determine the feasibility of a geography booklet as learning media based on subject literature and to find out the effectiveness of a geography booklet as learning media based on subject literature towards students learning outcomes. Stages of this research are stage of needs analysis, stage of planning geography booklet as learning media (design), stage of development (develop), and stage of trials (validation). Research results indicate (1) expert trial of geography topics is in very good qualification (90.45%), (2) expert trial of learning media is in very good qualification (84.96%), (3) expert trial of learning design is in very good qualification (94%), (4) individual trial is in very good qualification (94.81%), (5) small group trial is in very good qualification (96.06%), (6) field trial is in very good qualification (99.52%). The hypothesis trials result proved that there are significant differences of learning outcomes in between students who did not use a geography booklet as learning media based on subject literature with students who use a geography booklet as learning media based on subject literature. This is indicated by the results of data processing $t_{count} = 15,78$, at the level of significance $\alpha = 0,05$ $t_{table} = 1,69$. The conclusion is a geography booklet as learning media based on subject literature that has been develop, feasible and effective to convey a better change by looking at geography learning outcomes at the high school level..

Keywords: Learning outcomes, learning media, booklet.

1 Introduction

Geography subject in education is to be able to develop students's understanding about spatial organization, society, places, and environments on Earth surface [1]. Through geography subject, students are encouraged to be able to understand the physical processes that form the patterns of the Earth, the characteristics and distribution of ecology spatial on earth, so that students are expected to understand that humans created regions to simplify the complexity of the Earth. [2] states that geography is a valuable subject in the school curriculum. Because Geography can contribute us in understanding the world (or parts of the world). [5] geography is the study of equations and differentiations of geosphere phenomena with environmental, territorial, in spatial contexts.

According to [3] explains "the media is a tool of communication channel. Media comes from the Latin language and it is a plural form of the word medium which literally means an intermediary, which means the intermediary of the message source (a source) with the recipient of the message (a receiver), so the learning media plays an important role for the teacher to convey learning material to students." [4] "A medium (plural, media) is a means of communication and source of information. Derived from the Latin word meaning "between" the term refers to anything that carries information between a source and a receiver." [4] states that learning media is one of the communication tools in the learning process. The learning process contains five components of communication, namely the teacher (communicator), learning materials, learning media, students (communicants) and learning objectives.

According to the Ministry of Education and Culture (2016: 2) Literacy is the ability to access, understand, and use something intelligently through a variety of activities, including reading, viewing, listening, writing, and speaking. [3] said "reading is an extremely complex and multifaceted process". The reader is actively involved in various processes that occur simultaneously. First, the reader encodes both perceptual and conceptual. According to Rod Welford the Australian minister of education and culture, literacy is the core or

heart of the students' ability to learn and succeed in school and afterwards, so even though the background of students is different, government must strive for them to get an adequate level of literacy to face challenges.

The limitations of learning media on the one hand and the ability weakness of teachers to create media, lecture methods are still used. The limitations of learning media must be overcome by passing on the innovation of the development of learning media based on the area or domain of learning technology, one of them with the technology of print media or visual media [5].

By looking the characteristics of geography subject in such a way that a geography booklet as learning media based on subject literature is very suitable to use in geography learning process for learning able to get the information they want. Through this geography booklet as learning media based on subject literature that designed for dynamics of lithosphere and its effects on life, so that it can be more easily understand the topics being taught.

Based on the results of observations and interviews with subject teacher, it was explained that the difficulties experienced in geography learning lay in the lack of learning media, such as pictures, videos, teaching props and IT. Teachers generally still use learning media in the form of textbooks and students' worksheets as learning resources.

Booklet is one innovation form of learning media in the form of print media. This media contains the topics in physical form that is unique, interesting, and flexible. Unique because of small physical form complete with a full color design that will foster an interest to use it. Flexible because the shape is small (smaller than the book in general), so it can be carried and used anywhere and at any time [6]. This booklet media provides new nuances in reading literacy and more comprehend the topics in geography. Booklets are designed by highlighting clearer images and completed with descriptions which are the essence of the topics contained in the textbooks used by students, then able to motivate them so students able to think HOTS by using booklet media, students' literacy skills for reading also increase so that Geography lessons are easy to understand. Booklet media is a blend of pictures media and printed textbook media that contain information or topics about something to facilitate the delivery of information or delivery in learning "Booklet is a small book (half of quarto paper) and also thin, no more than 30 sheets back and forth which contain writing and pictures. The term booklet comes from books and leaflets, which means the booklet media is a combination of leaflets and books in small format (size) such as leaflets. The structure of the contents of the booklet resembles a book (preliminary, contents, closing), the way of the presentation of the contents is much shorter than the book".

2 Methodology

The development of a geography booklet as learning media based on subject literature been held in Panca Budi Private High School Medan. The method used was the approach of research and development from. The process implemented through stages: preliminary, development, and testing. Instruments used in the preliminary stage are the literature studies and field surveys; the media development stage was carried out in the form of the initial drafting of the media, limited trials, small group trials and field trials, also the trials of effectiveness of the development of a geography booklet as learning media based on subject literature by comparing the students learning outcomes before and after using the learning media.

2 Result and Discussion

The research results by the topics experts, media experts and learning design experts in each aspect of overall assessment were determine by the average grade in each category. The results of the assessment subsequently analyzed to determine whether the geography booklet as learning media based on subject literature feasible or not feasible to be developed. The average percentage of the research results by topics experts, media experts and learning design experts, shows in the table below:

Table 1. Results Percentage of average of topics experts, media experts and learning design experts

No.	Categorization	Percentage	Criteria
1	Topics Experts	90,45%	Very Good
2	Media Experts	84,96%	Very Good
3	Design Experts	94%	Very Good

To find out whether this geography booklet as learning media based on subject literature is effective in increasing geography learning outcomes, so media trials are conducted by comparing grades before using learning media (pre-test) and after using learning media (post-test).

3.1 Data on Preliminary Test Results/ Before Using Media

The trials of the effectiveness of geography booklet as learning media based on subject literature held at Panca Budi Private High School Medan where data was obtained with range grade was 3, the lowest grade was 16 with the highest grade of 35. The mean grade was 25.68, the mode grade was 26 and median 26. Preliminary test data carried out before using the geography booklet as learning media based on subject literature can be seen in the following table

Table 2. Frequency Distribution Before Using Learning Media

Interval Class	Absolute frequency	Relative frequency
16 - 19	4	12,5
20 - 23	7	21,87
24 - 27	10	31,26
28 - 31	7	21,87
32 - 35	4	12,5
Total	32	100

The histogram of students' grade who learn before using geography booklet as learning media based on subject literature, shows in the following chart:

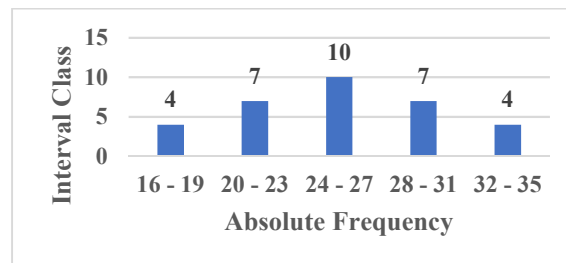


Fig.1. The histogram of students' grade before using geography booklet as learning media based on subject literature

3.2 Data on Final Test Results / After Using Media

The effectiveness trials after using geography booklet as learning media based on subject literature was conducted at Panca Budi Private High School Medan where data was obtained the range of grade was 3, the lowest grade was 38 with the highest grade of 57. The mean grade was 49.53, the mode grade was 47.12 and median of 47.66. The final test data conducted after using geography booklet as learning media based on subject literature, as shows in the following table:

Table 3. Frequency Distribution After Using Learning Media

Interval Class	Absolute frequency	Relative frequency
38 - 41	3	9,37
42 - 45	5	15,63
46 - 49	11	34, 37
50 - 53	6	18, 75

Interval Class	Absolute frequency	Relative frequency
54 - 57	7	21, 88
Total	32	100

The histogram of students' grade who learn after using geography booklet as learning media based on subject literature, shows in the following chart:

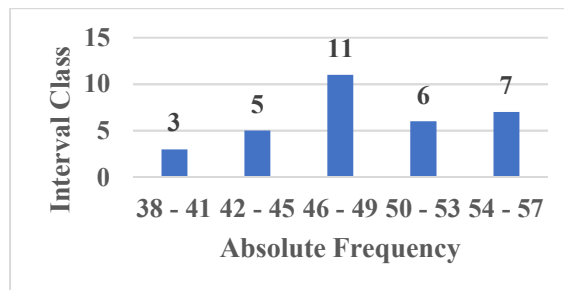


Fig.2. The histogram of students' grade after using geography booklet as learning media based on subject literature

3.3 Data on Students Literacy Results on Learning Media

To find out the results of students' literacy, a questionnaire was use to find out the students' literacy results before using the learning media compare to after using geography booklet as learning media based on subject literature. Which is the mean grade of literacy results before using learning media is 43%, and the mean grade of literacy results after using learning media is 94%. The students' literacy results program, shows in the following chart:

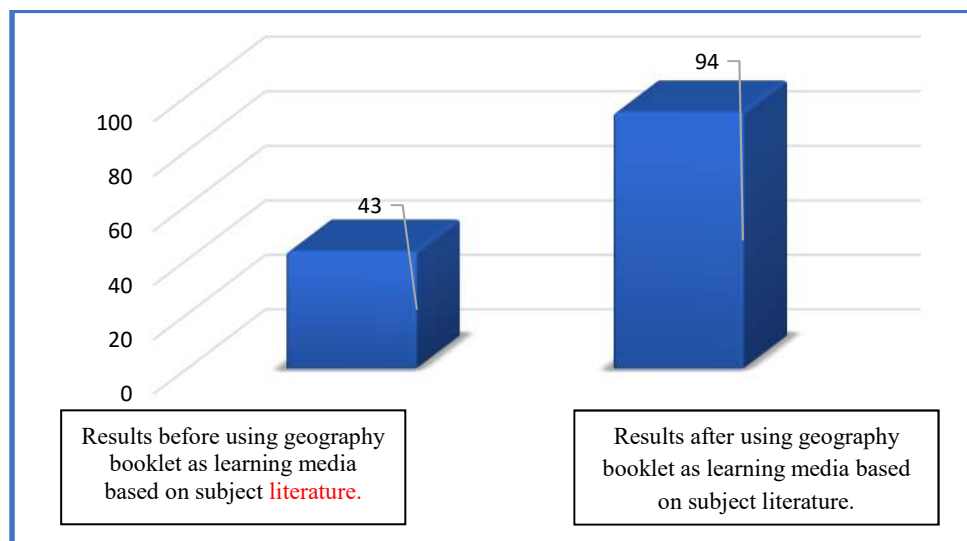


Fig.3. The histogram of students' literacy results before and after using geography booklet as learning media based on subject literature

Development of geography booklet as learning media based on subject literature designed by using the Adobe design application. Things that have been developed in geography booklet as learning media based on subject literature consisting of topics that will be taught and the media is packed with full color design, and explanations are accompanied by images that are easy to understand that consists of 4 meetings for each.

From the research results conducted using the geography booklet as learning media based on subject literature, there are differences in geography learning outcomes between students who are taught using the media and students who are taught without using the media that is obtained from the results calculation $t_{count} = 15.78 > t_{table} = 1.69$, therefore it can be concluded that $t_{count} > t_{table}$ which means " the geography booklet as learning media based on subject literature that have been developed able to increase the motivation of geography learning outcomes in high school".

4 Conclusion

The development of geography booklet as learning media based on subject literature scored very well, which means there was changes in learning motivation with the mean grade reach the passing grade for each lecturer of topics experts, media experts and learning design experts, where the media is suitable to use for learning. The results of the effectiveness trials conducted to obtain the learning outcomes proved that the learning outcomes of students who use the geography booklet as learning media based on subject literature are better than students who do not use the geography booklet as learning media based on subject literature. From the results of the media trials, it shows that there are significant changes from the learning outcomes and literacy become a basis to use booklet as geography learning media.

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