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The application of documentary film in improving student interest: An alternative for environmental education

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Abstract. Documentary films can be used as a learning media in the classroom. The objective of the study was to determine the increase of student interest in learning using documentary film. The film is about motion in plants to study natural processes in the environment. Data obtained using student response questionnaire and learning interest questionnaire before and after using documentary films. There were 86.1% of students who gave a positive response to the media. Student interest has a normalized gain of 0.63 in the medium category. Increased student interest in attention 0.67, relevance 0.61, confidence 0.59, satisfaction 0.64. This learning media can increase student interest in junior high school.

1. Introduction

Learning media can support the teaching process. Explanation of the material by teachers commonly using a direct learning model without being facilitated by the media. It leads to boredom, misperceptions, and not attracting the attention of students. Lack of recognition of students during the teaching and learning process results in unsatisfactory learning outcomes. Learning tendencies that do not attract the attention of students is a natural thing experienced by teachers who do not understand the needs of students. So many students are lazy to read because only full scripts are presented on sheets of paper. Students are more interested in media that is filled with pleasant images. Keen interest will lead to a persistent, serious effort and not easily discouraged in facing challenges [1]. Learning materials that attract student interest are more comfortable to learn because interest increases learning activities [2].

The benefits of using learning media will attract more attention to students so that it can foster motivation to learn. The teaching material will be more clearly meaningful so that students will more readily understand it. Besides, teaching methods will be more varied [3].

Information and communication technology can activate students in the learning process, shifting from a teacher-centred to student-centred. Research shows that giving and involving students in doing

academic tasks can build fundamental knowledge and build their understanding. It can increase student interest and increase student confidence in their cognitive abilities [4]. The development of technology is undoubtedly perfect for improving the quality of learning in the classroom. Now, students can not only learn in class, but they can study at home or anywhere. They also not only limited to learning from their textbooks and not only studying from their teacher.

The process or object documented in a film can be used as a learning media that increases the attractiveness and enthusiasm of students. Especially if we look at the survey results of high interest in watching Indonesian people. The documentary should be of good quality in images, audio, video and text.

At present, quite a lot of documentary films have been developed, for example, films that are presented on the National Geographic channel and videos on YouTube. However, films and videos are not necessarily easy to use in learning. It is because documentary filmmaking does not directly refer to the learning objectives in the classroom. Also, the videos that have been circulating on YouTube do not contain guidance for students to study.

2. Methods

The location of the documentary film test was at SMP Negeri 6 Pangsidi in class VIIIc on 11 July 2014 to 8 November 2014. The documentary film was used in learning moving plants. Student response data obtained from questionnaires were analyzed by determining the number of students who gave answers valued positive and negative responses. If the number of students who gave a positive response was greater or equal to 80%, the learning media was effective[5].

Learning interest was measured by the ARCS category (attention, relevance, confidence, satisfaction) [6]. Data on learning interest was obtained by giving pretest and posttest. Determination of learning interest categories based on table 1.

Table 1. Student interest category

Class average score	Student interest category
97-115	Very high
79-96	High
61-78	Average
43-60	Low
≤ 42	Very low

Increased student interest in learning was done by normalized gain score. The normalized gain score was a comparison of the pretest score and posttest score. Pretest scores are the analysis of initial student responses (before using documentaries) and posttest scores after using instructional media [7]. The criteria of normalized gain were:

$$\text{N Gain Value} = \frac{\text{Posttest} - \text{Pretest}}{\text{Maximum scores} - \text{Pretest}} \quad (1)$$

Furthermore, the increase in student interest can be calculated using the normalized gain formula 1 (Table 2).

Table 2. Normalized gain analysis

N gain value	Interpretation
$g > 0.70$	High
$0.30 < 0.70$	Average
$g < 0.30$	Low

3. Results and discussion

The effectiveness of documentary films was done by student responses to learning media. Besides, interest in learning is also used as an indicator of the effectiveness of this documentary film learning media. The results of student responses showed that there were 86.1% of students who responded positively to learning media and only 13.9% of students with doubtful responses. It shows that documentary film learning media is effectively used in teaching and learning activities. According to Hobri (2009), when 80% of students have responded positively to the media used, the learning media are classified as effective in the learning process.

Several aspects make students give positive responses to the documentary film, i.e.:

- a. Documentary films make students more interested in learning
- b. Documentary films make students happy about learning
- c. Documentary films are easy to use
- d. Documentary films support students to learn
- e. Documentary films motion in plants makes learning more real

Table3. Student interest score

Total student interest			Category
Pretest	Posttest	Gain	
60.28	94.68	0.63	Average

Based on Table 3, we can see that documentary films on motion in plants can increase student interest. The pretest score obtained was 60.28 (low) while the posttest was 94.68 (high), with an average increase in gain of 0.63. The increase is in the average category. Indicators of interest in learning consist of four, namely, attention, relevance, confidence and satisfaction. Data comparison of these four indicators can be seen in Figure 1.

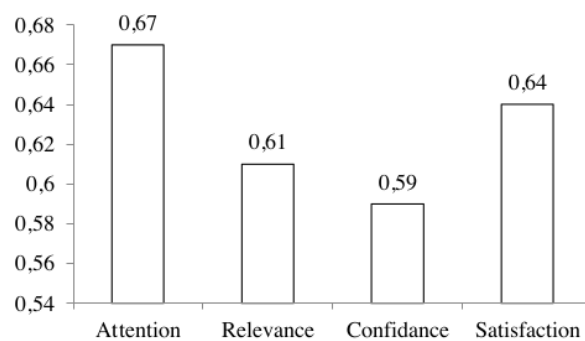


Figure1. Comparison of Gain for Each Student Interest Indicator

Figure 1 shows that attention indicators experienced the highest increase, while the level of self-confidence experienced the lowest increase. All increases in each indicator are in the category of an average. Factors that cause student interest to increase because they feel happy in learning. Learning media seem real and interactive. Also, audio and video alloys make students more interested in learning. In detail, the increase in student interest in learning can be observed in the explanation of each ARCS indicator. Improvements based on ARCS categories can significantly increase student interest [8,9].

3.1 Attention

Attention is an indicator part that deals with how to attract student attention to learning. It is the most significant increase among other indicators. Documentary films can attract the attention of students because these learning media students can focus more on learning, students feel not bored in learning, students are increasingly enthusiastic, and their curiosity increases in learning.

3.2 Relevance

Relevance is related to answering individual needs. The learning process should develop learning activities that help students see the suitability of the learning process with the personal life and profession of students. If students see the relationship between learning material and student goals, they will have an interest in learning. It can be achieved well when using documentary film learning media where students will see the relationship of learning with conditions that are evident in the field, i.e. the motion in plants is presented in such a way that it appears clear that plants are moving plants.

3.3 Confidence

Confidence will improve students' ability to complete assignments successfully. Confidence is related to an individual's attitude toward success and failure. When we can attract the attention of students, it will increase the attitude of confidence to succeed in learning.

3.4 Satisfaction

Satisfaction will provide the fulfilment of student expectations. It refers to the individual's happy feelings towards student mastery. This satisfaction is essential to maintain student interest. If the results of student efforts following his expectations and if students are happy with the results obtained, students will be motivated to continue to be involved in the learning process. Documentary film learning media can make students happy in learning, make students feel comfortable in learning, make students like learning and make students enthusiastic in learning. It is what will encourage student satisfaction in learning so that interest in learning will increase.

4. Conclusion

Documentary films increase student interest 0.63 in the normalized gain in the average category.86.1% of students gave a positive response to the documentary film. The film is suitable for observing natural processes and environmental education.

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