Analysis of Students' Needs and Responses on The Development of Ethnoscience Integrated Vlog

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Article Info

Abstract

This research is the first stage to design, develop, implement and evaluate ethnoscience integrated Vlog learning media with the ADDIE model, namely the analysis stage. This research aims to analyze students' needs and responses if an ethnoscience integrated Vlog learning media is developed. The method used in this analytical research is a survey method using questionnaires and interviews. From the results of distributing questionnaires and also interviews, it is known that respondents were 215 students at MTs Al Uswah Bergas and a science teacher with a graduate educational background of S1-Science Education. From the data analysis results, it was found that students need media that can visualize material that is difficult to imagine by students and is contextual. Students are more enthusiastic, enthusiastic, and understand the material when using media such as video shows to clear the steps. The development of ethnoscience integrated Vlog learning media was welcomed by students with 58.6% of students needing ethnoscience integrated Vlog media, 24.7% very much need and 14% less need. Based on this data analysis, it can be concluded that this analytical research needs to be continued to the design, development, implementation and evaluation stages following the ADDIE model research and development procedure to develop ethnoscience integrated Vlog media in the context of science learning.

How to Cite

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INTRODUCTION

The 2013 curriculum has a philosophical foundation that the curriculum is rooted in Indonesia's culture and nation (Hakim & Fatmaryanti, 2018). This philosophy gives meaning for students to learn from the values of Indonesian culture in the surrounding environment to increase the country's love for students. Learning that emphasizes cultural values and local wisdom is called learning that is integrated with ethnoscience. Ethnoscience is an activity of transforming original science with scientific science (Rahayu & Sudarmin, 2015). Actual science is knowledge based on facts in society while scientific science is based on science and scientific methods. Learning with ethnoscience is characterized by studied more deeply scientifically to answer problems that occur in the environment.

Learning with ethnoscience is proven to increase students' interest in learning towards science. In line with Shidiq (2016) research, ethnoscience-based learning that does not separate science, culture and local wisdom, and the community can be used as a learning approach to increase student interest or motivation as learning achievement towards science. Students do not see science as a hard science that must be studied with ethnoscience, but they see science as part of their environment's local culture and wisdom.

Based on the results of observations and interviews conducted with science teachers at MTs Al Uswah Bergas students began to get bored (lacking enthusiasm) with online learning, as indicated by the decreasing response of students in Google Classroom. Half of the students in the class, even more, showed their presence only in the absent room, then in discussion forums, students tended to be passive by not giving comments. This is because students find it difficult to imagine learning sources that exist in everyday life. So, it is essential to carry out learning related to ethnoscience following the region's conditions and traditions, especially in Semarang Regency, Central Java Province. Ethnoscience integrated learning will be more meaningful if there is support from teaching media.

The learning media used must be relevant to everyday life, increase students' learning interest and understanding of science, and facilitate visualization of material that is difficult for students to imagine. Learning media that can give the impression of visualization that attracts students' attention is using Vlog media. Vlog or Video-Blog, as the name implies, is a video blog.

A Vlog is a video containing opinions, stories or daily activities usually written on blogs (David, Sondakh, & Harilama, 2017). Vlogs have become one of the trends in the last few years. Even thousands of people from various professions have flocked to switch jobs to become Vloggers by creating video content and uploading on YouTube channels. Also, Vlogs have millions and even billions of viewers every day, such as food Vlogger Farida Nurhan who has 269,678 viewers within 20 hours of uploading. Ethnoscience integrated Vlog media is a learning media in the form of videos uploaded on the YouTube channel with content containing science learning materials whose community science has been transformed into scientific science. This ethnoscience integrated Vlog media, social values, culture, and norms will create a pleasant learning atmosphere.

A preliminary study on the development of ethnoscience integrated Vlog learning media was held based on this background. This research is the first stage to design, develop, implement and evaluate ethnoscience integrated Vlog learning media with the ADDIE model, namely the analysis stage. This study aimed to analyze students' needs for teaching media and their response if ethnoscience integrated Vlog learning media were developed.

METHOD

This research is part of the research and development of the ADDIE model. The ADDIE model's research and development consist of five steps: analysis, design, Development, Implementation, and Evaluation (Maulana et al., 2020). In contrast, this research is the first step, namely, the analysis stage. The analysis carried out includes a needs analysis related to students' interests, the teaching materials used, the availability of facilities, and the need for learning media. The method used in this analytical research is a survey method using questionnaires and interviews. The steps in the implementation of this analytical research are presented in Figure 1.

From the results of distributing questionnaires and also interviews, it is known that respondents were 215 students at MTs Al Uswah Bergas and a science teacher with a graduate educational background of S1-Science Education. The questionnaire and interview data were then analyzed and categorized to conclude. This research was conducted from late October to mid-November 2020.
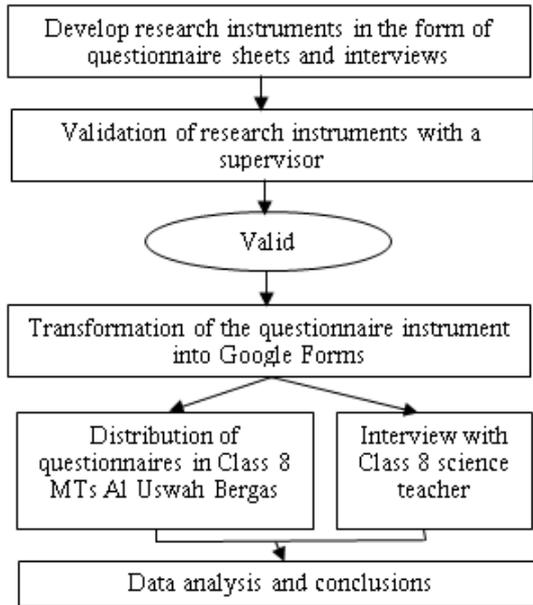
Figure 1. Research procedure

RESULT AND DISCUSSION

The research data includes (1) data from interviews with teachers, and (2) questionnaire data on student and teacher needs. Table 1 is a presentation of data from interviews with the teacher.

The interview results with the science teacher in Table 1 are also shown in the question-naire data for the students' needs filled out by students through Google Forms. Based on the student questionnaire data, the students' interest in science learning was high; namely 60% of the 215 students (129 students) were interested in learning science. While 24% (52 students) were less interested, 12% (26 students) chose very curiously, and the rest showed disinterest. The interest of students in science learning is shown in Figure 2.
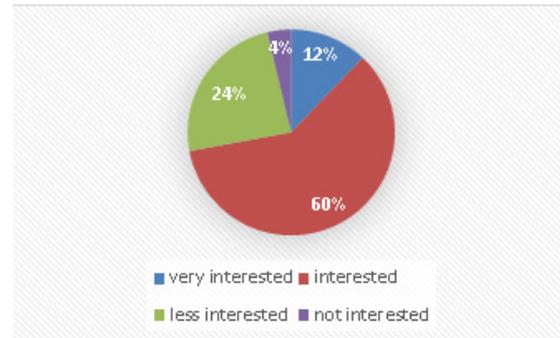
**Figure 2**. The percentage of students' interest in science learning

High student interest has a positive meaning for students' interest in science learning. This shows that students are interested in learning science. A positive view of science will generate interest in investigating science. Besides that, it will also lead to fun in learning science and in-

Table 1. Results of interviews with teachers

Core Question	Answer
Students' interest in science learning	Students give adequate responses to learning and quizzes, but some are less enthusiastic, do not focus on learning, and are also difficult to condition. Students lack interest in learning science because some materials are difficult to imagine because they cannot be observed directly.
Teaching materials used	the MGMP module and most of the module's material is only a summary outline of the material.
Availability of facilities	Practical tools are already available in the science laboratory. Still, the availability of materials is limited so that they can only do a practicum with demonstrations in front of the class. Due to the minimal availability of materials, science laboratories are rarely used for the apprenticeship. The science laboratory is more often used for meetings such as committee meetings.
The need for learning media	Most of the media used are offline. Students need media that can visualize material that is difficult for students to imagine. Students are more enthusiastic, enthusiastic, and understand the material when using media such as video shows to exact the steps. Natural science material is contextual and is around us, so it will be easier to understand if you use media to relate science material directly to everyday life

crease the time to study science (Creswell, 2017). However, due to several factors, it causes negative views and attitudes towards science learning. The causes of students' negative thoughts and attitudes towards science lessons are due to traditional teaching science methods that are used continuously, for example, learning takes place passively, students are reluctant to think, and accept the material presented (Kurniawan et al., 2018).

The attitude of students when science learning is taking place is shown in Figure 3. Respondents expressed varied perspectives when science learning was taking place. The data shows 34% (73 students) responded to the learning provided by the teacher, 27% (58 students) were enthusiastic about the learning being carried out, 21% (45 students) were less enthusiastic about the learning that was taking place, 18% (39 students) were less respond to the learning given. Students who are passionate about participating in the science learning process show an attitude of responding to the questions the teacher gives before other students answer (Misriati, 2020).
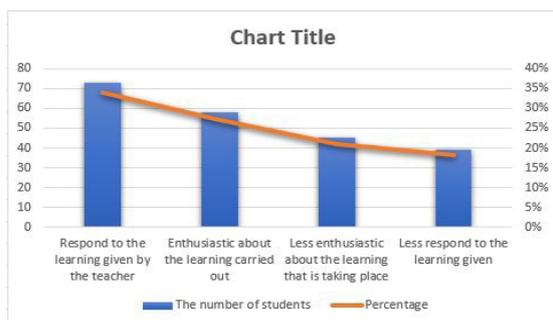
Figure 3. Percentage of students' attitudes towards science learning

The teacher's teaching materials when delivering science materials were more than the science books published by the government, namely 56.7% (Table 2). The use of teaching materials in learning can provide benefits to students. There are several advantages of using teaching materials, namely: 1). make students participate creatively and think analytically when they are involved in learning, 2). The concepts learned using teaching materials become more evident to students because they are taught through learning activities, 3). encourage a systematic integration of various sources in a learning experience, 4). become actively involved in improvisation, work principles are learned, and in this way, students acquire problem-solving skills, attitudes and scientific knowledge needed in solving scientific and technological problems (Akani, 2016). Because of the importance of teaching materials in

the learning process, teachers' teaching materials should be compiled by teachers who can adapt them to school conditions and students. However, the questionnaire data results show that only 20.9% of the teaching materials that teachers make themselves (Table 2).

Table 2. Percentage of teaching materials used by the teacher

Teaching materials used by the teacher	Percentage
The government published science books	56.7%
IPA books published by publishers	9.3%
Teacher-made modules	20.9%
Others (modules from MGMP, YouToube, Google)	13.1%

Apart from teaching materials, the role of learning media is also crucial in the learning process. Students and teachers expect learning with media that can visualize sources that are difficult for students to imagine. In line with the questionnaire data on students' needs, which showed that 59.5% of science material was easier to understand if it was delivered using learning media (Table 3).

Table 3. Percentage of the approval of learning media

The existence of learning media	Percentage
Strongly agree	17.2%
Agree	59.5%
Disagree	20.9%
Others	2.4%

Several studies have reported the use of media in the learning process has a positive impact, be it in the quality of learning (Panjaitan et al., 2019), student learning outcomes (Ria et al., 2012), helping find concepts (Hanif, Aini & Alizar, 2019)). Therefore, the use of media in learning is essential to support the learning process so that the material presented is easier to understand. The learning media that will be developed will be Vlog media integrated with ethnoscience.

Based on the questionnaire data on the needs of students, the need for Vlog media integrated with ethnoscience as an alternative media used by teachers in delivering science material is 58.6% (Figure 4), meaning that out of 215 students who filled out the questionnaire, 126 students chose the need to develop Vlog media.

Integrated ethnoscience. Several studies have shown that Vlog media is feasible to be developed as a learning medium, such as research conducted by Hibra, Hakim & Sudarwanto (2019) which created Vlog as a learning medium in the tax administration method, Combe & Codreanu (2016) which uses Vlog to develop language speaking skills and cultural exchange, and Sari (2017) revealed that the use of Vlogs on Youtube Channels increases the motivation and self-confidence of students.
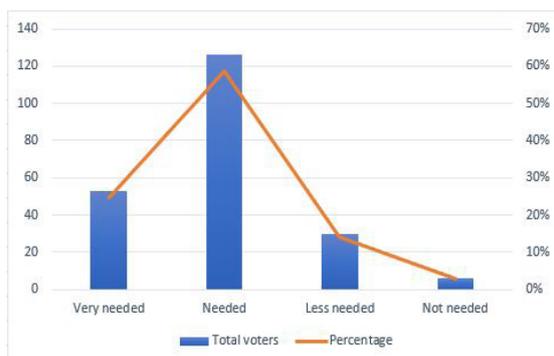
Figure 4. Ethnoscience integrated Vlog development needs

So, the results of the data analysis obtained, students need learning media that can visualize material that is difficult to imagine, making students view and have a negative attitude towards science learning. This need can be obtained by developing ethnoscience-integrated Vlog media.

Analytical research as a preliminary study is expected to contribute to appropriate learning media to be developed in science learning based on teachers and students' needs. This analytical research will continue to build analysis using the ADDIE model to determine the feasibility of ethnoscience integrated Vlog learning media in science learning.

CONCLUSION

From the data analysis results, it was found that students need media that can visualize material that is difficult to imagine by students and is contextual. Students are more enthusiastic, enthusiastic, and understand the material when using media such as video shows to clear the steps. The development of ethnoscience integrated Vlog learning media was welcomed by students with 58.6% of students needing ethnoscience integrated Vlog media, 24.7% very much need and 14% less need. Based on this data analysis, it can be

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