Developing Visual Basic-Based Science Learning Media Technology at SDN I Telukjambe Karawang

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Abstract. The results of observations that have been carried out at SDN Telukjambe I Karawang show that there are main problems related to science learning. The problems are caused by the lack of students' motivation in learning because the learning process is too monotonous at school, and the use of learning media is not optimal in supporting teaching and learning activities. The purpose of this research is to develop visual basic-based science learning media. This study is a research and development method. The research design consists of five stages, namely problem analysis, product development planning, product development, product revision, and final product. The first step is to analyze the problem of science learning. The second stage is developing science learning media by analyzing core competency standards and basic competencies based on the curriculum. The third stage is developing visual basic-based science learning media to be shown to students. The fourth stage is validating material and media by experts. Use of visual basic-based science learning media can encourage students' motivation in understanding the learning. The feasibility of visual basic-based Science learning media was obtained from the results of the assessment of the experts in media and materials that mostly obtained "good" criteria.

Keywords: Science Learning, Visual Basic, Research And Development, Teaching, Learning.

INTRODUCTION ~ Learning process in the classroom has a close relationship among teachers, students, curriculum, facilities and infrastructure. Teachers must be able to choose appropriate learning strategies according to presented material in order to achieve educational goals (Rawung, 2019). According to Fatimah et al (2014), learning will be better understood by students if it is supported by learning media so that teaching materials will be taught to students more effectively.

In elementary schools, there are science subject which are not just materials that are delivered in classroom but also must be practiced outside classroom. Science is knowledge obtained through data collection by experimentation, observation, and deduction to produce an explanation of a phenomenon that can be trusted (Indriati, 2012).

Students' achievement in science learning in Indonesia is still very low compared to other countries in the world. This can be seen from The Organization Cooperation and Development (OECD) data for the 2009-2015 survey period, Indonesia is consistently in the bottom 10. The 2018 survey still places Indonesian students in the lowest ranks on reading, math, and science.

According to Susanto (2013:165), one of the educational problems faced in Indonesia is poor implementation of

learning process applied by teachers. In the implementation of learning process, students are only directed to the ability of memorizing without any understanding and application in students' daily activities. Haryono (2013: 2) states that by considering at the problem of learning Science at many schools, students are not accustomed to using their reasoning power, but are actually accustomed to memorizing even though learning Science contains many abstract concepts that require concrete parts.

The results of observations that have been carried out at SDN Telukjambe I Karawang show that there are main problems related to science learning. The problems are caused by the lack of students' motivation in learning because the learning process is too monotonous at school, and the use of learning media is not optimal in supporting teaching and learning activities.

An alternative to overcome the problem of science learning activities is to use more varied and interesting learning media that is visual basic-based learning media. The purpose of this research is to develop visual basic-based science learning media. It is hoped that by developing this media, it can provide a real picture of what students are actually learning.

METHOD
This study is a research and development (R&D) method. According to Sugiyono (2015) the R&D method is a research method used to produce certain products and test the effectiveness of these products. The research design used refers to the steps of R&D research which consists of five stages, namely problem analysis, product development planning, product development, product revision, and final product.

RESULTS
The first step is to analyze the problem of science learning at SDN I Telukjambe Karawang. The problem is that teachers still have not implemented learning media optimally and the learning process tends to be one-way teaching, so students become more passive.

The second stage is developing science learning media by analyzing core competency standards and basic competencies based on the syllabus or curriculum.

The third stage is developing visual basic-based science learning media to be shown to students of SDN I Telukjambe Karawang.
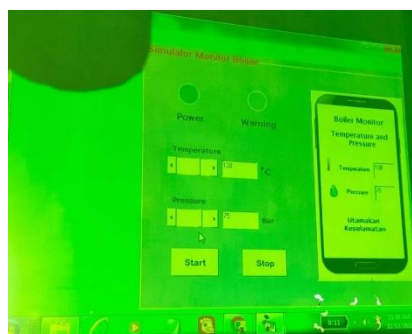

Figure 1. Visual Basic-Based Science Learning Media

The fourth stage is validating material and media by experts to determine the quality of learning materials and media.

The evaluation instrument used was a questionnaire containing questions with a Likert scale.

Table 1. Validation Result

Aspect of Assessment	Score	Criteria
Relevance between material and lesson plan	4	Good
Language used as students' age	4	Good
Encouraging students' motivation	4	Good
Interesting and fun	5	Very Good
Clarity of video and color	4	Good
Text color compatibility with the background	4	Good

DISCUSSION

This research is relevant to the research conducted by Irfan, Muhiddin, Evi Ristiana (2019) on Developing Powerpoint-Based Science Learning Media in Elementary Schools. The similarity between their research and current research is in the research method used, while the difference is in the learning media used by researchers.

This research is also relevant to the research conducted by Isdayanti, Lukman Nulhakim, Ahmad Syachruroji on developing Adobe Flash-Based Audio Visual Learning Media on Animal Life Cycle Materials. The similarity between this research and current research is in the research objectives, while the difference lies in the learning media and research methods.

CONCLUSION

Based on the research that has been conducted, it can be concluded that the use of visual basic-based science learning media can encourage students' motivation in understanding the learning delivered by the teacher when compared to other media. The feasibility of visual basic-based Science learning media was obtained from the results of the assessment of the experts in media and materials that mostly obtained "good" criteria.

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