

Development of Power Point Based CD Interactive Teaching Materials to Improve Student Learning Results

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Abstract: *The aim of this research is to describe the development of interactive CD learning materials based on power points to improve students' achievement in mastering IPA, especially the topic about the source of energy. The problems occurring in this research, students cannot master the material very well. Students did not have interesting in learning and they just had active in their activities. The research used is research and development. In collecting the data, the researcher had three types, observation, interview, and test. The results showed that the interactive CD learning material that was developed met the requirements in accordance with the steps of development. Media validation results and material validation results are shown with an average score of 79.8% and 87.2% respectively. Student responses to interactive learning materials scored 81.75% in small-scale trials while large-scale trials scored 85%. Then the teacher responses scored 71.7% and 80.48%, respectively.*

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I. Introduction

Learning science education in schools should put more emphasis on aspects of knowledge, attitudes and skills of various problems that exist around students. In the teaching and learning process, the media is used to facilitate teaching and learning communication. To expedite the learning process towards a better direction, it is very necessary that the media to assist in the learning process. In line with that according to Sudjana (2009: 2) states that the reasons for learning media can support the learning process of students regarding the benefits of teaching media include: (a) teaching will attract more attention of students so that it can foster motivation to learn, (b) teaching material will be more clearer and better understood by students, so students are able to master the teaching objectives.

Based on observations conducted on Monday, February 26, 2018 in class IV Pahoman 2 Primary School, Bandar Lampung on science subjects, the learning process is still conducted conventionally without the support of the media. This causes students to tend to feel bored during the learning process so that the impact on student learning outcomes is low or under KKM from the learning outcomes obtained are still \pm 70% of students have not been completed. The limitation of supporting media results in the learning process of students not being optimal and not attracting students' attention. In this regard, to improve the learning process that is expected to improve learning outcomes, we need an attractive media to foster enthusiasm, interest, and activate students in the process of teaching and learning activities in the classroom. One alternative to overcoming this problem is to use Power Point-based interactive CD teaching materials.

Media as a tool in the teaching and learning process, therefore teachers are required to be able to use media in learning. In line with that according to Arsyad (2015: 193), "Microsoft Power Point is one of the applications used by people or educators in presenting teaching materials, reports, and their work". With the help of power point media, a teacher can present teaching material to students so that students can more easily transfer their knowledge through presentations given by a teacher to their students in class. Besides making it easier for a teacher to master the class and help students to stay focused with what is explained by a teacher. For computer users, Microsoft Power Point is an application that is commonly used in its activities, especially at presentations. Microsoft Power Point is a software that will help in arranging an effective, professional, and also easy presentation. Microsoft Power Point will help an idea become more interesting and clear its purpose if presented. Microsoft Power Point will help in combining all media elements such as text, images, sound and even video and animation so that it becomes an interesting to media.

Teaching materials used in learning must be interactive so that there is a special attraction from the media. In line with that according to Prastowo, (2015: 328), the word "interactive" implies mutual action or interrelation or active mutual. Thus, interactive teaching materials can be interpreted as active teaching materials, meaning that they are designed so that they can carry out a command back to the user to carry out an activity. Based on the problems that have been raised, the general problem in this study is how the results of the development of interactive CD-based teaching materials Power Point to improve learning outcomes? The specific problems in this study are: 1) How is the development of interactive Power Point based CD teaching

materials? 2) Is the development of Power Point based interactive CD learning materials feasible? 3) How big is the student learning outcomes after using Power Point based interactive CD teaching materials? 4) What is the response of students after using Power Point based interactive CD teaching materials?

The general objective in this research is to describe the results of the development of interactive Power Point based CD learning materials to improve learning outcomes. Specifically the objectives in this study are as follows: 1) Producing the development of interactive Power Point based CD learning materials 2) Testing the feasibility of developing interactive Power Point based CD learning materials is feasible 3) Knowing how much student learning outcomes after using Power interactive CD based teaching materials Point 4) Determine student responses after using Power Point-based interactive CD teaching materials.

Learning media are all components of the student learning environment that are used by instructors so that learning takes place more effectively. So that the message or information can be in the form of knowledge, expertise, ideas, experiences and so on when the process of delivering information from the teacher to students can run smoothly. Power Point is a presentation application program developed by Microsoft Corporation. Like other presentation processing software, Power Point can position text objects, graphics, video, sound, and other objects on one or several individual pages called "slides". In line with that according to Arsyad (2015: 193), "Microsoft Power Point is one of the applications used by people in presenting teaching materials or reports, their work or status". By using Microsoft Office Power Point we can design stunning visual presentations using text, graphics, photos, animations, videos, and so on.

According to the Great Indonesian Dictionary of Nurhairunnisah(2017: 32), the word "interactive" implies mutual action or interrelation or mutual active. Thus, interactive teaching materials can be interpreted as active teaching materials, meaning that they are designed to be able to carry out instructions to the user to carry out an activity. So, this teaching material is not like printed teaching materials or models which are only passive and cannot exercise control over its users. In this interactive teaching material, the user (learners) engages in a two-way interaction with the teaching material being studied.

Furthermore, according to the Guidelines for Bibliographic Description of Interactive Multimedia in the General Guidelines for the Development of Teaching Materials, Mingguarti(2013: 329), "Interactive teaching materials are a combination of two or more media (audio, text, graphics, images and video) which users are manipulated to controlling the commands and or natural behavior of a presentation ". Nowadays, many people have started to use interactive teaching materials, because besides being interesting, these teaching materials also make it easier for users to learn the material. In preparing interactive teaching materials, adequate supporting knowledge and skills are needed, especially in operating equipment, such as computers, cameras, videos and photo cameras.

Interactive teaching materials are teaching materials that combine several learning media (audio, video, text, or graphics) that are interactive to control an order or the natural behavior of a presentation. Thus, there is a two-way relationship between teaching materials and users. So, if the learning process is carried out using teaching materials like this, students can be encouraged to be active.

According to Nataliani (2014: 334), the steps for the preparation and development of interactive teaching materials are as follows: a). First, the title is derived from basic competencies or subject matter according to the size of the material. Basic competence contains a number of abilities that students must have in certain subjects as a reference for compiling competency indicators. While the main material, namely a number of key information, knowledge, skills or values arranged in such a way by educators so that students master the competencies that have been set. b). Second, learning instructions are written clearly so that students are easy to use. c). Third, supporting information is explained clearly, densely and attractively in written form or still and moving images. d. Fourth, assignments are written in interactive programs. e. Fifth, assessment can be done on the work of assignments given at the end of learning, which can be seen by educators through computers. f. Sixth, use various learning resources that can enrich the material, for example books, magazines, internet and research journals as material for creating interactive teaching programs.

II. Method

Design of research used is a research and development (R&D) research design following the Sukmadinata design (2015: 169). Because interactive learning media is a tool in the learning process, to evaluate the learning process, what is developed is non-test. The step of interactive media development is preceded by a needs analysis followed by determining SK, KD and Story Board, SD Learning Development SD Learning Media and expert studies, Development of Draft II, limited trials, limited trials, field trials, analysis of trial results, and production Interactive CD.

The type of data to be collected is qualitative data and quantitative data. Sugiyono (2014) qualitative data are inputs from media experts and material experts as well as quantitative data in the form of students' response scores (coding scores). Data analysis method is done by using mix-method design triangulation that is by analyzing simultaneously from qualitative and quantitative data as well as combined data. Then use the

results of the analysis to understand the research problem. The basis of this data analysis design is the lack of one type of data to be supplemented by other types of data. Quantitative tests were conducted statistically to determine the validity and reliability of teaching materials based on interactive Power Point CDs. Success criteria for development Assessment of learning activities is $\geq 80\%$, Assessment of student and teacher responses is $\geq 80\%$, Teaching Materials have a readability level that is easy to understand (readability coefficient > 0.3) and easy to use, Standards of achievement of learning objectives namely the acquisition of individual scores ≥ 65 and the percentage of completeness classically is $\geq 85\%$ of students have achieved a score ≥ 65 .

III. Result and Discussion

Development of teaching materials based on interactive Power Point CDs is carried out with development procedures through 7 stages namely: needs analysis, determination of SK, KD and Flowchart, development of elementary learning and elementary learning media, expert studies, field test / implementation stages, analysis of trial results, and interactive CD products. The development of Microsoft Office Power Point learning media on social studies subjects is based on needs analysis. Information gathering is done by analyzing problems and material through field surveys, then proceed with the preparation of draft products. The development of teaching materials based on interactive Power Point CDs is feasible to be used based on the results of the validation of the material experts and media experts as the basis for revising the media from aspects of learning, content aspects, aspects of appearance and programming aspects. The results of the experts' validation are used as benchmarks for the appropriateness of learning media to be tested in the field.

The development of teaching materials based on interactive Power Point CDs is feasible to be used based on the results of the validation of the material expert and the media expert as the basis for revising the media from the learning aspect, the content aspect, the display aspect and the programming aspect. The results of the experts' validation are used as benchmarks for the appropriateness of learning media to be tested in the field. The percentage of the results of the feasibility assessment of the material experts included very feasible criteria, namely with an average percentage of 79.8%. The percentage of the results of the feasibility assessment of the media experts included the very feasible criteria, namely with an average percentage of 87.2%. Student learning outcomes after using Power Point interactive CD-based teaching materials in limited trials conducted on Grade IV students of SDN 3 Bandar Lampung, in large-scale trials conducted on students in grade IV Pahoman, held on Monday, March 12, 2018. Data The research findings are grouped based on students learning by using Power Point interactive CD-based teaching materials.

The percentage of the results of the feasibility assessment of the media experts included the very feasible criteria, namely with an average percentage of 87.2%. How much student learning outcomes after using Power Point-based interactive CD teaching materials in a limited trial was conducted on grade IV students of SDN 3 Bandar Lampung, held on Tuesday, March 6, 2018. The research findings data are grouped based on students learning by using Power Point interactive CD-based teaching materials. Student responses after using interactive CD-based teaching materials Power Point teacher responses to interactive CD teaching materials outline shows that the teaching materials used are good. This can be seen from the results of small-scale trials obtained by the teacher's response of 71.7% while in large-scale trials obtained by 80.48%. Student responses to interactive CD teaching materials on small-scale trials obtained 81.75%. Whereas in large-scale trials obtained 85%. This shows that students' responses to interactive CD teaching materials are included in the criteria very well.

IV. Conclusion

Based on the results of research and discussion, it can be concluded research conclusions as follow

1. Planning the development of learning media begins with the determination of competency standards, basic competencies, indicators of learning achievement, and learning strategies to be carried out. The subject matter mentioned is packaged into Microsoft Office Power Point learning media. Learning media is developed with the program language used in the form of commands in Hyperlinks, so that its use is integrated according to the order arranged in the slide.
2. Learning media interactive teaching materials material development of production technology, communication and transportation is very feasible as a medium of learning according to media experts and material experts. The percentage of eligibility scores obtained in detail is explained as follows:
 - a) Percentage of eligibility based on expert judgment on the material: the percentage of eligibility based on the evaluation of material experts obtained 79.8% included in the very feasible category, and the percentage of eligibility based on the assessment of the media expert obtained 87.2% included in the feasible category.

- b) Teaching material interactive CD material development of production technology, communication and transportation can improve student learning outcomes. This can be seen from the score obtained by 63% of students in small-scale trials fulfilling the minimum completeness criteria ($KKM \geq 75$). While the scores obtained in the large-scale trial that is equal to 100% remaining have met the minimum completeness criteria ($KKM \geq 75$).

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