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International Journal of Educational Dynamics (IJEDs)
Vol. 3 No. 1 (pp. 14-20) December 2020
p_ISSN 2655-4852
e_ISSN 2655-5093

DEVELOPMENT OF ANDROID-BASED LEARNING MEDIA FIRST-AID LEARNING IN ACCIDENTS FOR SMP EXTRACURRICULARS

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ABSTRACT

The purpose of this research is to produce learning media based on android that is valid, practical, and effective. This type of research is development. The development model used is the 4-D model, consisting of four stages, i.e define, design, develop, and disseminate. The research data were obtained from validity, practicality, and effectiveness tests. From the results of the media validity test, it shows that the category is very valid from 3 aspects, i.e the material aspect of 97.89%, the media aspect of 81.82%, and the language aspect of 82.86%. Practicality data were obtained from the results of the questionnaire analysis of the responses of educators and students, while the practicality test results of Android-based learning media for first aid learning obtained an assessment of 93.40 for practicality assessment by students and 96.67 for practical assessment by educators with a very valid category. The results of the effectiveness test of student learning outcomes pretest results obtained an average of 62.25 and at the time of the posttest increased to 83.25 after using android-based learning media in the learning process of first aid in accidents, this shows that there is an increase in student learning outcomes after using based learning media. android learning first aid for junior high school extracurricular accidents.

Keywords: development, android-based learning media, P3K

INTRODUCTION

The implementation of formal, informal or non-formal education is a concrete form of implementing educational programs to achieve the desired goals. In this case, schools are one of the educational facilities that play an important role in supporting this education. In schools, especially in junior high school (SMP) education, several extracurricular programs function to improve the abilities and character of students, hone skills and independence, one of which is the School Health Business (UKS).

To realize the goals of UKS, the main activities of UKS through the UKS Triassic are listed in SKB 4 of the Minister Number 6 of 2014 chapter II article 3, i.e health education, health services and fostering a healthy school environment. SMP N 22 Kerinci is an SMP in Kerinci district which is one of the schools accredited A. Based on the results of an interview with the UKS coach of SMP N 22 Kerinci, Mr Odia, since 2010-2017 the UKS extracurricular at SMPN 22 Kerinci has not so active in carrying out activities.

In 2018 - 2019 the UKS extracurricular activity at SMPN 22 Kerinci began to be active again with routine training activities. However, based on the observations of the author who is also a member of PMI who participated in seeing the process of coaching the UKS extracurricular activities at SMPN 22 Kerinci saw the development in terms of the learning process and routine exercises that were followed by students at SMPN 22 Kerinci which had

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not significantly improved, this could be Judging from the use of media and learning resources used by UKS coaches, they have not experienced any changes or innovations and are still using teaching media in 2010 so that the effect on student learning outcomes is not optimal in understanding first aid learning materials on UKS extracurricular activities at SMPN 22 Kerinci. Based on the facts, it is known that the first aid study results obtained by students who take the UKS extracurricular activities at SMPN 22 Kerinci are as follows:

Table 1. Average Acquisition of UKS extracurricular learning outcomes for semester 1 of the 2019/2020 academic year

Material	Average
P3K	7.00
PHBS	8
Leadership	7.5
Total	22.5
Average	7.5

Source: UKS SMPN 22 Kerinci Extracurricular Advisory Teacher. 2019/2020

Based on Table I above, the average scores for students who took the UKS extracurricular for first aid class ranged from 6.55 to 7.25. This data shows that the average score of students still has not reached the KKM (KKM score is 7.5), especially first aid material, while other materials have met the KKM. First aid material is one of the main subjects for UKS to carry out the function of maintaining and serving UKS. According to the Essence team (2012), UKS First Aid (P3K) can be a place for temporary help, treatment to perform medical treatment for patients, victims before medical assistance from health centres and hospitals is provided. The development of science and technology at this time is so fast that it encourages humans to respond to all these developments quickly to keep up with them. The demands of human resources who can respond to developments in science and technology are needed.

The world of education cannot be separated from the educational process which includes teachers, students, and the learning environment which influences each other to achieve learning objectives. Media is one of the factors in achieving learning objectives. Hamalik (1986); Arsyad (2002) suggests that the use of learning media in the teaching and learning process can arouse new student desires and interests, generate motivation and stimulation of learning activities, and even bring psychological influences on students. Learning media in general that are often used today are print media and computer-based media in the form of powerpoints. Learning media such as PowerPoint can not be used at any time by students (less practical) because not all students who take the UKS extracurricular have facilities in the form of computers or laptops, the availability of manual books in the form of printed books or pocketbooks related to UKS material is still very minimal, based on the author's search results to one of the biggest bookstores which already has many branches in big cities in Indonesia such as Gramedia, not one author found a book with the theme UKS. The development of information and communication technology devices is currently so fast, one of the most commonly used information and communication technology devices today is the cell phone. Based on the author's observations when observing the implementation of the UKS exercise at SMPN 22 Kerinci students who took the UKS extracurricular overall already had an Android smartphone, especially students who took the UKS extracurricular

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were 100% already using a smartphone. The more students who own and use information and communication technology devices in the form of cell phones, the greater the opportunity to use information and communication technology devices in education. Based on the background of the problem, the authors are motivated to research with the title "Development of Learning Media Based on Android First Aid Learning in Accidents for Junior High School Extracurricular Activities".

METHODS

The type of research used is research and development or better known as Research and Development (R&D). This is by the opinion of Sugiyono (2014) which states that research and development methods are research methods used to produce certain products, and test the effectiveness of these products. The test subjects in this study were junior high school students in 2020. The type of data used as primary data, i.e data obtained directly taken through a validation questionnaire, practicum questionnaire, student learning outcomes to get effectiveness. The development model used refers to the 4-D model, proposed by S. Thiagarajan, Dorothy S. Semmel, and Melvyn I. Semmel. According to Thiagarajan, et al. (Trianto, 2011) this model consists of four stages, i.e define, design, develop, and disseminate:

1. Define
    a. Curriculum Analysis
    b. Student Analysis
2. Design
3. Development
    a. Validity Stage
    b. Practicality Stage
    c. Effectiveness Stage
4. Disseminate

Based on the needs of researchers, the development model used is the 4-D model, because it is considered suiTable in developing learning tools. By Hamdani's (2011) opinion, the 4-D model is appropriate to be used as a basis for developing learning tools, the description is explained more fully and systematically, its development involves expert judgment as a validator so that before testing the device has been revised based on assessments, suggestions and input validator.

RESULT

By the objectives and development procedures used, the following research data were obtained:

1. Define Stage: At the define stage, it relates to competency standards, basic competencies and indicators that students want to achieve. The steps that the author took in research at SMPN 22 Kerinci are:
    a. Curriculum analysis: After observing at SMPN 22 Kerinci on Friday, March 16 2020, information was obtained that first aid material is one of the main subjects for UKS to carry out the maintenance and service functions of UKS at SMPN 22 Kerinci. P3K

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can be a place for temporary help/treatment to carry out medical treatment for patients/victims before medical assistance from health centres and hospitals.

b. Student Analysis: From the results of the analysis, it is known that students who take the UKS extracurricular activity at SMPN 22 Kerinci 100% already have an Android smartphone, therefore it requires learning innovation so that smartphones owned by students can be used as learning media optimally.

2. Design Stage (Design)
   a. Learning Media: After analyzing the curriculum, the writer began to design learning media that would be tested on students, especially those who took the UKS extracurricular activities, including:
      – Flowchart: Flowchart is a physical depiction of the steps and sequence procedures of a program.
      – Story Board: Story Board is a sketch of images arranged in sequence according to the script, with a storyboard we can convey our story ideas to others more easily.
      – Creating media: a) Determine Software Development With so many developer applications and ways to create Android-based learning media, a program that will be used to develop Android-based learning media is determined, i.e Adobe Flash Professional CS6; and b) Creating Android-based learning media
3. Develop Stage (Development): The learning media development stage includes the validation stage, i.e the validation of the instrument which consists of validating instruments for material, media, language, effectiveness and practicality. To obtain a valid data collection instrument, an assessment of the validation instrument must first be carried out.

The instrument assessment carried out consisted of media instruments, the practicality of teacher and student responses to learning media. Following are the results of the validator's assessment of the data collection instrument:

Table 2. Recapitulation of the results of the validation instrument assessment

Instrument	Rating Score from	Category
Validation of Learning Media	97,14%	Very Valid
Learning Media Practicality	96%	Very Practical
The Effectiveness of Learning Media	100%	Very Effective
Average	97,71%	Very Valid

The table above shows that the data collection instrument has been declared very valid with an average of 97.71%.

a. Validation: From the results of media validation, the material/content and language of the recapitulation of the results of the validation of learning media based on android first aid learning in accidents for UKS SMP extracurricular activities.
b. Based on the Table above, it can be seen that the overall average result of the validation of learning media based on android first aid learning for accidents for UKS SMP extracurricular is 87.82% which is in the very valid category. From the results of the validation of learning media based on android first aid learning in accidents using the Adobe Flash Professional CS6 application, it can be concluded that the

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Android-based learning media, the first aid material for the Adobe Flash Professional CS6 application for the UKS extracurricular for SMP level are valid.

c. Practicality: The practicality of the developed Android-based learning media can be seen from the results of the practicality analysis by educators and students.
   - Results of educators' responses to the Practicality of Android-based Learning Media: Assessment of educator responses aims to determine the opinion of educators on the practicality of the learning media being developed. The results of the practical assessment of Android-based learning media in the UKS extracurricular first aid learning conducted at SMPN 22 Kerinci showed that the average percentage of educators' responses to Android-based learning media in learning first aid in accidents was in the very practical category with a percentage of 96.67%.
   - Results of Student Responses to Practicality of Learning Media based on Android: Student responses to student practicality are given to find out students' opinions about the level of practicality of Android-based learning media. This practicality sheet was filled in by 20 students at the final meeting of the trial who were filled in online by students using google forms, it appears that the percentage of student responses to the practicality of Android-based learning media is 93.40% with the very practical category.

d. Effectiveness: Based on the comparison of the results of the students' pretest and posttest scores there are differences. In the pretest score, an average of 62.25 was obtained and at the time of the posttest, it increased to 83.25 after using the media using android-based learning media in the UKS extracurricular first aid study. This indicated an increase in student learning outcomes after using Android-based learning media so that students who using Android-based learning media first aid learning for accidents can achieve a value above the KKM.

4. The Disseminate Stage (Spread): This stage is the stage of using Android-based learning media for learning first aid in accidents for UKS extracurricular activities in junior high schools in a wider scope. The distribution can be done to the classroom, school, or another teacher. Due to limited time, cost and energy, the dissemination stage in this study was carried out on a limited scale at one other school and a practicality test was carried out by the UKS extracurricular coach. Another school that is used to carry out the deployment stage is SMPN 5 Kerinci.

CONCLUSIONS

Based on the achievement of research objectives regarding Android-based learning media for learning first aid in accidents, it is concluded that: 1) Android-based learning media first aid learning for UKS extracurricular activities at SMPN 22 Kerinci has been successfully developed with the Adobe Flash Professional CS6 program and is assisted by other programs such as Adobe Photoshop CS6, Adobe AIR, and Google Doc Form so that the appearance of learning media is more attractive and can be operated on students' smartphones; Test the validity of learning media based on Android based on the results of the assessment by material experts with a score of 97.89 in the very valid category, media experts with a score

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of 81.82 in the very valid category and linguists with a score of 82.86 in the very valid category, then it is done product improvements once according to the validator's comments and suggestions and continue at the next stage; c) The practicality test results of Android-based learning media for learning first aid for accidents for UKS SMP extracurricular activities obtained an assessment of 93.40 for practicality assessment by students and 96.67 for practical assessment by educators at SMPN 22 Kerinci; and 4) The results of the effectiveness test of student learning outcomes from the pretest and posttest data on the pretest results obtained an average of 62.25 and at the posttest it increased to 83.25 after using the media using andoroid-based learning media in the learning process of first aid in accidents for extracurricular activities. UKS at SMPN, 22 Kerinci shows that there is an increase in student learning outcomes after using Android-based learning media.

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