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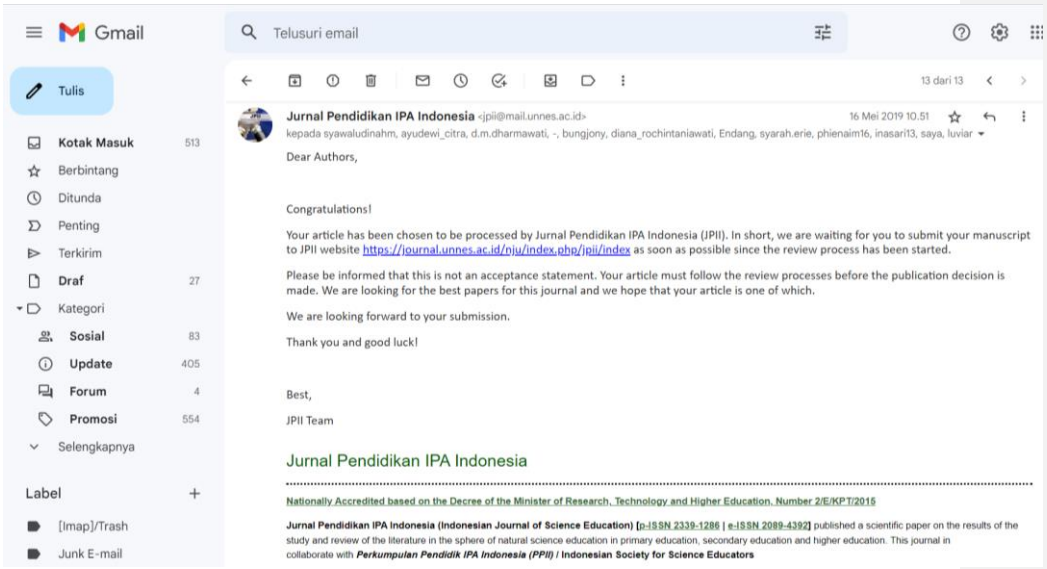

THE EFFECTIVENESS OF ANDROID APPLICATION AS STUDENT AID TOOLS IN UNDERSTANDING TASK OF PHYSICS

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ABSTRACT

Gadget addiction and the low level of learning interest of students in carrying out tasks are the new problems in education so that efforts need to be made to overcome them. The aim of this study is to determine the effectiveness of android application as student aid tools in understanding the task of Physics. Subjects in this research are all students of class VIII SMP Islam Terpadu Arrozaq Rantauprapat. The type of research is qualitative research that is directing students to utilize his gadgets in completing the task of physics. The instruments used in this research are the video checking rubric and the effectiveness questionnaire. This research was carried out for 3 months and video checks were carried out at the end of each month after project assignments were collected. The results of data analysis in this study indicate that the utilization of android application as a tool of students is considered effective. The students become enthusiastic in working on assignments and students access the internet through gadgets on positive things.

Keywords: Effectiveness, Android application, task, physics

INTRODUCTION

Along with the technology development sophisticated increasingly, nowadays gadget has been equipped with several features and modern applications which facilitate the users in reaching the world of the Internet so that users use it actively. A study finds that college students spent nearly nine hours daily on their cell-phones. As the functionality of cell-phones continues to expand, addiction to this seemingly indispensable piece of technology becomes an increasingly realistic possibility. Study results suggest that certain activities performed on one's cell-phone are more likely to lead to dependence than others and that these addictive activities vary across gender (Roberts, Yaya, & Manolis, 2014).

More than 190 countries around the world use Android. Many users use Android to search for apps, games and other digital content. Android becomes the fastest-growing mobile operating system. Every day more than 1 million Android devices are enabled worldwide (Ependi, Universitas, & Darma, n.d.). Indonesia is one the countries which the people use gadget actively. Almost every student, not only Senior High School student but also Primary student has gadgets and used it in their daily activities. From the results of a survey conducted in Indonesia, in the age range of 19-34 years old, the main contributor to the age of users was 49.52 percent. The age range of 35-54 years old (29.55 percent), 13-18 years old (16.68 percent). In terms of education, for postgraduate numbered 88, 24 percent, bachelor 79.23 percent, senior high school 70.54 percent, junior high school 48.53 percent, and elementary school 25.1 percent (Tim APJII, 2018). The data indicates that students of Indonesia are addicted to using the gadget and unfortunately getting negative impact for Indonesian students.

Gadget addiction which is happening on the students of Indonesia makes new problems in education, especially in SMPIT (Junior High School) of Arrozaq Rantauprapat, Sumatera Utara. Based on the first observation that students often do not have responded when the teacher gives task and homework. It is about 10% of the students finishing the homework or task who do it by themselves, 80% of the students copy their friend's homework and 10% of the students do not work on it at all. When the teacher checks out the assignments, it is founded that only 10% of the students who understand their tasks well. Whereas task giving is one effective method in learning in order that student reviewing the lesson at home and their science comprehension are increased.

Because of the conditions above, the researcher decided to interview some parents of the students about their child's activities at home. the result of the interview has shown that most students spend all their time with their gadgets and never reviewing their lessons out of school. The students spending their time on accessing social media, playing online games, and trying to updating new features of their gadgets. It can be known by checking their social media account and we can see how often they update status, upload their photos, share their edited videos by using android applications which they download in their gadget and play an online game. All these activities are often shared with their social media accounts (Facebook, Instagram, Path, Twitter). When we ignore it, it can cause decreasing of learning interest and declining of student's achievement. Interest and attention are two things that are considered the same in everyday use, the attention of students is the concentration of students on observation and understanding with the exclusion of others. The interest and attention are following the learning process must arise on the basis of high awareness of students for learning. Furthermore, the teacher is expected to be able to provide motivation and guidance to students, the goal is that students have a higher desire for learning so that the attention in learning will get better (Nurhasanah & Sobandi, 2016). Students have an interest in a particular object with attention to the object. Therefore, it is necessary to make special efforts to deal with these problems for the future of student education.

Actually, these students have great abilities and creativities to support their education in using gadgets. It is not wise to remove the gadget from students because basically gadget still has benefit. When we look inside, most of the students actually have good ability and creativity in operating some features of their gadget, such as photo and video editing. It can be used by the teacher to have learning projects done by students using their gadget. The Teacher can collaborate lesson, creativity, and passion of students to build up a learning interest. Mobile learning was more effective than the use of traditional teaching methods in helping students enrolled in "Strategies of Teaching and Learning" course to achieve better and develop their skills (Elfeky & Yakoub Masadeh, 2016). These features are provided in a very supportive learning Android because it is very useful to help students understand the subject matter. This feature also allows teachers to explain the lessons learned through the media, so the teacher does not need to explain repeatedly (Irwan, Yogyakarta, Endris, & Yogyakarta, 2016). By Android application on smatrphone, it can be flexible media facilitates students to learn anywhere and anytime so that students learning frequency can be higher bringing a pass to the high students retention (Lubis, I. A. & Ikhsan, 2015). By using this method, students will keep their learning without stopping their hobby.

Based on the explanation above, it is necessary to do research about Android Application Effectiveness as Student Tools in Doing Homework or Task. The method of assigning tasks is the way of presenting the lesson which the teacher assigns the tasks for students to do the learning activities, then accounted it (Sutriani, 2014). Learning by giving an assignment is a suitable method to apply to child, because it gives assignments to children is the right way so that children have more sense of responsibility answer and provide experience real learning to children (Cahyati, Magta, Konseling, & Ganesha, 2015). The implementation of the electronic teaching material supported by the right learning model will improve the effectivity of the teaching material (Winatha & Abubakar, 2018).

The assignment of this study refers to the implementation of Project Based Learning. The description of project-based learning (PBL) consisting projects that integrate science, technology, society, history, mathematics, politics and even arts that serves productive discussion opportunity for students and gives them the excitement of learning should be seen as an answer to the search of such a teaching strategy. Within that context students have the chance of investigating rich and challenging topics of real-world issues, share their study with others and the portrait of the classroom consists students discussing on various topics in groups, searching knowledge from varied sources, take decisions and presenting their product (Turgut Halil, 2008). In integrated science learning using Project Based Learning model can improve the concept mastery of junior high school students. This shows that in the case of increasing theduct concept mastery of middle school students on integrated science (Liliawati, Utama, Mursydah, Saprudin, & Liliasari, 2017). Students are given assignments in the form of projects that must be completed according to the agreement. The Project Based Learning included seven steps, these were the determination of the topics, organization of the groups, planning the project, application of the project, planning the presentation, making the presentation, and the evaluation (Kızkapan & Bektaş, 2017).

The aim of this research is to see the effectiveness of android application as a tool for students in completing physics project. Utilization of android application in this research focuses on making a video which contains materials of science subject through giving task method. The subject matter presented in this study is about Accelerated Uniform Motion covering horizontal rectilinear motion, vertical rectilinear motion, and parabolic motion.

METHODS

Reseach Type

The type of this research is a qualitative method by using descriptive analysis that postpositivistic method because it is based on postpositivism philosophy (Sugiyono, 2010). The goal of qualitative reseach is to examine how things look from different vantage points (Taylor Steven J., Bagdon Robert, 2015). Moleong explained that descriptive research describes the state of the object of research at the time now as it is based on facts (Lexy J. Moleong, 2013). This research is an attempt to disclose a problem or circumstance or event as it is so that it is only disclosure of facts. In this research, giving a treatment to students who have low interest to do homework or tasks of Integrated Science subject in Integrated Islamic Junior High School of Arrozaq (SMPIT Arrozaq) Rantauprapat.

Subjects

The subjects of this research are students of SMPIT Arrozaq Rantauprapat consisting of two classes, Class VIII A with 17 students and VIII B with 18 students. Hence the total of Subjects in this research is 35 students.

Instrument and Reseach Procedure

The instrument used in this study is a rubric of video checking indicator to measure student-made video content and effectiveness questionnaires to measure the effectiveness of utilizing android applications. The research procedure consists of several stages, i.e :

Stage of Planning, this stage includes :

a. Observing at the school to see the students condition when following the learning process in the classroom.

b. Interviewing science teacher to find out students presentations on tasks or homework as well as recapping the students' daily values.
c. Interviewing some parents to find out the activities of the students while at home.
d. Making instrument like a rubric of video checking indicators to measure student-generated video content and effectiveness questionnaires to measure the effectiveness of android apps as a student tool for doing homework or assignments.

Stage of Implementation, this stage includes :

a. Providing the understanding and mechanisms about the importance of using the android application to all students of SMPIT Arrozaq.
b. Inviting science teacher to collaborate in assignment providing to students by the project based learning method. The project is making a creative video creation with the contains about science materials that have been taught through android applications. On this stage, the students were trained to acquire the understanding of scientific concepts and the process needed to participate in the society of digital (Science and Technology) era (Saefi, Lukiati, & Suarsini, 2017).
c. This project is given once a month for each class. The duration of activities in this phase lasts for three months.
d. Collecting video project which is then checked based on a rubric of video content indicator. This check is performed every month after the collection of video projects.

Data Collection and Analysis Technique

Data collection technique in this research is to collect the video projects at the end of each month and the effectiveness questionnaire used to measure the effectiveness of the use of Android applications in completing homework. Data analysis technique used in this research is descriptive qualitative, which aims to explain the effectiveness of the efforts done according to benchmark made by the researcher.

The following is the table of criteria of effectiveness of android application utilization. This table is a reference to determine the effectiveness category based on the average percentage score that has been generated.

Table 1. Criteria For The Effectiveness of Android Application Utilization

Percentage Value	Criteria
0% - 20%	**Ineffective**
21% - 40%	**Less effective**
41% - 60%	**Quite effective**
61% - 80%	**Effective**
81% - 100%	**More effective**

RESULTS AND DISCUSSION

Video Checking in The First Month

The first video was collected after 4 weeks of learning at the end of May 2018. The material presented in this video is about "accelerated uniform motion on the horizontal rectilinear motion". The application of android used are Viva Video and KineMaster. Apps encourage the implementation of design thinking and creativity as the learner moves through each stage of the inquiry process (Stevenson, Hedberg, Highfield, & Diao, 2015). Here is a description of the video checking data based on established indicators.

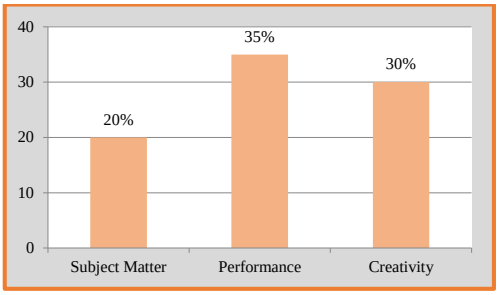

Figure 1. Percentage of video content indicator achievement in the first month

The data above is the overall result of the group in the achievement of the video content indicator that has been created by the students. The result of the first video content checking shows that average achievement indicators are still too low at 20% for the subject matter, 35% for performance, and 30% for video creativity.

Related to the content of the material presented in the video, the average of the group still has not been able to convey the material on the topic properly. The students are still transfixed by the text of the books or notes that they memorized and they also did pronounciation that cause inconsistency to the actual concept. In addition, there are still 4 out of 10 groups that have not submitted sub-material completely.

For the performance of group members recorded in the video, that the students still don't have enough confidence in delivering their explanation. Even though the students have high confidence also have a good understanding of the subject matter so that students will have confidence in mastery and skills himself (Sihotang, Setiawan, & Saragi, 2017). More of students haltingly on speaking and express of thinking face so it looks like memorizing every word. In addition, the gestures of the body are not calm so the video looks so rigid. This video also still looks so rigid and simple that so little animation, images, or writing on a video display. They just displayed the recording of the video-making process without editing. It means that their editing ability is very low. So are the media used, the students are still not keen on the objects around them which can be used as media in delivering of material. Even though there are a lot of old stuff or objects surrounding us that can be used as a demonstration medium for accelerated uniform motion, but students have not been able to use them so that the expected learning media has not yet appeared.

The good learning video is a video that fulfills two aspects of media development that become a reference, there are material and media. Material aspects include the accuracy of the material, the breadth of material, the clarity of the material, and the attractiveness of the material presented. While in the media aspect includes the quality of video content and technical quality (Titi Suryansyah, 2017).

Video Checking in The Second Month

The second video was submitted after 4 weeks of learning at the end of June 2018. The material presented in this video is about "accelerated uniform motion on the vertical rectilinear motion". Here is a description of the video checking data based on the established indicator.

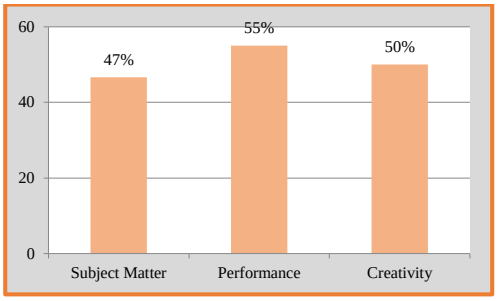

Figure 2. Percentage of video content indicator achievement in the second month

The data above is the second video checking result in the achievement of video content indicator that has been created by students that are 47% for the subject matter, 55% for performance, and 50% for video creativity. The results of this second check indicate that the average achievement indicator has increased about 20%.

Related to the content of the material presented in the video, the average of the group has already begun to be able to convey the material on its topic properly, although it is not very well in explaining the concept. The students are not stuck by memorizing textbooks or notes. But, the linguistic in delivering or presenting still have to be developed. For the performance of group members which that recorded in the video, the average of the group has shown their self-confidence in explanation, it's just that the thinking face expression and haltingly on speaking are still often seen. However, every group began to appear calmly in this second video. Creativity in this second video presentation has been widely seen. Some groups have started to use things around them to be a simple media, such as using an old mineral bottle which is an empty bottle and filled bottle, then dropped it simultaneously and see which bottles first reached on the floor. This demonstration is to show that object mass does not affect the velocity in vertical motion. This therefore implies that demonstration method increase students interest and understanding and consequently promoting high achievement rate (Ekeyi, 2013). It's just still need to syncronize the media related to the concept of material to be delivered.

For creativity in video editing, each group has started to have improvements, it just needs more to learn in order making the video better. Because good video learning will help in improving the quality of the learning process, then the video display should be as attractive as possible.

Video Checking in The Third Month

The third video was collected after 4 weeks of learning in August 2018. The material presented in this video is about "accelerated uniform motion on the parabolic rectilinear motion". Here is a description of video checking results based on the established indicator.

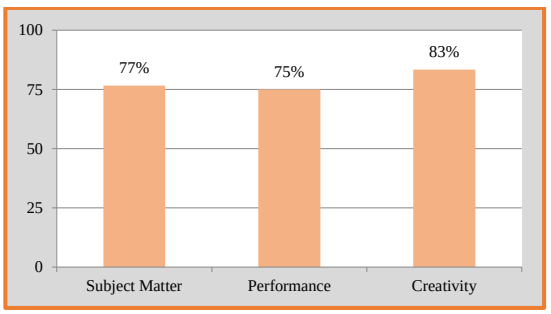

Figure 3. Percentage of video content indicator achievement in the Third month

The data above is the result of checking the third video in the achievement of video content indicator that has been created by the student. Picture 3 shows that the average of groups percentage in achieving indicators is 77% for the subject matter, 75% for performance, and 83% for video creativity. The results of this third checking show that the average of indicators achievement has increased so rapidly.

The material contained in this video has been explained by the groups very well. In learning processing, all groups can explain the parabolic motion concept correctly and completely. The average of the group's membership is not transfixed by memorizing textbooks or notes, so they can inform the material calmly. For the performance of group members which are recorded in this video, that average of the group has shown confidence in conveying the explanation. Thinking expression is no longer visible in this third video, only 2 out of 10 groups still stammered in the delivery. It's happened because the video learning influence student's habit learning. Studies have shown that multimedia learning (video) has a huge impact on the outcome of learning. A well designed multimedia learning can promote better performance among learners. Multimedia learning that is designed using good teaching methodologies and instructional models can have a positive impact on the learners (Jamal, Nasir, & Asirvatham, 2012).

The collecting of the third video is already diverse and do not rigid, it means the creativities of groups in video presentation has improved very well. All groups have been able to utilize things around them to be used a simple media in learning. In presenting this parabolic motion, each group uses the ball as a medium. One member of the group kicks the ball at a point with a certain angle, then sees how far the ball is thrown. By kicking a ball at one point with various angles, students will understand the relationship between the angle with the farthest distance that can be reached by the ball. It's just keeping to increase their understanding to select proper media according to the concept of the subject.

For creativity in video editing, every group has been able to insert animations, images, music and interesting writings that make the video look better. The selection of colors and attractive icons according to their age makes the video look slicker. However, this editing ability must also be improved to produce more interesting works.

The improvements achieved by these students indicate an interest in utilizing android applications for their learning tools, this is in accordance with the results of research that the participants interest and very feel necessary with the training that has been given because through training the development of teacher-based learning media android to get updates in the field of technology information in education (Edi Ismanto, Melly Novalia, 2017).

In addition, according to Polonia's research showed about 98.73% of students stated that the physics learning by using media of android mobile application conducted by the teacher more interesting, fun, innovative, creative, and variation (Ses, Polonia, Yuliati, & Zulaikah, 2015).

Increasing the quality of the video is caused by the interest of students who are getting better at doing the task. This is because students no longer consider the task to be a burden. The interest of students to complete tasks that are charged by themselves will be greater than the tasks given by the teacher (Sanjaya Wina, 2008).

Questionnaire of Effectiveness

This questionnaire was given at the end of the research to measure the effectiveness of using android applications in the task. The following is the results of the dissemination of effectiveness questionnaires distributed to all students.

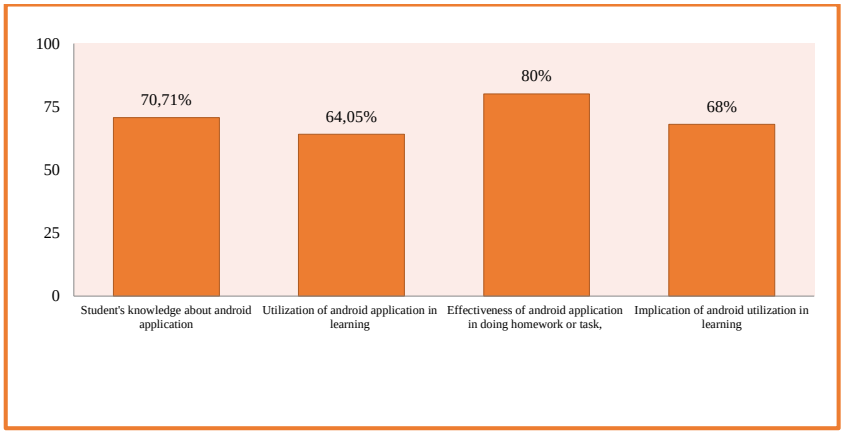

Figure 4. Graph of percentage of effectiveness of android application utilization.

To measure effectiveness of the using android application, there are 4 things have been determined as achievement indicator, i.e. 1) student's knowledge about android application, 2) utilization of android application in the learning process, 3) effectiveness of android application in doing homework or task, and 4) implication of android utilization in learning.

Based on the graph in Fig. 4 shows that the percentage of student knowledge indicator about the android application is 70,71% that is an ineffective category. This shows that android application is not a strange thing for students, so students have no difficulty in exploring the components that exist in Android applications. This approach of learning is highly receptive to students as they are more likely to seek and use learning contents via mobile services rather than to find proprietary courseware that is not easily accessed (Hanafi, 2012).

Due to friendly use of Android, students can access the lessons by android apps easily that have been provided. It seems from the percentage of performance indicator on the utilization of android application is 64.05% which is effective. According to the result of Nursina's research that available applications in smartphones can be used as a medium of learning by students to facilitate the acquisition of science and to learn materials effectively and efficiently (Nursina, La Ode Muh. Umran, 2017). In this study students are directed in such a way in using android applications to work on the project so that unexpected things can be controlled properly.

The third indicator of the effectiveness of android application in doing homework or tasks, which shows a big percentage is 80,00 %, it's a very effective category. The use of android apps to do homework or task has changed students who were lazy to do homework in the past, and now can to race with another in creating and presenting their best video project. Students do not consider that the task given by the teacher as a burden anymore because they see it as an interesting activity. According to Vandalita's research, she said that the students who learn with smartphones in the classroom appeared to be more active in the discussion. Each member of a group worked well together in discussing the material given by the teacher, and they are very enthusiastic in the discussion/question and answer session among groups. The questions asked by students are also more meaningful. This happened because learning with smartphones can make students' perspectives more open and at once make students get a lot of knowledge that was not covered and included in the course books. Each group also reveal high competitiveness to show the best result in the discussion (Rambitan, 2015).

For the result of indicator achievement about the implication of android apps utilization, it shows 68,00% which is effective. Combining the passion with a task can boost students creativity. Essentially, the places for learning is not limited by the classroom so that students

can learn wherever through their smartphone. The implication of this implementation is more students enthusiastic and diligent to do their homework or task. Furthermore, the main purpose of learning is the participation of students towards the material and media that we display. A teacher in the era of technology is now demanded have experience and practice applying, analyzing, synthesizing, and evaluating rather than just understand and provide information to students (Purwanti, 2015).

This is in accordance with explanation in the paper reseach that students in project based learning applied class, according to the observation, are more active and creative and think more critically than students in classical learning applied class. By providing pleasant ambiance, students can get along during learning process (Gerhana, Mardiyana, & Pramudya, 2017).

CONCLUSION

The Effectiveness of android apps as a student's tools in doing their integrated science subject task is considered effective. It is proved by result percentage of effectiveness questionnaires given to students.

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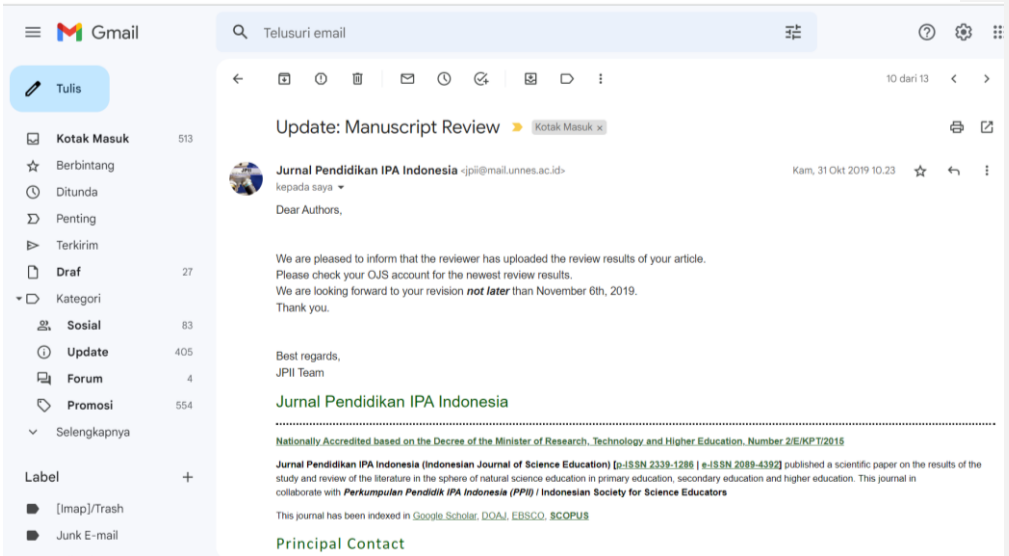

THE EFFECTIVENESS OF ANDROID APPLICATION AS STUDENT AID TOOLS IN UNDERSTANDING TASK OF PHYSICS

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ABSTRACT

Gadget addiction and the low level of learning interest of students in carrying out tasks are the new problems in education so that efforts need to be made to overcome them. The aim of this study is to determine the effectiveness of android application as student aid tools in understanding the task of Physics. Subjects in this research are all students of class VIII SMP Islam Terpadu Arrozaq Rantauprapat. The type of research is qualitative research that is directing students to utilize his gadgets in completing the task of physics. The instruments used in this research are the video checking rubric and the effectiveness questionnaire. This research was carried out for 3 months and video checks were carried out at the end of each month after project assignments were collected. The results of data analysis in this study indicate that the utilization of android application as a tool of students is considered effective. The students become enthusiastic in working on assignments and students access the internet through gadgets on positive things.

Keywords: Effectiveness, Android application, task, physics

INTRODUCTION

Along with the technology development sophisticated increasingly, nowadays gadget has been equipped with several features and modern applications which facilitate the users in reaching the world of the Internet so that users use it actively. A study finds that college students spent nearly nine hours daily on their cell-phones. As the functionality of cell-phones continues to expand, addiction to this seemingly indispensable piece of technology becomes an increasingly realistic possibility. Study results suggest that certain activities performed on one's cell-phone are more likely to lead to dependence than others and that these addictive activities vary across gender [1].

More than 190 countries around the world use Android. Many users use Android to search for apps, games and other digital content. Android becomes the fastest-growing mobile operating system. Every day more than 1 million Android devices are enabled worldwide [2]. Indonesia is one the countries which the people use gadget actively. Almost every student, not only Senior High School student but also Primary student has gadgets and used it in their daily activities. From the results of a survey conducted in Indonesia, in the age range of 19-34 years old, the main contributor to the age of users was 49.52 percent. The age range of 35-54 years old (29.55 percent), 13-18 years old (16.68 percent). In terms of education, for postgraduate numbered 88, 24 percent, bachelor 79.23 percent, senior high school 70.54 percent, junior high school 48.53 percent, and elementary school 25.1 percent [3]. The data indicates that students of Indonesia are addicted to using the gadget and unfortunately getting negative impact for Indonesian students.

Gadget addiction which is happening on the students of Indonesia makes new problems in education, especially in SMPIT (Junior High School) of Arrozaq Rantauprapat, Sumatera Utara. Based on the first observation that students often do not have responded when the teacher gives task and homework. It is about 10% of the students finishing the homework or task who do it by themselves, 80% of the students copy their friend's homework and 10% of the students do not work on it at all. When the teacher checks out the assignments, it is founded that only 10% of the students who understand their tasks well. Whereas task giving is one effective method in learning in order that student reviewing the lesson at home and their science comprehension are increased.

Because of the conditions above, the researcher decided to interview some parents of the students about their child's activities at home. the result of the interview has shown that most students spend all their time with their gadgets and never reviewing their lessons out of school. The students spending their time on accessing social media, playing online games, and trying to updating new features of their gadgets. It can be known by checking their social media account and we can see how often they update status, upload their photos, share their edited videos by using android applications which they download in their gadget and play an online game. All these activities are often shared with their social media accounts (Facebook, Instagram, Path, Twitter). When we ignore it, it can cause decreasing of learning interest and declining of student's achievement. Interest and attention are two things that are considered the same in everyday use, the attention of students is the concentration of students on observation and understanding with the exclusion of others. Students have an interest in a particular object with attention to the object. Therefore, it is necessary to make special efforts to deal with these problems for the future of student education.

Actually, these students have great abilities and creativities to support their education in using gadgets. It is not wise to remove the gadget from students because basically gadget still has benefit. When we look inside, most of the students actually have good ability and creativity in operating some features of their gadget, such as photo and video editing. It can be used by the teacher to have learning projects done by students using their gadget. The Teacher can collaborate lesson, creativity, and passion of students to build up a learning interest. Mobile learning was more effective than the use of traditional teaching methods in helping students enrolled in "Strategies of Teaching and Learning" course to achieve better and develop their skills [4]. By using this method, students will keep their learning without stopping their hobby.

Based on the explanation above, it is necessary to do research about Android Application Effectiveness as Student Tools in Doing Homework or Task. The method of assigning tasks is the way of presenting the lesson which the teacher assigns the tasks for

students to do the learning activities, then accounted it [5]. Learning by giving an assignment is a suitable method to apply to child, because it gives assignments to children is the right way so that children have more sense of responsibility answer and provide experience real learning to children [6].

The assignment of this study refers to the implementation of Project Based Learning. Students are given assignments in the form of projects that must be completed according to the agreement. The Project Based Learning included seven steps, these were the determination of the topics, organization of the groups, planning the project, application of the project, planning the presentation, making the presentation, and the evaluation [7].

The aim of this research is to see the effectiveness of android application as a tool for students in completing physics project. Utilization of android application in this research focuses on making a video which contains materials of science subject through giving task method. The subject matter presented in this study is about Accelerated Uniform Motion covering horizontal rectilinear motion, vertical rectilinear motion, and parabolic motion.

METHODS

Reseach Type

The type of this research is a qualitative method by using descriptive analysis that postpositivistic method because it is based on postpositivism philosophy [8]. Moleong explained that descriptive research describes the state of the object of research at the time now as it is based on facts [9]. This research is an attempt to disclose a problem or circumstance or event as it is so that it is only disclosure of facts. In this research, giving a treatment to students who have low interest to do homework or tasks of Integrated Science subject in Integrated Islamic Junior High School of Arrozaq (SMPIT Arrozaq) Rantauprapat.

Subjects

The subjects of this research are students of SMPIT Arrozaq Rantauprapat consisting of two classes, Class VIII A with 17 students and VIII B with 18 students. Hence the total of Subjects in this research is 35 students.

Instrument and Reseach Procedure

The instrument used in this study is a rubric of video checking indicator to measure student-made video content and effectiveness questionnaires to measure the effectiveness of utilizing android applications. The research procedure consists of several stages, i.e :

Stage of Planning, this stage includes :

e. Observing at the school to see the students condition when following the learning process in the classroom.
f. Interviewing science teacher to find out students presentations on tasks or homework as well as recapping the students' daily values.
g. Interviewing some parents to find out the activities of the students while at home.
h. Making instrument like a rubric of video checking indicators to measure student-generated video content and effectiveness questionnaires to measure the effectiveness of android apps as a student tool for doing homework or assignments.

Stage of Implementation, this stage includes :

e. Providing the understanding and mechanisms about the importance of using the android application to all students of SMPIT Arrozaq.
f. Inviting science teacher to collaborate in assignment providing to students by the project based learning method. The project is making a creative video creation with the contains about science materials that have been taught through android applications. This project is given once a month for each class. The duration of activities in this phase lasts for three months.
g. Collecting video project which is then checked based on a rubric of video content indicator. This check is performed every month after the collection of video projects.

Data Collection and Analysis Technique

Data collection technique in this research is to collect the video projects at the end of each month and the effectiveness

questionnaire used to measure the effectiveness of the use of Android applications in completing homework. Data analysis technique used in this research is descriptive qualitative, which aims to explain the effectiveness of the efforts done according to benchmark made by the researcher.

The following is the table of criteria of effectiveness of android application utilization. This table is a reference to determine the effectiveness category based on the average percentage score that has been generated.

Table 1. Criteria For The Effectiveness of Android Application Utilization

Percentage Value	Criteria
0% - 20%	**Ineffective**
21% - 40%	**Less effective**
41% - 60%	**Quite effective**
61% - 80%	**Effective**
81% - 100%	**More effective**

RESULTS AND DISCUSSION

Video Checking in The First Month

The first video was collected after 4 weeks of learning at the end of May 2018. The material presented in this video is about "accelerated uniform motion on the horizontal rectilinear motion". Here is a description of the video checking data based on established indicators.

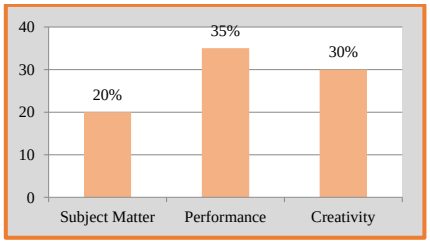

Figure 1. Percentage of video content indicator achievement in the first month

The data above is the overall result of the group in the achievement of the video content indicator that has been created by the students. The result of the first video content checking shows that average achievement indicators are still too low at 20% for the subject matter, 35% for performance, and 30% for video creativity.

Related to the content of the material presented in the video, the average of the group still has not been able to convey the material on the topic properly. The students are still transfixed by the text of the books or notes that they memorized and they also did pronounciation that cause inconsistency to the actual concept. In addition, there are still 4 out of 10 groups that have not submitted sub-material completely.

For the performance of group members recorded in the video, that the students still don't have enough confidence in delivering their explanation. Even though the students have high confidence also have a good understanding of the subject matter so that students will have confidence in mastery and skills himself [10]. More of students haltingly on speaking and express of thinking face so it looks like memorizing every word. In addition, the gestures of the body are not calm so the video looks so rigid. This video also still looks so rigid and simple that so little animation, images, or writing on a video display. They just displayed the recording of the video-making process without editing. It means that their editing ability is very low. So are the media used, the students are still not keen on the objects around them which can be used as media in delivering of material. Even though there are a lot of old stuff or objects surrounding us that can be used as a demonstration medium for accelerated uniform motion, but students have not been able to use them so that the expected learning media has not yet appeared.

The good learning video is a video that fulfills two aspects of media development that become a reference, there are material and media. Material aspects include the accuracy of the material, the breadth of material, the clarity of the material, and the

attractiveness of the material presented. While in the media aspect includes the quality of video content and technical quality [11].

Video Checking in The Second Month

The second video was submitted after 4 weeks of learning at the end of June 2018. The material presented in this video is about "accelerated uniform motion on the vertical rectilinear motion". Here is a description of the video checking data based on the established indicator.

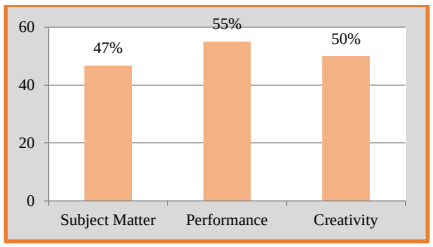

Figure 2. Percentage of video content indicator achievement in the second month

The data above is the second video checking result in the achievement of video content indicator that has been created by students that are 47% for the subject matter, 55% for performance, and 50% for video creativity. The results of this second check indicate that the average achievement indicator has increased about 20%.

Related to the content of the material presented in the video, the average of the group has already begun to be able to convey the material on its topic properly, although it is not very well in explaining the concept. The students are not stuck by memorizing textbooks or notes. But, the linguistic in delivering or presenting still have to be developed. For the performance of group members which that recorded in the video, the average of the group has shown their self-confidence in explanation, it's just that the thinking face expression and haltingly on speaking are still often seen. However, every group began to appear calmly in this second video. Creativity in this second video presentation has been widely seen. Some groups have started to use things around them to be a simple media, such as using an old mineral bottle which is an empty bottle and filled bottle, then dropped it simultaneously and see which bottles first reached on the floor. This demonstration is to show that object mass does not affect the velocity in vertical motion. It's just still need to syncronize the media related to the concept of material to be delivered.

For creativity in video editing, each group has started to have improvements, it just needs more to learn in order making the video better. Because good video learning will help in improving the quality of the learning process, then the video display should be as attractive as possible.

Video Checking in The Third Month

The third video was collected after 4 weeks of learning in August 2018. The material presented in this video is about "accelerated uniform motion on the parabolic rectilinear motion". Here is a description of video checking results based on the established indicator.

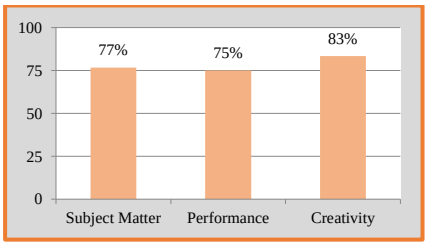

Figure 3. Percentage of video content indicator achievement in the Third month

The data above is the result of checking the third video in the achievement of video content indicator that has been created by the student. Picture 3 shows that the average of groups percentage in achieving indicators is 77% for the subject matter, 75% for performance, and 83% for video creativity. The results of this third checking show that

the average of indicators achievement has increased so rapidly.

The material contained in this video has been explained by the groups very well. In learning processing, all groups can explain the parabolic motion concept correctly and completely. The average of the group's membership is not transfixed by memorizing textbooks or notes, so they can inform the material calmly. For the performance of group members which are recorded in this video, that average of the group has shown confidence in conveying the explanation. Thinking expression is no longer visible in this third video, only 2 out of 10 groups still stammered in the delivery.

The collecting of the third video is already diverse and do not rigid, it means the creativities of groups in video presentation has improved very well. All groups have been able to utilize things around them to be used a simple media in learning. In presenting this parabolic motion, each group uses the ball as a medium. One member of the group kicks the ball at a point with a certain angle, then sees how far the ball is thrown. By kicking a ball at one point with various angles, students will understand the relationship between the angle with the farthest distance that can be reached by the ball. It's just keeping to increase their understanding to select proper media according to the concept of the subject.

For creativity in video editing, every group has been able to insert animations, images, music and interesting writings that make the video look better. The selection of colors and attractive icons according to their age makes the video look slicker. However, this editing ability must also be improved to produce more interesting works.

The improvements achieved by these students indicate an interest in utilizing android applications for their learning tools, this is in accordance with the results of research that the participants interest and very feel necessary with the training that has been given because through training the development of teacher-based learning media android to get updates in the field of technology information in education [12].

In addition, according to Polonia's research showed about 98.73% of students stated that the physics learning by using media of android mobile application conducted by the teacher more interesting, fun, innovative, creative, and variation [13].

Questionnaire of Effectiveness

This questionnaire was given at the end of the research to measure the effectiveness of using android applications in the task. The following is the results of the dissemination of effectiveness questionnaires distributed to all students.

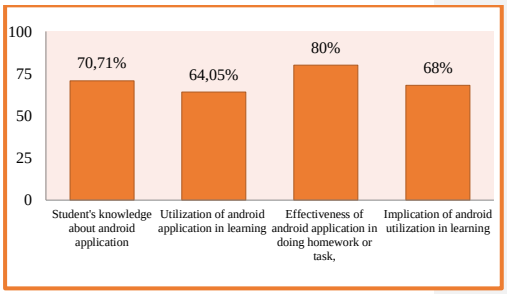

Figure 4. Graph of percentage of effectiveness of android application utilization.

To measure effectiveness of the using android application, there are 4 things have been determined as achievement indicator, i.e. 1) student's knowledge about android application, 2) utilization of android application in the learning process, 3) effectiveness of android application in doing homework or task, and 4) implication of android utilization in learning.

Based on the graph in Fig. 4 shows that the percentage of student knowledge indicator about the android application is 70,71% that is an ineffective category. This shows that android application is not a strange thing for students, so students have

no difficulty in exploring the components that exist in Android applications.

Due to friendly use of Android, students can access the lessons by android apps easily that have been provided. It seems from the percentage of performance indicator on the utilization of android application is 64.05% which is effective. According to the result of Nursina's research that available applications in smartphones can be used as a medium of learning by students to facilitate the acquisition of science and to learn materials effectively and efficiently [14]. In this study students are directed in such a way in using android applications to work on the project so that unexpected things can be controlled properly.

The third indicator of the effectiveness of android application in doing homework or tasks, which shows a big percentage is 80,00 %, it's a very effective category. The use of android apps to do homework or task has changed students who were lazy to do homework in the past, and now can to race with another in creating and presenting their best video project. Students do not consider that the task given by the teacher as a burden anymore because they see it as an interesting activity. According to Vandalita's research, she said that the students who learn with smartphones in the classroom appeared to be more active in the discussion. Each member of a group worked well together in discussing the material given by the teacher, and they are very enthusiastic in the discussion/question and answer session among groups. The questions asked by students are also more meaningful. This happened because learning with smartphones can make students' perspectives more open and at once make students get a lot of knowledge that was not covered and included in the course books. Each group also reveal high competitiveness to show the best result in the discussion [15].

For the result of indicator achievement about the implication of android apps utilization, it shows 68,00% which is effective. Combining the passion with a task can boost students creativity. Essentially, the places for learning is not limited by the classroom so that students can learn wherever through their smartphone. The implication of this implementation is more students enthusiastic and diligent to do their homework or task.

This is in accordance with explanation in the paper reseach that students in project based learning applied class, according to the observation, are more active and creative and think more critically than students in classical learning applied class. By providing pleasant ambiance, students can get along during learning process [16].

CONCLUSION

The Effectiveness of android apps as a student's tools in doing their integrated science subject task is considered effective. It is proved by result percentage of effectiveness questionnaires given to students.

ACKNOWLEDGEMENTS

We would like to thank the Ministry of Research and Technology and Higher Education of the Republic of Indonesia which has funded the research grant for beginner lecturer with contract number 069/K1.1/LT.1/2017. We also thank Labuhan Batu School of Teacher and Science (STKIP Labuhan Batu) which has supported this research in moral form.

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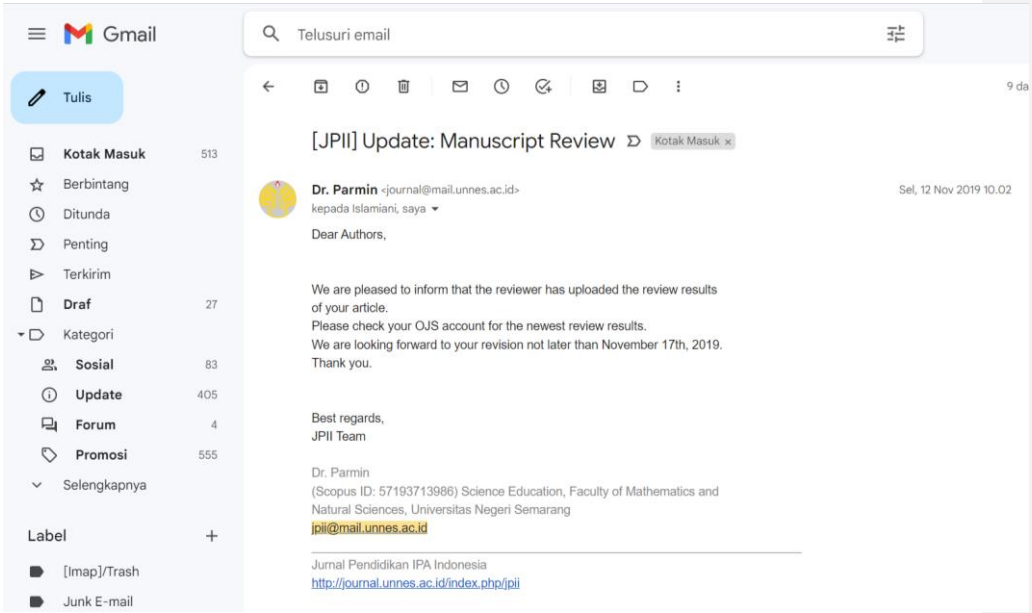

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More than 190 countries around the world use Android. Many users use Android to search for apps, games and other digital content. Android becomes the fastest-growing mobile operating system. Every day more than 1 million Android devices are enabled worldwide (Ependi, Universitas, & Darma, n.d.). Indonesia is one the countries which the people use gadget actively. Almost every student, not only Senior High School student but also Primary student has gadgets and used it in their daily activities. From the results of a survey conducted in Indonesia, in the age range of 19-34 years old, the main contributor to the age of users was 49.52 percent. The age range of 35-54 years old (29.55 percent), 13-18 years old (16.68 percent). In terms of education, for postgraduate numbered 88, 24 percent, bachelor 79.23 percent, senior high school 70.54 percent, junior high school 48.53 percent, and elementary school 25.1 percent (Tim APJII, 2018). The data indicates that students of Indonesia are addicted to using the gadget and unfortunately getting negative impact for Indonesian students.

Gadget addiction which is happening on the students of Indonesia makes new problems in education, especially in SMPIT (Junior High School) of Arrozaq Rantauprapat, Sumatera Utara. Based on the first observation that students often do not have responded when the teacher gives task and homework. It is about 10% of the students finishing the homework or task who do it by themselves, 80% of the students copy their friend's homework and 10% of the students do not work on it at all. When the teacher checks out the assignments, it is founded that only 10% of the students who understand their tasks well. Whereas task giving is one effective method in learning in order that student reviewing the lesson at home and their science comprehension are increased.

Because of the conditions above, the researcher decided to interview some parents of the students about their child's activities at home. the result of the interview has shown that most students spend all their time with their gadgets and never reviewing their lessons out of school. The students spending their time on accessing social media, playing online games, and trying to updating new features of their gadgets. It can be known by checking their social media account and we can see how often they update status, upload their photos, share their edited videos by using android applications which they download in their gadget and play an online game. All these activities are often shared with their social media accounts (Facebook, Instagram, Path, Twitter). When we ignore it, it can cause decreasing of learning interest and declining of student's achievement. Interest and attention are two things that are considered the same in everyday use, the attention of students is the concentration of students on observation and understanding with the exclusion of others. The interest and attention are following the learning process must arise on the basis of high awareness of students for learning. Furthermore, the teacher is expected to be able to provide motivation and guidance to students, the goal is that students have a higher desire for learning so that the attention in learning will get better (Nurhasanah & Sobandi, 2016). Students have an interest in a particular object with attention to the object. Therefore, it is necessary to make special efforts to deal with these problems for the future of student education.

Actually, these students have great abilities and creativities to support their education in using gadgets. It is not wise to remove the gadget from students because basically gadget still has benefit. When we look inside, most of the students actually have good ability and creativity in operating some features of their gadget, such as photo and video editing. It can be used by the teacher to have learning projects done by students using their gadget. The Teacher can collaborate lesson, creativity, and passion of students to build up a learning interest. Mobile learning was more effective than the use of traditional teaching methods in helping students enrolled in "Strategies of Teaching and Learning" course to achieve better and develop their skills (Elfeky & Yakoub Masadeh, 2016). These features are provided in a very supportive learning Android because it is very useful to help students understand the subject matter. This feature also allows teachers to explain the lessons learned through the media, so the teacher does not need to explain repeatedly (Irwan, Yogyakarta, Endris, & Yogyakarta, 2016). By Android application on smatrphone, it can be flexible media facilitates students to learn anywhere and anytime so that students learning frequency can

be higher bringing a pass to the high students retention (Lubis, I. A. & Ikhsan, 2015). By using this method, students will keep their learning without stopping their hobby.

Based on the explanation above, it is necessary to do research about Android Application Effectiveness as Student Tools in Doing Homework or Task. The method of assigning tasks is the way of presenting the lesson which the teacher assigns the tasks for students to do the learning activities, then accounted it (Sutriani, 2014). Learning by giving an assignment is a suitable method to apply to child, because it gives assignments to children is the right way so that children have more sense of responsibility answer and provide experience real learning to children (Cahyati, Magta, Konseling, & Ganesha, 2015). The implementation of the electronic teaching material supported by the right learning model will improve the effectivity of the teaching material (Winatha & Abubakar, 2018).

The assignment of this study refers to the implementation of Project Based Learning. The description of project-based learning (PBL) consisting projects that integrate science, technology, society, history, mathematics, politics and even arts that serves productive discussion opportunity for students and gives them the excitement of learning should be seen as an answer to the search of such a teaching strategy. Within that context students have the chance of investigating rich and challenging topics of real-world issues, share their study with others and the portrait of the classroom consists students discussing on various topics in groups, searching knowledge from varied sources, take decisions and presenting their product (Turgut Halil, 2008). In integrated science learning using Project Based Learning model can improve the concept mastery of junior high school students. This shows that in the case of increasing theduct concept mastery of middle school students on integrated science (Liliawati, Utama, Mursydah, Saprudin, & Liliasari, 2017). Students are given assignments in the form of projects that must be completed according to the agreement. The Project Based Learning included seven steps, these were the determination of the topics, organization of the groups, planning the project, application of the project, planning the presentation, making the presentation, and the evaluation (Kızkapan & Bektaş, 2017).

The aim of this research is to see the effectiveness of android application as a tool for students in completing physics project. Utilization of android application in this research focuses on making a video which contains materials of science subject through giving task method. The subject matter presented in this study is about Accelerated Uniform Motion covering horizontal rectilinear motion, vertical rectilinear motion, and parabolic motion.

METHODS

Reseach Type

The type of this research is a qualitative method by using descriptive analysis that postpositivistic method because it is based on postpositivism philosophy (Sugiyono, 2010). The goal of qualitative reseach is to examine how things look from different vantage points (Taylor Steven J., Bagdon Robert, 2015). Moleong explained that descriptive research describes the state of the object of research at the time now as it is based on facts (Lexy J. Moleong, 2013). This research is an attempt to disclose a problem or circumstance or event as it is so that it is only disclosure of facts. In this research, giving a treatment to students who have low interest to do homework or tasks of Integrated Science subject in Integrated Islamic Junior High School of Arrozaq (SMPIT Arrozaq) Rantauprapat.

Subjects

The subjects of this research are students of SMPIT Arrozaq Rantauprapat consisting of two classes, Class VIII A with 17 students and VIII B with 18 students. Hence the total of Subjects in this research is 35 students.

Instrument and Reseach Procedure

The instrument used in this study is a rubric of video checking indicator to measure student-made video content and effectiveness questionnaires to measure the effectiveness of utilizing android applications. The research procedure consists of several stages, i.e :

Stage of Planning, this stage includes :

i. Observing at the school to see the students condition when following the learning process in the classroom.
j. Interviewing science teacher to find out students presentations on tasks or homework as well as recapping the students' daily values.
k. Interviewing some parents to find out the activities of the students while at home.
l. Making instrument like a rubric of video checking indicators to measure student-generated video content and effectiveness questionnaires to measure the effectiveness of

android apps as a student tool for doing homework or assignments.

Stage of Implementation, this stage includes :

h. Providing the understanding and mechanisms about the importance of using the android application to all students of SMPIT Arrozaq.
i. Inviting science teacher to collaborate in assignment providing to students by the project based learning method. The project is making a creative video creation with the contains about science materials that have been taught through android applications. On this stage, the students were trained to acquire the understanding of scientific concepts and the process needed to participate in the society of digital (Science and Technology) era (Saefi, Lukiati, & Suarsini, 2017).
j. This project is given once a month for each class. The duration of activities in this phase lasts for three months.
k. Collecting video project which is then checked based on a rubric of video content indicator. This check is performed every month after the collection of video projects.

Data Collection and Analysis Technique

Data collection technique in this research is to collect the video projects at the end of each month and the effectiveness questionnaire used to measure the effectiveness of the use of Android applications in completing homework. Data analysis technique used in this research is descriptive qualitative, which aims to explain the effectiveness of the efforts done according to benchmark made by the researcher.

The following is the table of criteria of effectiveness of android application utilization. This table is a reference to determine the effectiveness category based on the average percentage score that has been generated.

Table 1. Criteria For The Effectiveness of Android Application Utilization

Percentage Value	Criteria
0% - 20%	**Ineffective**
21% - 40%	**Less effective**
41% - 60%	**Quite effective**
61% - 80%	**Effective**
81% - 100%	**More effective**

RESULTS AND DISCUSSION

Video Checking in The First Month

The first video was collected after 4 weeks of learning at the end of May 2018. The material presented in this video is about "accelerated uniform motion on the horizontal rectilinear motion". The application of android used are Viva Video and KineMaster. Apps encourage the implementation of design thinking and creativity as the learner moves through each stage of the inquiry process (Stevenson, Hedberg, Highfield, & Diao, 2015). Here is a description of the video checking data based on established indicators.

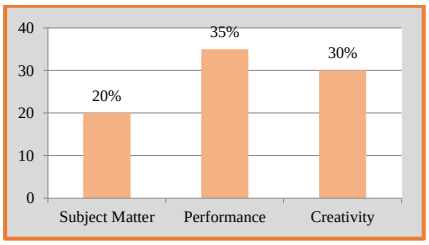

Figure 1. Percentage of video content indicator achievement in the first month

The data above is the overall result of the group in the achievement of the video content indicator that has been created by the students. The result of the first video content checking shows that average achievement indicators are still too low at 20% for the subject matter, 35% for performance, and 30% for video creativity.

Related to the content of the material presented in the video, the average of the group still has not been able to convey the material on the topic properly. The students are still transfixed by the text of the books or notes that they memorized and they also did pronounciation that cause inconsistency to the actual concept. In addition, there are still 4 out of 10 groups that have not submitted sub-material completely.

For the performance of group members recorded in the video, that the students still don't have enough confidence in delivering their explanation. Even though the students have high confidence also have a good understanding of the subject matter so that students will have confidence in mastery and skills himself (Sihotang, Setiawan, & Saragi, 2017). More of students haltingly on speaking and express of thinking face so it looks like memorizing every word. In addition, the gestures of the body are not calm so the video looks so rigid.

This video also still looks so rigid and simple that so little animation, images, or writing on a video display. They just displayed the recording of the video-making process without editing. It means that their editing ability is very low. So are the media used, the students are still not keen on the objects around them which can be used as media in delivering of material. Even though there are a lot of old stuff or objects surrounding us that can be used as a demonstration medium for accelerated uniform motion, but students have not been able to use them so that the expected learning media has not yet appeared.

The good learning video is a video that fulfills two aspects of media development that become a reference, there are material and media. Material aspects include the accuracy of the material, the breadth of material, the clarity of the material, and the attractiveness of the material presented. While in the media aspect includes the quality of video content and technical quality (Titi Suryansyah, 2017).

Video Checking in The Second Month

The second video was submitted after 4 weeks of learning at the end of June 2018. The material presented in this video is about "accelerated uniform motion on the vertical rectilinear motion". Here is a description of the video checking data based on the established indicator.

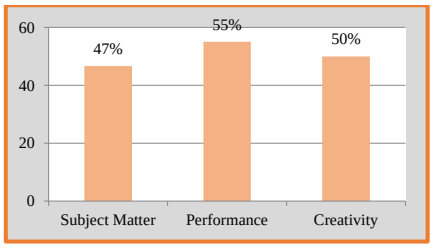

Figure 2. Percentage of video content indicator achievement in the second month

The data above is the second video checking result in the achievement of video content indicator that has been created by students that are 47% for the subject matter, 55% for performance, and 50% for video creativity. The results of this second check indicate that the average achievement indicator has increased about 20%.

Related to the content of the material presented in the video, the average of the group has already begun to be able to convey the material on its topic properly, although it is not very well in explaining the concept. The students are not stuck by memorizing textbooks or notes. But, the linguistic in delivering or presenting still have to be developed. For the performance of group members which that recorded in the video, the average of the group has shown their self-confidence in explanation, it's just that the thinking face expression and haltingly on speaking are still often seen. However, every group began to appear calmly in this second video. Creativity in this second video presentation has been widely seen. Some groups have started to use things around them to be a simple media, such as using an old mineral bottle which is an empty bottle and filled bottle, then dropped it simultaneously and see which bottles first reached on the floor. This demonstration is to show that object mass does not affect the velocity in vertical motion. This therefore implies that demonstration method increase students interest and understanding and consequently promoting high achievement rate (Ekeyi, 2013). It's just still need to syncronize the media related to the concept of material to be delivered.

For creativity in video editing, each group has started to have improvements, it just needs more to learn in order making the video better. Because good video learning will help in improving the quality of the learning process, then the video display should be as attractive as possible.

Video Checking in The Third Month

The third video was collected after 4 weeks of learning in August 2018. The material presented in this video is about "accelerated uniform motion on the parabolic rectilinear motion". Here is a description of video checking results based on the established indicator.

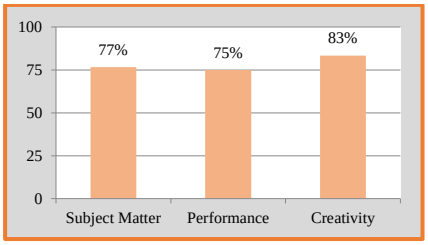

Figure 3. Percentage of video content indicator achievement in the Third month

The data above is the result of checking the third video in the achievement of video content

indicator that has been created by the student. Picture 3 shows that the average of groups percentage in achieving indicators is 77% for the subject matter, 75% for performance, and 83% for video creativity. The results of this third checking show that the average of indicators achievement has increased so rapidly.

The material contained in this video has been explained by the groups very well. In learning processing, all groups can explain the parabolic motion concept correctly and completely. The average of the group's membership is not transfixed by memorizing textbooks or notes, so they can inform the material calmly. For the performance of group members which are recorded in this video, that average of the group has shown confidence in conveying the explanation. Thinking expression is no longer visible in this third video, only 2 out of 10 groups still stammered in the delivery. It's happened because the video learning influence student's habit learning. Studies have shown that multimedia learning (video) has a huge impact on the outcome of learning. A well designed multimedia learning can promote better performance among learners. Multimedia learning that is designed using good teaching methodologies and instructional models can have a positive impact on the learners (Jamal, Nasir, & Asirvatham, 2012).

The collecting of the third video is already diverse and do not rigid, it means the creativities of groups in video presentation has improved very well. All groups have been able to utilize things around them to be used a simple media in learning. In presenting this parabolic motion, each group uses the ball as a medium. One member of the group kicks the ball at a point with a certain angle, then sees how far the ball is thrown. By kicking a ball at one point with various angles, students will understand the relationship between the angle with the farthest distance that can be reached by the ball. It's just keeping to increase their understanding to select proper media according to the concept of the subject.

For creativity in video editing, every group has been able to insert animations, images, music and interesting writings that make the video look better. The selection of colors and attractive icons according to their age makes the video look slicker. However, this editing ability must also be improved to produce more interesting works.

The improvements achieved by these students indicate an interest in utilizing android applications for their learning tools, this is in accordance with the results of research that the participants interest and very feel necessary with the training that has been given because through training the development of teacher-based learning media android to get updates in the field of technology information in education (Edi Ismanto, Melly Novalia, 2017).

In addition, according to Polonia's research showed about 98.73% of students stated that the physics learning by using media of android mobile application conducted by the teacher more interesting, fun, innovative, creative, and variation (Ses, Polonia, Yuliati, & Zulaikah, 2015).

Increasing the quality of the video is caused by the interest of students who are getting better at doing the task. This is because students no longer consider the task to be a burden. The interest of students to complete tasks that are charged by themselves will be greater than the tasks given by the teacher (Sanjaya Wina, 2008).

Questionnaire of Effectiveness

This questionnaire was given at the end of the research to measure the effectiveness of using android applications in the task. The following is the results of the dissemination of effectiveness questionnaires distributed to all students.

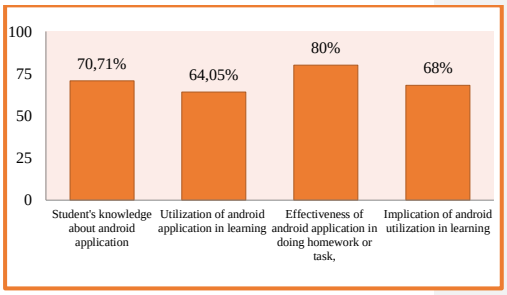

Figure 4. Graph of percentage of effectiveness of android application utilization.

To measure effectiveness of the using android application, there are 4 things have been determined as achievement indicator, i.e. 1) student's knowledge about android application, 2) utilization of android application in the learning process, 3) effectiveness of android application in doing homework or task, and 4) implication of android utilization in learning.

Based on the graph in Fig. 4 shows that the percentage of student knowledge indicator about the android application is 70,71% that is an ineffective category. This shows that android application is not a strange thing for students, so students have no difficulty in exploring the components that exist in Android applications. This approach of learning is highly receptive to students as they are more likely to seek and use learning contents via mobile services rather than to find proprietary courseware that is not easily accessed (Hanafi, 2012).

Due to friendly use of Android, students can access the lessons by android apps easily that have been provided. It seems from the percentage of performance indicator on the utilization of android application is 64.05% which is effective. According to the result of Nursina's research that available applications in smartphones can be used as a medium of learning by students to facilitate the acquisition of science and to learn materials effectively and efficiently (Nursina, La Ode Muh. Umran, 2017). In this study students are directed in such a way in using android applications to work on the project so that unexpected things can be controlled properly.

The third indicator of the effectiveness of android application in doing homework or tasks, which shows a big percentage is 80,00 %, it's a very effective category. The use of android apps to do homework or task has changed students who were lazy to do homework in the past, and now can to race with another in creating and presenting their best video project. Students do not consider that the task given by the teacher as a burden anymore because they see it as an interesting activity. According to Vandalita's research, she said that the students who learn with smartphones in the classroom appeared to be more active in the discussion. Each member of a group worked well together in discussing the material given by the teacher, and they are very enthusiastic in the discussion/question and answer session among groups. The questions asked by students are also more meaningful. This happened because learning with smartphones can make students' perspectives more open and at once make students get a lot of knowledge that was not covered and included in the course books. Each group also reveal high competitiveness to show the best result in the discussion (Rambitan, 2015).

For the result of indicator achievement about the implication of android apps utilization, it shows 68,00% which is effective. Combining the passion with a task can boost students creativity. Essentially, the places for learning is not limited by the classroom so that students can learn wherever through their smartphone. The implication of this implementation is more students enthusiastic and diligent to do their homework or task. Furthermore, the main purpose of learning is the participation of students towards the material and media that we display. A teacher in the era of technology is now demanded have experience and practice applying, analyzing, synthesizing, and evaluating rather than just understand and provide information to students (Purwanti, 2015).

This is in accordance with explanation in the paper reseach that students in project based learning applied class, according to the observation, are more active and creative and think more critically than students in classical learning applied class. By providing pleasant ambiance, students can get along during learning process (Gerhana, Mardiyana, & Pramudya, 2017).

CONCLUSION

The Effectiveness of android apps as a student's tools in doing their integrated science subject task is considered effective. It is proved by result percentage of effectiveness questionnaires given to students.

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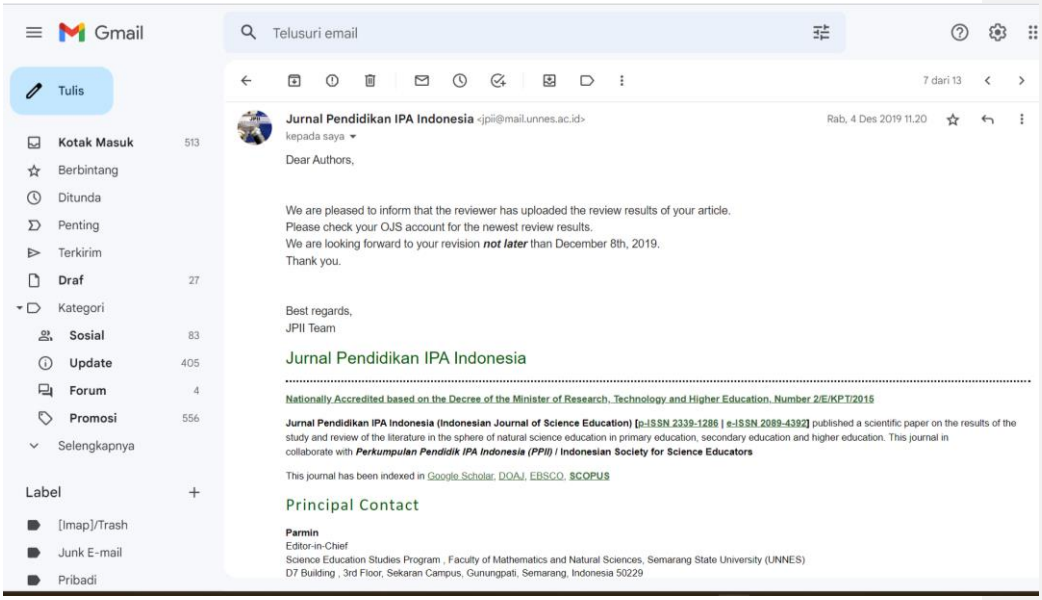
4. Bukti konfirmasi review dan hasil review kedua



THE EFFECTIVENESS OF ANDROID APPLICATION AS STUDENT AID TOOLS IN UNDERSTANDING TASK OF PHYSICS

ABSTRACT

Gadget addiction and the low level of learning interest of students in carrying out tasks are the new problems in education so that efforts need to be made to overcome them. The aim of this study is to determine the effectiveness of android application as student aid tools in understanding the task of Physics. Subjects in this research are all students of class VIII SMP Islam Terpadu Arrozaq Rantauprapat. The type of research is qualitative research that is directing students to utilize his gadgets in completing the task of physics. The instruments used in this research are the video checking rubric and the effectiveness questionnaire. This research was carried out for 3 months and video checks were carried out at the end of each month after project assignments were collected. The results of data analysis in this study indicate that the utilization of android application as a tool of students is considered effective. The students become enthusiastic in working on assignments and students access the internet through gadgets on positive things.

Keywords: Effectiveness, Android application, task, physics

INTRODUCTION

Along with the technology development sophisticated increasingly, nowadays gadget has been equipped with several features and modern applications which facilitate the users in reaching the world of the Internet so that users use it actively. A study finds that college students spent nearly nine hours daily on their cell-phones. As the functionality of cell-phones continues to expand, addiction to this seemingly indispensable piece of technology becomes an increasingly realistic possibility. Study results suggest that certain activities performed on one's cell-phone are more likely to lead to dependence than others and that these addictive activities vary across gender (Roberts et al., 2014).

More than 190 countries around the world use Android. Many users use Android to search for apps, games and other digital content. Indonesia is one the countries which the people use gadget actively, they are 171.17 million of the total Indonesian population of 264.16 million. Almost every student, not only Senior High School student but also Primary student has gadgets and used it in their daily activities. From the results of a survey conducted in Indonesia, in the age range of 19-34 years old, the main contributor to the age of users was 49.52 percent. The

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age range of 35-54 years old (29.55 percent), 13-18 years old (16.68 percent). In terms of education, for postgraduate numbered 88, 24 percent, bachelor 79.23 percent, senior high school 70.54 percent, junior high school 48.53 percent, and elementary school 25.1 percent. For the duration of internet using, avarage daily time spent using the inernet via any device are 8 hours 36 minuts (Tim APJII, 2018).

The data indicates that Indonesian students are addicted to using the gadget and unfortunately getting negative impact. Using the gadget for a long duration, will certainly affect the quality of students if it is not directed to right and beneficial use. Outside of school, students no longer care about repeating lessons or doing assignments. They are busy with their gadgets without time restrictions so a lot of time will be wasted, even though some tasks from school must be completed immediately.

The conditions above also occur in students of SMPIT (Junior High School) of Arrozaq Rantauprapat, Sumatera Utara. This is a fullday school with a learning schedule at 07.15 a.m – 04.00 p.m. Based on the first reseach by giving a questionnaires to students about they activities at home, that 94% of students play their gadget about 4-5 hours and 6% play their gadget at less than 4 hours. With the avarage 40% of them accessing social media, 45% playing games online, and 15% accessing other website. This was also reinforced by the results of interviews of 15 students guardians who were randomly selected, that most students spend all their time with their gadgets and never reviewing their lessons out of school. The students spending their time on accessing social media, playing online games, and trying to updating new features of their gadgets. It can be known by checking their social media account and we can see how often they update status, upload their photos, share their edited videos by using android applications which they download in their gadget and play an online games. All these activities are often shared with their social media accounts (Facebook, Instagram, Path, Twitter, tiktok, etc). When we ignore it, it can cause decreasing of learning interest and declining of student's achievement.

Meanwhile at their school, students often do not have responded when the teacher gives task and homework. Based on observations and interviews to science teachers at SMPIT Arrozaq, It is about 10% of the students finishing the homework or task who do it by themselves, 80% of the students copy their friend's homework and 10% of the students do not work on it at all. When the teacher checks out the assignments, it is founded that only 10% of the students who understand their tasks well. Whereas task giving is one effective method in learning in order that student reviewing the lesson at home and their science comprehension are increased.
the low interest of students in doing homework certainly has to do with the unlimited use of gadgets. gadget addiction causes students to neglect the assignments given by the teacher at school. The result of the preliminary research has shown that interest and attention are two things that are considered the same in everyday use, the attention of students is the concentration of students on observation and understanding with the exclusion of others. The interest and attention are following the learning process must arise on the basis of high awareness of students for learning. Furthermore, the teacher is expected to be able to provide motivation and guidance to students, the goal is that students have a higher desire for learning so that the attention in learning will get better (Nurhasanah & Sobandi, 2016). Students have an interest in a particular object with attention to the object. Therefore, it is necessary to make special efforts to deal with these problems for the future of student education.

Actually, these students have great abilities and creativities to support their education in using gadgets. It is not wise to remove the gadget from students because basically gadget still has benefit. When we look inside, most of the students actually have good ability and creativity in operating some features of their gadget, such as photo and video editing. It can be used by the teacher to have learning projects done by students using their gadget. The Teacher can collaborate lesson, creativity, and passion of students to build up a learning interest. Mobile learning was more effective than the use of traditional teaching methods in helping students enrolled in "Strategies of Teaching and Learning" course to achieve better and develop their skills (Elfeky et al., 2016). These features are provided in a very supportive learning Android because it is very useful to help students understand the subject matter. This feature also allows teachers to explain the lessons learned through the media, so the teacher does not need to explain repeatedly (Irwan et al., 2016). By Android application on smatrphone, it can be flexible media facilitates students to learn anywhere and anytime so that students learning frequency can be higher bringing a pass to the high students retention (Lubis et al., 2015). By using this method, students will keep their learning without stopping their hobby.

Based on the explanation above, it is necessary to do research about Android Application Effectiveness as Student Tools in Doing Homework or Task. The method of assigning tasks is the way of presenting the lesson which the teacher assigns the tasks for students to do the learning activities, then accounted it (Sutriani, 2014). Learning by giving an assignment is a suitable method to apply to child, because it gives assignments to children is the right way so that children have more sense of responsibility answer and provide experience real learning to children (Cahyati et al., 2015). The implementation of the electronic teaching material supported by the right learning model will improve the effectivity of the teaching material (Winatha & Abubakar, 2018).

The assignment of this study refers to the implementation of Project Based Learning. The description of project-based learning (PBL) consisting projects that integrate science, technology, society, history, mathematics, politics and even arts that serves productive discussion opportunity for students and gives them the excitement of learning should be seen as an answer to the search of such a teaching strategy. Within that context students have the chance of investigating rich and challenging topics of real-world issues, share their study with others and the portrait of the classroom consists students discussing on various topics in groups, searching knowledge from varied sources, take decisions and presenting their product (Halil, 2008). In integrated science learning using Project Based Learning model can improve the concept mastery of junior high school students. This shows that in the case of increasing theduct concept mastery of middle school students on integrated science (Liliawati et al., 2017). Students are given assignments in the form of projects that must be completed according to the agreement. The Project Based Learning included seven steps, these were the determination of the topics, organization of the groups, planning the project, application of the project, planning the presentation, making the presentation, and the evaluation (Kızkapan & Bektaş, 2017).

The aim of this research is to see the effectiveness of android application as a tool for students in completing physics project or task. Utilization of android application in this research focuses on making a video which contains materials of science subject through giving task method. Each student is given the freedom to choose the application to be used in making videos. The subject matter presented in this study is about Accelerated Uniform Motion covering horizontal rectilinear motion, vertical rectilinear motion, and parabolic motion.

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METHODS

Reseach Type

The type of this research is a qualitative method by using descriptive analysis that postpositivistic method because it is based on postpositivism philosophy (Sugiyono, 2010). The goal of qualitative reseach is to examine how things look from different vantage points (Steven J. & Robert, 2015). Moleong explained that descriptive research describes the state of the object of research at the time now as it is based on facts (Moleong, 2013). This research is an attempt to disclose a problem or circumstance or event as it is so that it is only disclosure of facts. In this research, giving a treatment to students who have low interest to do homework or tasks of Integrated Science subject in Integrated Islamic Junior High School of Arrozaq (SMPIT Arrozaq) Rantauprapat.

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Subjects

The subjects of this research are students of SMPIT Arrozaq Rantauprapat consisting of two classes, Class VIII A with 17 students and VIII B with 18 students. Hence the total of Subjects in this research is 35 students.

Instrument and Reseach Procedure

The instrument used in this study is a rubric of video checking indicator to measure student-made video content and effectiveness questionnaires to measure the effectiveness of utilizing android applications. The research procedure consists of several stages, i.e :

Stage of Planning, this stage includes :

m. Observing at the school to see the students condition when following the learning process in the classroom.
n. Interviewing science teacher to find out students presentations on tasks or homework as well as recapping the students' daily values.
o. Interviewing some parents to find out the activities of the students while at home.
p. Making instrument like a rubric of video checking indicators to measure student-generated video content and effectiveness questionnaires to measure the effectiveness of android apps as a student tool for doing homework or assignments.

Stage of Implementation, this stage includes :

l. Providing the understanding and mechanisms about the importance of using the android application to all students of SMPIT Arrozaq.
m. Inviting science teacher to collaborate in assignment providing to students by the project based learning method. The project is making a creative video creation with the contains about science materials that have been taught through android applications. On this stage, the students were trained to acquire the understanding of scientific concepts and the process needed to participate in the society of digital (Science and Technology) era (Saefi, Lukiati, & Suarsini, 2017).
n. This project is given once a month for each class. The duration of activities in this phase lasts for three months.
o. Collecting video project which is then checked based on a rubric of video content indicator. This check is performed every month after the collection of video projects.

Data Collection and Analysis Technique

Data collection technique in this research is to collect the video projects at the end of each month and the effectiveness questionnaire used to measure the effectiveness of the use of Android applications in completing homework. Data analysis technique used in this research is descriptive qualitative, which aims to explain the effectiveness of the efforts done according to benchmark made by the researcher. The following is the table of criteria of effectiveness of android application utilization. This table is a reference to determine the effectiveness category based on the average percentage score that has been generated.

Table 1. Criteria For The Effectiveness of Android Application Utilization

Percentage Value	Criteria
0% - 20%	**Ineffective**
21% - 40%	**Less effective**
41% - 60%	**Quite effective**
61% - 80%	**Effective**
81% - 100%	**More effective**

RESULTS AND DISCUSSION

Video Checking in Three Months

Here is a description of the video checking data in three months based on established indicators. Each video was collected after 4 weeks of learning at the end of the months.

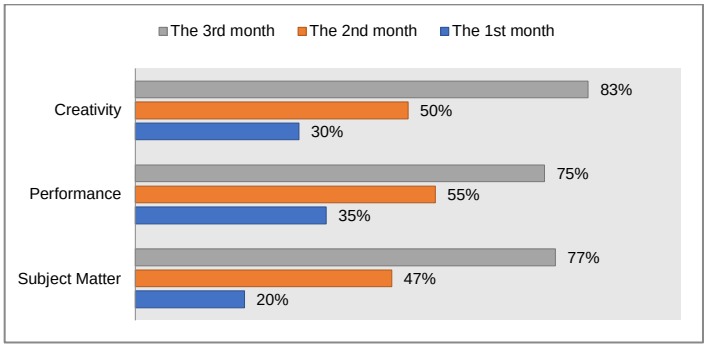

Figure 1. Percentage of video content indicator achievement in three months

Video Checking Description in The First Month

The first video was collected after 4 weeks of learning at the end of May 2018. The material presented in this video is about "accelerated uniform motion on the horizontal rectilinear motion". The application of android used are Viva Video and KineMaster. Apps encourage the implementation of design thinking and creativity as the learner moves through each stage of the inquiry process (Stevenson et al., 2015).

The data above is the overall result of the group in the achievement of the video content indicator that has been created by the students. The result of the first video content checking shows that average achievement indicators are still too low at 20% for the subject matter, 35% for performance, and 30% for video creativity.

Related to the content of the material presented in the video, the average of the group still has not been able to convey the material on the topic properly. The students are still transfixed by the text of the books or notes that they memorized and they also did pronounciation that cause inconsistency to the actual concept. In addition, there are still 4 out of 10 groups that have not submitted sub-material completely.

For the performance of group members recorded in the video, that the students still don't have enough confidence in delivering their explanation. Even though the students have high confidence also have a good understanding of the subject matter so that students will have confidence in mastery and skills himself (Sihotang et al., 2017). More of students haltingly on speaking and express of thinking face so it looks like memorizing every word. In addition,

the gestures of the body are not calm so the video looks so rigid. This video also still looks so rigid and simple that so little animation, images, or writing on a video display. They just displayed the recording of the video-making process without editing. It means that their editing ability is very low. So are the media used, the students are still not keen on the objects around them which can be used as media in delivering of material. Even though there are a lot of old stuff or objects surrounding us that can be used as a demonstration medium for accelerated uniform motion, but students have not been able to use them so that the expected learning media has not yet appeared.

The good learning video is a video that fulfills two aspects of media development that become a reference, there are material and media. Material aspects include the accuracy of the material, the breadth of material, the clarity of the material, and the attractiveness of the material presented. While in the media aspect includes the quality of video content and technical quality (Suryansyah, 2017).

Video Checking Description in The Second Month
The second video was submitted after 4 weeks of learning at the end of June 2018. The material presented in this video is about "accelerated uniform motion on the vertical rectilinear motion". The second video checking result in the achievement of video content indicator that has been created by students that are 47% for the subject matter, 55% for performance, and 50% for video creativity. The results of this second check indicate that the average achievement indicator has increased about 20%.

Related to the content of the material presented in the video, the average of the group has already begun to be able to convey the material on its topic properly, although it is not very well in explaining the concept. The students are not stuck by memorizing textbooks or notes. But, the linguistic in delivering or presenting still have to be developed. For the performance of group members which that recorded in the video, the average of the group has shown their self-confidence in explanation, it's just that the thinking face expression and haltingly on speaking are still often seen. However, every group began to appear calmly in this second video. Creativity in this second video presentation has been widely seen. Some groups have started to use things around them to be a simple media, such as using an old mineral bottle which is an empty bottle and filled bottle, then dropped it simultaneously and see which bottles first reached on the floor. This demonstration is to show that object mass does not affect the velocity in vertical motion. This therefore implies that demonstration method increase students interest and understanding and consequently promoting high achievement rate (Ekeyi, 2013). It's just still need to syncronize the media related to the concept of material to be delivered.

For creativity in video editing, each group has started to have improvements, it just needs more to learn in order making the video better. Because good video learning will help in improving the quality of the learning process, then the video display should be as attractive as possible.

Video Checking Description in The Third Month
The third video was collected after 4 weeks of learning in August 2018. The material presented in this video is about "accelerated uniform motion on the parabolic rectilinear motion". The result of checking the third video in the achievement of video content indicator that has been created by the student. Picture 3 shows that the average of groups percentage in achieving indicators is 77% for the subject matter, 75% for performance, and 83% for video creativity. The results of this third checking show that the average of indicators achievement has increased so rapidly.

The material contained in this video has been explained by the groups very well. In learning processing, all groups can explain the parabolic motion concept correctly and completely. The average of the group's membership is not transfixed by memorizing textbooks or notes, so they can inform the material calmly. For the performance of group members which are recorded in this video, that average of the group has shown confidence in conveying the explanation. Thinking expression is no longer visible in this third video, only 2 out of 10 groups still stammered in the delivery. It's happened because the video learning influence student's habit learning. Studies have shown that multimedia learning (video) has a huge impact on the outcome of learning. A well designed multimedia learning can promote better performance among learners. Multimedia learning that is designed using good teaching methodologies and instructional models can have a positive impact on the learners (Jamal et al., 2012).

The collecting of the third video is already diverse and do not rigid, it means the creativities of groups in video presentation has improved very well. All groups have been able to utilize things around them to be used a simple media in learning. In presenting this parabolic motion, each group uses the ball as a medium. One member of the group kicks the ball at a point with a certain angle, then sees how far the ball is thrown. By kicking a ball at one point with various angles, students will understand the relationship between the angle with the farthest distance that can be reached by the ball. It's just keeping to increase their understanding to select proper media according to the concept of the subject.

For creativity in video editing, every group has been able to insert animations, images, music and interesting writings that make the video look better. The selection of colors and attractive icons according to their age makes the video look slicker. However, this editing ability must also be improved to produce more interesting works.

The improvements achieved by these students indicate an interest in utilizing android applications for their learning tools, this is in accordance with the results of research that the participants interest and very feel necessary with the training that has been given because through training the development of teacher-based learning media android to get updates in the field of technology information in education (Ismanto & Novalia, 2017).

In addition, according to Polonia's research showed about 98.73% of students stated that the physics learning by using media of android mobile application conducted by the teacher more interesting, fun, innovative, creative, and variation (Ses et al., 2015).

Increasing the quality of the video is caused by the interest of students who are getting better at doing the task. This is because students no longer consider the task to be a burden. The interest of students to complete tasks that are charged by themselves will be greater than the tasks given by the teacher (Wina, 2008).

Comparison of Preliminary Research Data with Research Results Data

After checking the video by the researcher, an evaluation is carried out on the students about the completion of the video project assignments that have been done. Science teachers orally test each group about the subject matter they present in the video to see their understanding competencies. The teacher also gives students some questions about completing the video to see their work on the assignment. The following is a comparison table of preliminary research data with research result data.

Table 2. Comparison of Preliminary Research Data with Research Results Data

	Homework completion			
	Finishing homework by themselves	Finishing homework by copy paste	Don't finishing homework	Understanding the task well
Before (%)	10	80	10	10
After (%)	0	100	0	95

Table 2 shows that there was an increase students interest in doing the assignments. Initially only 10% of students finishing homework by themselves, 80% copy their friend's assigments, and 10% did not finishing the homework, but after being given a video project assignment using the Android apps, 100% of students finishing the assigments by themselves. This happens because the video project assignments given by students are completed in groups with the help of the android application. Each group member can explore their talents into the project that is being worked on and work by the passion of each member. Besides each member also cooperates and helps in the completion of the project. Students who are proficient in design and IT will focus on working on video displays, while students who are proficient in mastering the material will focus on drafting the material and teaching other students to understand the material to be presented. Thus, each student will be able to understand the material they present so that their understanding of the concept increases from 10% to 95%.

Questionnaire of Effectiveness

This questionnaire was given at the end of the research to measure the effectiveness of using android applications in the task. The following is the results of the dissemination of effectiveness questionnaires distributed to all students.

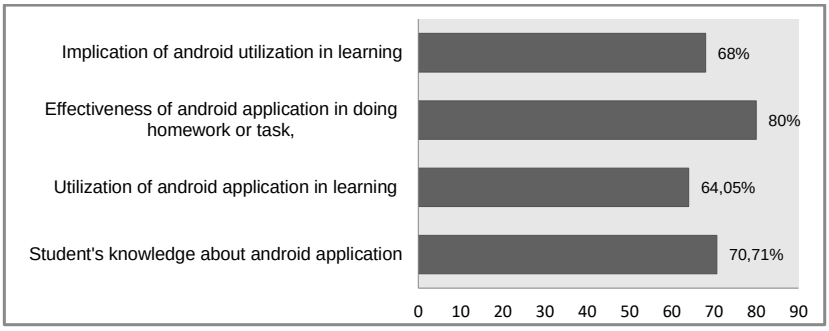

Figure 2. Graph of percentage of effectiveness of android application utilization.

To measure effectiveness of the using android application, there are 4 things have been determined as achievement indicator, i.e. 1) student's knowledge about android application, 2) utilization of android application in the learning process, 3) effectiveness of android application in doing homework or task, and 4) implication of android utilization in learning.

Based on the graph in Fig. 2 shows that the percentage of student knowledge indicator about the android application is 70,71% that is an ineffective category. This shows that android application is not a strange thing for students, so students have no difficulty in exploring the components that exist in Android applications. This approach of learning is highly receptive to students as they are more likely to seek and use learning contents via mobile services rather than to find proprietary courseware that is not easily accessed (Hanafi, 2012).

Due to friendly use of Android, students can access the lessons by android apps easily that have been provided. It seems from the percentage of performance indicator on the utilization of android application is 64.05% which is effective. According to the result of Nursina's research that available applications in smartphones can be used as a medium of learning by students to facilitate the acquisition of science and to learn materials effectively and efficiently (Nursina et al., 2017). In this study students are directed in such a way in using android applications to work on the project so that unexpected things can be controlled properly. in addition, students are also greatly helped by using android applications in doing assignments. they can explore themselves when working on tasks so that they get maximum results.

The third indicator of the effectiveness of android application in doing homework or tasks, which shows a big percentage is 80,00 %, it's a very effective category. The use of android apps to do homework or task has changed students who were lazy to do homework in the past, and now can to race with another in creating and presenting their best video project. If previously student interest was very low in doing assignments, now student interest is increased after being given a project assignment by utilizing the android application. Students do not consider that the task given by the teacher as a burden anymore because they see it as an interesting activity.

According to Vandalita's research, she said that the students who learn with smartphones in the classroom appeared to be more active in the discussion. Each member of a group worked well together in discussing the material given by the teacher, and they are very enthusiastic in the discussion/question and answer session among groups. The questions asked by students are also more meaningful. This happened because learning with smartphones can make students' perspectives more open and at once make students get a lot of knowledge that was not covered and included in the course books. Each group also reveal high competitiveness to show the best result in the discussion (Rambitan, 2015).

For the result of indicator achievement about the implication of android apps utilization, it shows 68,00% which is effective. Combining the passion with a task can boost students creativity. Essentially, the places for learning is not limited by the classroom so that students can learn wherever through their smartphone. The implication of this implementation is more students enthusiastic and diligent to do their homework or task. This can be seen from the comparison of preliminary research data with result research data, which on average there is an increase in doing the task.

Furthermore, the main purpose of learning is the participation of students towards the material and media that we display. A teacher in the era of technology is now demanded have experience and practice applying, analyzing, synthesizing, and evaluating rather than just understand and provide information to students (Purwanti, 2015).

This is in accordance with explanation in the paper reseach that students in project based learning applied class, according to the observation, are more active and creative and think more critically than students in classical learning applied class. By providing pleasant ambiance, students can get along during learning process (Gerhana et al., 2017).

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CONCLUSION

The Effectiveness of android apps as a student's tools in doing their integrated science subject task is considered effective. It is proved by result percentage of effectiveness questionnaires given to students.

ACKNOWLEDGEMENTS

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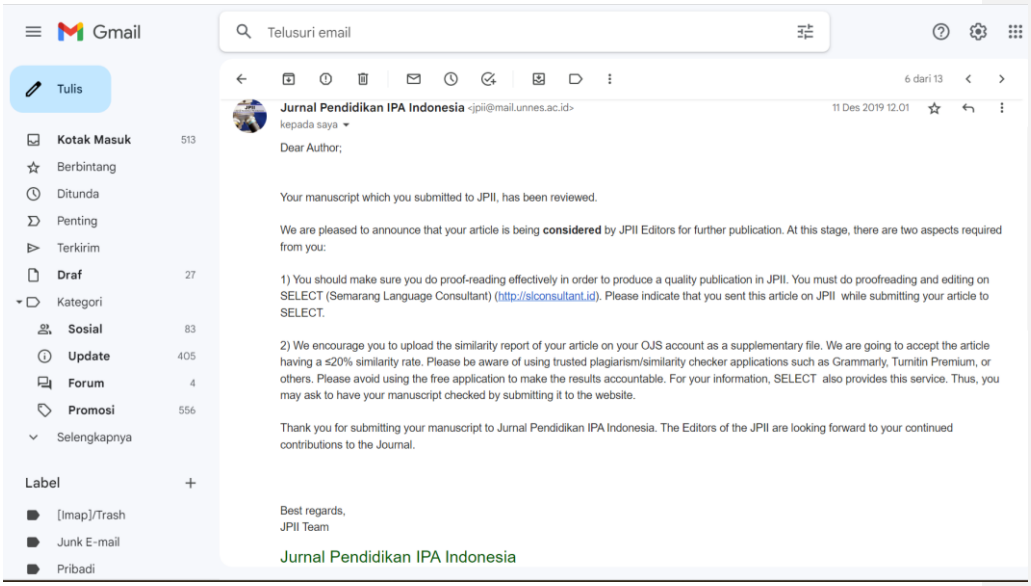

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THE EFFECTIVENESS OF ANDROID APPLICATION AS STUDENT AID TOOLS IN UNDERSTANDING TASK OF PHYSICS

ABSTRACT

Gadget addiction and the low level of learning interest of students in carrying out tasks are the new problems in education so that efforts need to be made to overcome them. The aim of this study is to determine the effectiveness of android application as student aid tools in understanding the task of Physics. Subjects in this research are all students of class VIII SMP Islam Terpadu Arrozaq Rantauprapat. The type of research is qualitative research that is directing students to utilize his gadgets in completing the task of physics. The instruments used in this research are the video checking rubric and the effectiveness questionnaire. This research was carried out for 3 months and video checks were carried out at the end of each month after project assignments were collected. The results of data analysis in this study indicate that the utilization of android application as a tool of students is considered effective. The students become enthusiastic in working on assignments and students access the internet through gadgets on positive things.

Keywords: Effectiveness, Android application, task, physics

INTRODUCTION

Along with the technology development sophisticated increasingly, nowadays gadget has been equipped with several features and modern applications which facilitate the users in reaching the world of the Internet so that users use it actively. A study finds that college students spent nearly nine hours daily on their cell-phones. As the functionality of cell-phones continues to expand, addiction to this seemingly indispensable piece of technology becomes an increasingly realistic possibility. Study results suggest that certain activities performed on one's cell-phone are more likely to lead to dependence than others and that these addictive activities vary across gender

(Roberts et al., 2014).

More than 190 countries around the world use Android. Many users use Android to search for apps, games and other digital content. Indonesia is one the countries which the people use gadget actively, they are 171.17 million of the total Indonesian population of 264.16 million. Almost every student, not only Senior High School student but also Primary student has gadgets and used it in their daily activities. From the results of a survey conducted in Indonesia, in the age range of 19-34 years old, the main contributor to the age of users was 49.52 percent. The age range of 35-54 years old (29.55 percent), 13-18 years old (16.68 percent). In terms of education, for postgraduate numbered 88, 24 percent, bachelor 79.23 percent, senior high school 70.54 percent, junior high school 48.53 percent, and elementary school 25.1 percent. For the duration of internet using, avarage daily time spent using the inernet via any device are 8 hours 36 minuts (Tim APJII, 2018).

The data indicates that Indonesian students are addicted to using the gadget and unfortunately getting negative impact. Using the gadget for a long duration, will certainly affect the quality of students if it is not directed to right and beneficial use. Outside of school, students no longer care about repeating lessons or doing assignments. They are busy with their gadgets without time restrictions so a lot of time will be wasted, even though some tasks from school must be completed immediately.

The conditions above also occur in students of SMPIT (Junior High School) of Arrozaq Rantauprapat, Sumatera Utara. This is a fullday school with a learning schedule at 07.15 a.m – 04.00 p.m. Based on the first reseach by giving a questionnaires to students about they activities at home, that 94% of students play their gadget about 4-5 hours and 6% play their gadget at less than 4 hours. With the avarage 40% of them accessing social media, 45% playing games online, and 15% accessing other website. This was also reinforced by the results of interviews of 15 students guardians who were randomly selected, that most students spend all their time with their gadgets and never reviewing their lessons out of school. The students spending their time on accessing social media, playing online games, and trying to updating new features of their gadgets. It can be known by checking their social media account and we can see how often they update status, upload their photos, share their edited videos by using android applications which they download in their gadget and play an online games. All these activities are often shared with their social media accounts (Facebook, Instagram, Path, Twitter, tiktok, etc). When we ignore it, it can cause decreasing of learning interest and declining of student's achievement.

Meanwhile at their school, students often do not have responded when the teacher gives task and homework. Based on observations and interviews to science teachers at SMPIT Arrozaq, It is about 10% of the students finishing the homework or task who do it by themselves, 80% of the students copy their friend's homework and 10% of the students do not work on it at all. When the teacher checks out the assignments, it is founded that only 10% of the students who understand their tasks well. Whereas task giving is one effective method in learning in order that student reviewing the lesson at home and their science comprehension are increased.
the low interest of students in doing homework certainly has to do with the unlimited use of gadgets. gadget addiction causes students to neglect the assignments given by the teacher at school. The result of the preliminary research has shown that interest and attention are two things that are considered the same in everyday use, the attention of students is the concentration of students on observation and understanding with the exclusion of others. The interest and attention are following the learning process must arise on the basis of high awareness of students for learning. Furthermore, the teacher is expected to be able to provide motivation and guidance to students, the goal is that students have a higher desire for learning so that the attention in learning will get better (Nurhasanah & Sobandi, 2016). Students have an interest in a particular object with attention to the object. Therefore, it is necessary to make special efforts to deal with these problems for the future of student education.

Actually, these students have great abilities and creativities to support their education in using gadgets. It is not wise to remove the gadget from students because basically gadget still has benefit. When we look inside, most of the students actually have good ability and creativity in operating some features of their gadget, such as photo and video editing. It can be used by the teacher to have learning projects done by students using their gadget. The Teacher can collaborate lesson, creativity, and passion of students to build up a learning interest. Mobile learning was more effective than the use of traditional teaching methods in helping students enrolled in "Strategies of Teaching and Learning" course to achieve better and develop their skills (Elfeky et al., 2016). These features are provided in a very supportive learning Android because it is very useful to help students understand the subject matter. This feature also allows teachers to explain the lessons learned through the media, so the teacher does not need to explain repeatedly (Irwan et al., 2016). By Android application on smatrphone, it can be flexible media facilitates students to learn anywhere and anytime so that students learning frequency can be higher bringing a pass to the high students retention (Lubis et al., 2015). By using this method, students will keep their learning without stopping their hobby.

Based on the explanation above, it is necessary to do research about Android Application Effectiveness as Student Tools in Doing Homework or Task. The method of assigning tasks is the way of presenting the lesson which the

teacher assigns the tasks for students to do the learning activities, then accounted it (Sutriani, 2014). Learning by giving an assignment is a suitable method to apply to child, because it gives assignments to children is the right way so that children have more sense of responsibility answer and provide experience real learning to children (Cahyati et al., 2015). The implementation of the electronic teaching material supported by the right learning model will improve the effectivity of the teaching material (Winatha & Abubakar, 2018).

The assignment of this study refers to the implementation of Project Based Learning. The description of project-based learning (PBL) consisting projects that integrate science, technology, society, history, mathematics, politics and even arts that serves productive discussion opportunity for students and gives them the excitement of learning should be seen as an answer to the search of such a teaching strategy. Within that context students have the chance of investigating rich and challenging topics of real-world issues, share their study with others and the portrait of the classroom consists students discussing on various topics in groups, searching knowledge from varied sources, take decisions and presenting their product (Halil, 2008). In integrated science learning using Project Based Learning model can improve the concept mastery of junior high school students. This shows that in the case of increasing theduct concept mastery of middle school students on integrated science (Liliawati et al., 2017). Students are given assignments in the form of projects that must be completed according to the agreement. The Project Based Learning included seven steps, these were the determination of the topics, organization of the groups, planning the project, application of the project, planning the presentation, making the presentation, and the evaluation (Kızkapan & Bektaş, 2017).

The aim of this research is to see the effectiveness of android application as a tool for students in completing physics project or task. Utilization of android application in this research focuses on making a video which contains materials of science subject through giving task method. Each student is given the freedom to choose the application to be used in making videos. The subject matter presented in this study is about Accelerated Uniform Motion covering horizontal rectilinear motion, vertical rectilinear motion, and parabolic motion.

METHODS

Reseach Type

The type of this research is a qualitative method by using descriptive analysis that postpositivistic method because it is based on postpositivism philosophy (Sugiyono, 2010). The goal of qualitative reseach is to examine how things look from different vantage points (Steven J. & Robert, 2015). Moleong explained that descriptive research describes the state of the object of research at the time now as it is based on facts (Moleong, 2013). This research is an attempt to disclose a problem or circumstance or event as it is so that it is only disclosure of facts. In this research, giving a treatment to students who have low interest to do homework or tasks of Integrated Science subject in Integrated Islamic Junior High School of Arrozaq (SMPIT Arrozaq) Rantauprapat.

Subjects

The subjects of this research are students of SMPIT Arrozaq Rantauprapat consisting of two classes, Class VIII A with 17 students and VIII B with 18 students. Hence the total of Subjects in this research is 35 students.

Instrument and Reseach Procedure

The instrument used in this study is a rubric of video checking indicator to measure student-made video content and effectiveness questionnaires to measure the effectiveness of utilizing android applications. The research procedure consists of several stages, i.e :

Stage of Planning, this stage includes :

q. Observing at the school to see the students condition when following the learning process in the classroom.
r. Interviewing science teacher to find out students presentations on tasks or homework as well as recapping the students' daily values.
s. Interviewing some parents to find out the activities of the students while at home.
t. Making instrument like a rubric of video checking indicators to measure student-generated video content and effectiveness questionnaires to measure the effectiveness of android apps as a student tool for doing homework or assignments.

Stage of Implementation, this stage includes :

p. Providing the understanding and mechanisms about the importance of using the android application to all students of SMPIT Arrozaq.
q. Inviting science teacher to collaborate in assignment providing to students by the project based learning method. The project is making a creative video creation with the contains about science materials that have been taught through android applications. On this stage, the students were trained to acquire the understanding

of scientific concepts and the process needed to participate in the society of digital (Science and Technology) era (Saefi, Lukiati, & Suarsini, 2017).

r. This project is given once a month for each class. The duration of activities in this phase lasts for three months.
s. Collecting video project which is then checked based on a rubric of video content indicator. This check is performed every month after the collection of video projects.

Data Collection and Analysis Technique

Data collection technique in this research is to collect the video projects at the end of each month and the effectiveness questionnaire used to measure the effectiveness of the use of Android applications in completing homework. Data analysis technique used in this research is descriptive qualitative, which aims to explain the effectiveness of the efforts done according to benchmark made by the researcher. The following is the table of criteria of effectiveness of android application utilization. This table is a reference to determine the effectiveness category based on the average percentage score that has been generated.

Table 1. Criteria For The Effectiveness of Android Application Utilization

Percentage Value	Criteria
0% - 20%	**Ineffective**
21% - 40%	**Less effective**
41% - 60%	**Quite effective**
61% - 80%	**Effective**
81% - 100%	**More effective**

RESULTS AND DISCUSSION

Video Checking in Three Months

Here is a description of the video checking data in three months based on established indicators. Each video was collected after 4 weeks of learning at the end of the months.

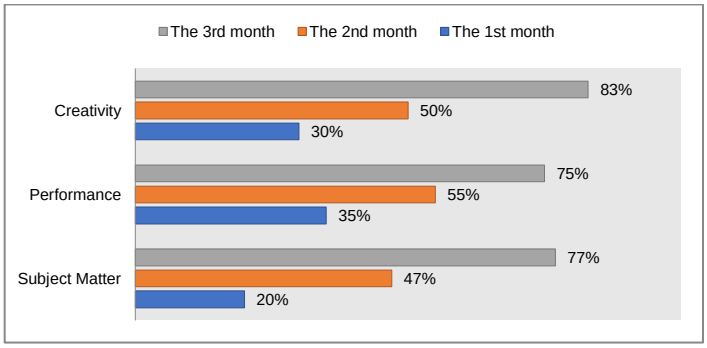

Figure 1. Percentage of video content indicator achievement in three months

Video Checking Description in The First Month

The first video was collected after 4 weeks of learning at the end of May 2018. The material presented in this video is about “accelerated uniform motion on the horizontal rectilinear motion”. The application of android used are Viva Video and KineMaster. Apps encourage the implementation of design thinking and creativity as the learner moves through each stage of the inquiry process (Stevenson et al., 2015).

The data above is the overall result of the group in the achievement of the video content indicator that has been created by the students. The result of the first video content checking shows that average achievement indicators are still too low at 20% for the subject matter, 35% for performance, and 30% for video creativity.

Related to the content of the material presented in the video, the average of the group still has not been able to convey the material on the topic properly. The students are still transfixed by the text of the books or notes that they memorized and they also did pronounciation that cause inconsistency to the actual concept. In addition, there are still 4 out of 10 groups that have not submitted sub-material completely.

For the performance of group members recorded in the video, that the students still don't have enough confidence in delivering their explanation. Even though the students have high confidence also have a good understanding of the subject matter so that students will have confidence in mastery and skills himself (Sihotang et al., 2017). More of students haltingly on speaking and express of thinking face so it looks like memorizing every word. In addition, the gestures of the body are not calm so the video looks so rigid. This video also still looks so rigid and simple that so little animation, images, or writing on a video display. They just displayed the recording of the video-making process without editing. It means that their editing ability is very low. So are the media used, the students are still not keen on the objects around them which can be used as media in delivering of material. Even though there are a lot of old stuff or objects surrounding us that can be used as a demonstration medium for accelerated uniform motion, but students have not been able to use them so that the expected learning media has not yet appeared.

The good learning video is a video that fulfills two aspects of media development that become a reference, there are material and media. Material aspects include the accuracy of the material, the breadth of material, the clarity of the material, and the attractiveness of the material presented. While in the media aspect includes the quality of video content and technical quality (Suryansyah, 2017).

Video Checking Description in The Second Month

The second video was submitted after 4 weeks of learning at the end of June 2018. The material presented in this video is about "accelerated uniform motion on the vertical rectilinear motion". The second video checking result in the achievement of video content indicator that has been created by students that are 47% for the subject matter, 55% for performance, and 50% for video creativity. The results of this second check indicate that the average achievement indicator has increased about 20%.

Related to the content of the material presented in the video, the average of the group has already begun to be able to convey the material on its topic properly, although it is not very well in explaining the concept. The students are not stuck by memorizing textbooks or notes. But, the linguistic in delivering or presenting still have to be developed. For the performance of group members which that recorded in the video, the average of the group has shown their self-confidence in explanation, it's just that the thinking face expression and haltingly on speaking are still often seen. However, every group began to appear calmly in this second video. Creativity in this second video presentation has been widely seen. Some groups have started to use things around them to be a simple media, such as using an old mineral bottle which is an empty bottle and filled bottle, then dropped it simultaneously and see which bottles first reached on the floor. This demonstration is to show that object mass does not affect the velocity in vertical motion. This therefore implies that demonstration method increase students interest and understanding and consequently promoting high achievement rate (Ekeyi, 2013). It's just still need to syncronize the media related to the concept of material to be delivered.

For creativity in video editing, each group has started to have improvements, it just needs more to learn in order making the video better. Because good video learning will help in improving the quality of the learning process, then the video display should be as attractive as possible.

Video Checking Description in The Third Month

The third video was collected after 4 weeks of learning in August 2018. The material presented in this video is about "accelerated uniform motion on the parabolic rectilinear motion". The result of checking the third video in the achievement of video content indicator that has been created by the student. Picture 3 shows that the average of groups percentage in achieving indicators is 77% for the subject matter, 75% for performance, and 83% for video creativity. The results of this third checking show that the average of indicators achievement has increased so rapidly.

The material contained in this video has been explained by the groups very well. In learning processing, all groups can explain the parabolic motion concept correctly and completely. The average of the group's membership is not transfixed by memorizing textbooks or notes, so they can inform the material calmly. For the performance of group members which are recorded in this video, that average of the group has shown confidence in conveying the explanation. Thinking expression is no longer visible in this third video, only 2 out of 10 groups still stammered in the delivery. It's happened because the video learning influence student's habit learning. Studies have shown that multimedia learning (video) has a huge impact on the outcome of learning. A well designed multimedia learning can promote better performance among learners. Multimedia learning that is designed using good teaching methodologies and instructional models can have a positive impact on the learners (Jamal et al., 2012).

The collecting of the third video is already diverse and do not rigid, it means the creativities of groups in video presentation has improved very well. All groups have been able to utilize things around them to be used a simple media in learning. In presenting this parabolic motion, each group uses the ball as a medium. One member of the

group kicks the ball at a point with a certain angle, then sees how far the ball is thrown. By kicking a ball at one point with various angles, students will understand the relationship between the angle with the farthest distance that can be reached by the ball. It's just keeping to increase their understanding to select proper media according to the concept of the subject.

For creativity in video editing, every group has been able to insert animations, images, music and interesting writings that make the video look better. The selection of colors and attractive icons according to their age makes the video look slicker. However, this editing ability must also be improved to produce more interesting works.

The improvements achieved by these students indicate an interest in utilizing android applications for their learning tools, this is in accordance with the results of research that the participants interest and very feel necessary with the training that has been given because through training the development of teacher-based learning media android to get updates in the field of technology information in education (Ismanto & Novalia, 2017).

In addition, according to Polonia's research showed about 98.73% of students stated that the physics learning by using media of android mobile application conducted by the teacher more interesting, fun, innovative, creative, and variation (Ses et al., 2015).

Increasing the quality of the video is caused by the interest of students who are getting better at doing the task. This is because students no longer consider the task to be a burden. The interest of students to complete tasks that are charged by themselves will be greater than the tasks given by the teacher (Wina, 2008).

Comparison of Preliminary Research Data with Research Results Data

After checking the video by the researcher, an evaluation is carried out on the students about the completion of the video project assignments that have been done. Science teachers orally test each group about the subject matter they present in the video to see their understanding competencies. The teacher also gives students some questions about completing the video to see their work on the assignment. The following is a comparison table of preliminary research data with research result data.

Table 2. Comparison of Preliminary Research Data with Research Results Data

	Homework completion			
	Finishing homework by themselves	Finishing homework by copy paste	Don't finishing homework	Understanding the task well
Before (%)	10	80	10	10
After (%)	0	100	0	95

Table 2 shows that there was an increase students interest in doing the assignments. Initially only 10% of students finishing homework by themselves, 80% copy their friend's assigments, and 10% did not finishing the homework, but after being given a video project assignment using the Android apps, 100% of students finishing the assigments by themselves. This happens because the video project assignments given by students are completed in groups with the help of the android application. Each group member can explore their talents into the project that is being worked on and work by the passion of each member. Besides each member also cooperates and helps in the completion of the project. Students who are proficient in design and IT will focus on working on video displays, while students who are proficient in mastering the material will focus on drafting the material and teaching other students to understand the material to be presented. Thus, each student will be able to understand the material they present so that their understanding of the concept increases from 10% to 95%.

Questionnaire of Effectiveness

This questionnaire was given at the end of the research to measure the effectiveness of using android applications in the task. The following is the results of the dissemination of effectiveness questionnaires distributed to all students.

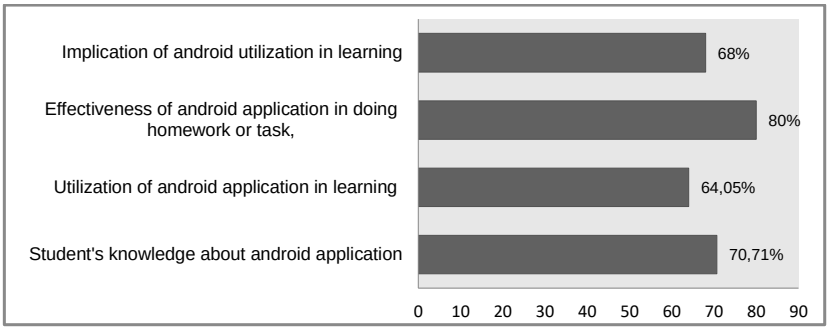

Figure 2. Graph of percentage of effectiveness of android application utilization.

To measure effectiveness of the using android application, there are 4 things have been determined as achievement indicator, i.e. 1) student's knowledge about android application, 2) utilization of android application in the learning process, 3) effectiveness of android application in doing homework or task, and 4) implication of android utilization in learning.

Based on the graph in Fig. 2 shows that the percentage of student knowledge indicator about the android application is 70,71% that is an ineffective category. This shows that android application is not a strange thing for students, so students have no difficulty in exploring the components that exist in Android applications. This approach of learning is highly receptive to students as they are more likely to seek and use learning contents via mobile services rather than to find proprietary courseware that is not easily accessed (Hanafi, 2012).

Due to friendly use of Android, students can access the lessons by android apps easily that have been provided. It seems from the percentage of performance indicator on the utilization of android application is 64.05% which is effective. According to the result of Nursina's research that available applications in smartphones can be used as a medium of learning by students to facilitate the acquisition of science and to learn materials effectively and efficiently (Nursina et al., 2017). In this study students are directed in such a way in using android applications to work on the project so that unexpected things can be controlled properly. in addition, students are also greatly helped by using android applications in doing assignments. they can explore themselves when working on tasks so that they get maximum results.

The third indicator of the effectiveness of android application in doing homework or tasks, which shows a big percentage is 80,00 %, it's a very effective category. The use of android apps to do homework or task has changed students who were lazy to do homework in the past, and now can to race with another in creating and presenting their best video project. If previously student interest was very low in doing assignments, now student interest is increased after being given a project assignment by utilizing the android application. Students do not consider that the task given by the teacher as a burden anymore because they see it as an interesting activity.

According to Vandalita's research, she said that the students who learn with smartphones in the classroom appeared to be more active in the discussion. Each member of a group worked well together in discussing the material given by the teacher, and they are very enthusiastic in the discussion/question and answer session among groups. The questions asked by students are also more meaningful. This happened because learning with smartphones can make students' perspectives more open and at once make students get a lot of knowledge that was not covered and included in the course books. Each group also reveal high competitiveness to show the best result in the discussion (Rambitan, 2015).

For the result of indicator achievement about the implication of android apps utilization, it shows 68,00% which is effective. Combining the passion with a task can boost students creativity. Essentially, the places for learning is not limited by the classroom so that students can learn wherever through their smartphone. The implication of this implementation is more students enthusiastic and diligent to do their homework or task. This can be seen from the comparison of preliminary research data with result research data, which on average there is an increase in doing the task.

Furthermore, the main purpose of learning is the participation of students towards the material and media that we display. A teacher in the era of technology is now demanded have experience and practice applying, analyzing, synthesizing, and evaluating rather than just understand and provide information to students (Purwanti, 2015).

This is in accordance with explanation in the paper reseach that students in project based learning applied class, according to the observation, are more active and creative and think more critically than students in classical learning applied class. By providing pleasant ambiance, students can get along during learning process (Gerhana et al., 2017).

CONCLUSION

The Effectiveness of android apps as a student's tools in doing their integrated science subject task is considered effective. It is proved by result percentage of effectiveness questionnaires given to students.

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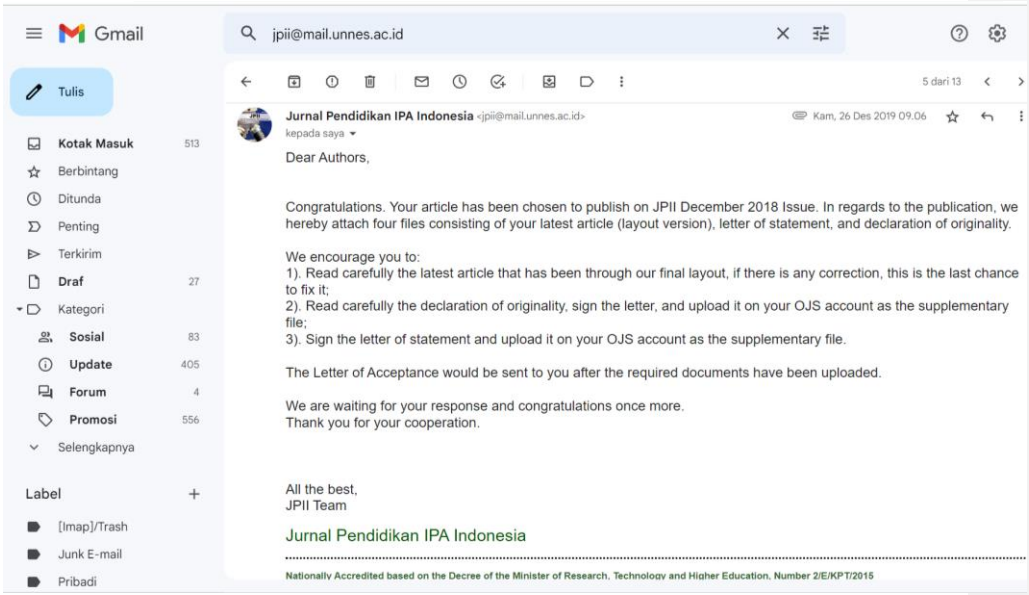

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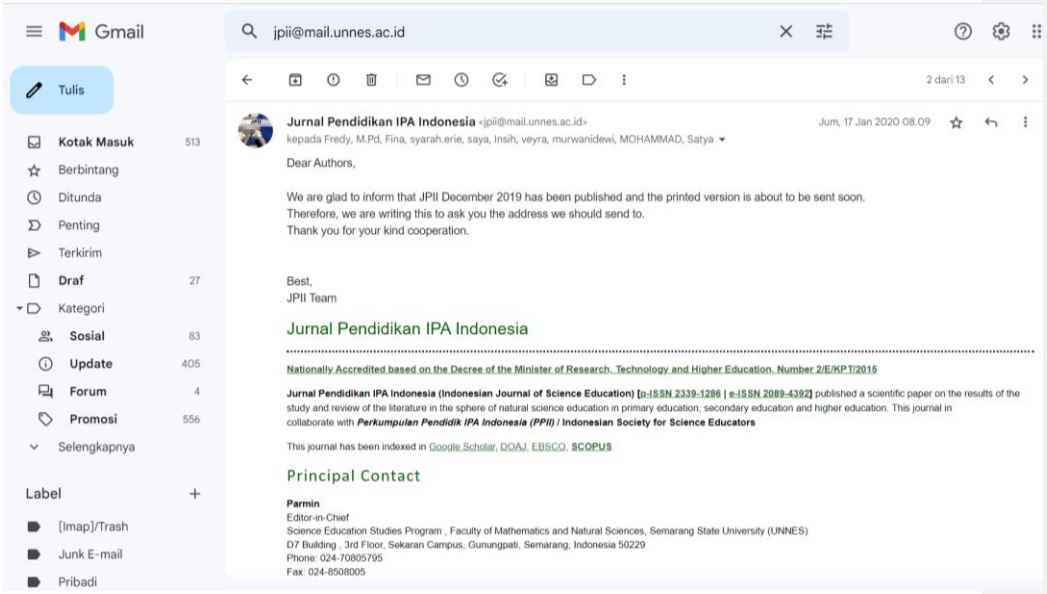

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