Evaluation of Learning Media Virtual Box Application In Basic Network Computer

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Abstract
This study aims to look at the implementation of virtual box application learning media reviewed from assure model consisting of six stages in class X TKJ SMKN 1 Painan. This research is an evaluation research. Which uses quantitative research methods to examine certain populations or samples, the data collected in this study is primary data taken directly through questionnaires, where the data are taken through assure stages by questionnaire method. The results of quantitative analysis can be concluded that the evaluation of the use of virtual box application learning media in basic network computer subjects is in a high category of 82.76% meaning that effective learning media is applied in basic network computer learning after reviewing the six stages of the assure model and judging from the results in the stalling of the six stages, which is 82.76% that fall into the high category. This research is feasible and reasonable because it does not contradict the theory.

Keywords: Evaluation, Learning Media, Virtual Box

INTRODUCTION
Learning media is one of the important components contained in the learning process. Utilization of learning media should be a part that gets the attention of teachers in learning activities. However, the lack of variety and not optimal learning media used causes a lack of interest in students to learn and leads to low learning outcomes.

Media is one component in the learning process, so the role of media in learning is not only as a teaching tool but as an important part of the learning process. Components contained in the learning based on Musfiquoon (2012:35) are objective components, material or material components, strategy components, tool and media components, and evaluation components. To support the success of media position learning in learning is very important, because the media is not only a messenger that must be controlled completely by human sources, but can also benefit teachers in the presentation of learning materials. With the benefit of the media, learning can directly effectively and achieve maximum results.

Graduates who have specific field skills in accordance with the competencies of the selected skills are graduates of vocational high schools (SMK). Students will be prepared
to be ready to enter the industry and create jobs independently, it is in the curriculum. So to achieve its goal students have been equipped with a variety of skills. The rapid development of technology is also sophisticated in the field of information technology and computer networks so that the needs of its workforce in this field are increasing. At SMKN 1 Painan has opened a network computer engineering department (TKJ) that equips students within skills in the field.

Therefore, from some weaknesses in the utilization of virtual boxes in SMKN 1 Painan, it is necessary to evaluate. To be able to evaluate well, it takes a model that is appropriate and suitable with the object evaluated will have an impact and be useful in the framework of decision making. It is in accordance with the opinion of The Believer (2011:493) that: "The evaluation model is very useful in assisting data decision making as a decision making material, evaluation can also be used for decision making whether continued, stopped, or modified". In the evaluation of virtual box learning media in basic network computer subjects of class X TKJ SMKN 1 Painan, researchers used ASSURE model using virtual box learning media.

The purpose of an evaluation of learning media judging by the strengths and weaknesses of the learning media that has been created by the teacher, can usually be clearly known after the program is implemented in the classroom and evaluated carefully. The results obtained from the evaluation will give guidance to teachers about which parts of the learning media are already good and which parts are not good so that they have not been able to achieve the objectives of the development of learning media which in this case is expected to be related to the achievement of learning objectives that have been prepared.

On the basis of the evaluation results can be made necessary improvements, both at the time the media is being used and after use. Improvements made after this media is finished using, will be useful for the purposes of media improvement in the next learning activities. The media evaluation carried out is basically focused on several objectives, namely:

1. Choose the educational media that will be used by the class.
2. To see the procedure / mechanization of the use of a tool.
3. To check if the purpose of using the tool has been achieved.
4. assess the ability of teachers to use educational media.
5. Provide information for administrative purposes.
6. To fix the media tools themselves.

The development of information and communication technology has had an influence in the world of education in Indonesia, especially in the learning process. One indication of this phenomenon is the shift in the learning process where the interaction between educators and learners is not only done through face-to-face relationships but also done with communication media such as computers, the internet, and so on.

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1. Make it easier for students to get teaching materials
2. Increase active participation of students
3. Improving students’ self-learning skills
4. Improving the quality of education and training materials
5. Improve the ability to display information with information technology devices

Expanding the reach of the teaching and learning process by using a computer network is not limited to space.

Virtual Box is a computer program under Windows that is a tool or virtualization program that can be used to execute "additional" operating systems in the "main" operating system, in other words an operating system in which there is an operating system. Can be exemplified for someone willing to try to use certain operating systems such as operating systems in use windows 7 and want to try how to use or want to see the appearance of other operating systems (ubuntu, windows 10 and others), such examples we can take advantage of for people who want to do simulation or trial an operating system without having to lose the operating system used.

Through these benefits the author has the idea to use virtual boxes as a learning medium for operating system installation for vocational school students where smk class X students majoring in Network Computer Engineering get material about operating system installation. Here students can do and try to simulate the installation of any operating system accurately and real in accordance with the real process without having to fear the loss of important data on the computer or pc. Moreover, this virtual tool is one of the programs that has stability and interface in the installation process exactly the same as the installation of the operating system in reality and very different from other virtualization tools. By using the virtual box in the installation step we do not need its own partition and also do not interfere with the hard disk by having to format the hard disk at the beginning of installation such as the installation of a new operating system in reality.

**METHOD**

**Media Evaluation Using Assure Model**

Learning activities in assure learning model is the result of the development of Continental European scientists. As Benny A wrote. Personally that, "Assure model was developed by Sharoon Smaldino, Robert Heinich, James Russel, and Michael Molenda in the book "Instructional Technology and Media for Learning". The teacher's attention to students is realized through the role of teachers in helping students in every learning process. The learning assistance integrated in Assure's learning model focuses more on media and technology utilization. As Benny A wrote. Personal (2011) that assure learning model is more oriented towards utilizing media and technology in creating desired learning processes and activities. Assure’s learning model aims to provide optimal
learning outcomes and create successful learning, with a record of systematic and holistic implementation of learning. The practical and easy-to-use aspect is the subsequent study as the purpose of assure learning model.

The ASSURE model is one of the instructions and planning that can help for how to plan, identify, determine goals, choose methods and materials, and evaluate. This ASSURE model is a reference for educators in teaching learners in lessons planned and organized systematically by integrating technology and media so that learning becomes more effective and meaningful for learners. The stages, according to Smaldino, are the description of the ASSURE model, as follows:

**A: Analyze Learner characteristic**

The first step is to identify the characteristics of the learner. Learners, perhaps students, students, trainees, or members of a learning organization.

1. **S:** State objectives

   The next step is to formulate learning objectives as specifically as possible. This goal may be outlined in the syllabus, textbooks, curriculum, or developed by the teacher himself. ABGD technique to express objectives (Mager, 1997): (Audience): what learners do (not what teachers do), (Behaviour): verbs that describe the skills to be achieved after learning, (Conditions): a statement of purpose covering the conditions under which the work is observed, (Degree): a statement of purpose that identifies standards or criteria that will decide the extent to which success for the work is acceptable.

   Although there is a wide range of opinions on how best to describe and organize the types of learning, there are E categories (domains) that are widely accepted namely: cognitive, affective, and psychomotor skills. Smaldino (2005) adds interpersonal skills, because these skills are very important in a teamwork.

2. **S:** Selects method, media and materialism

   The plan for the use of media and technology, first of all of course demands systematic elections. The process of choosing there are three stages, namely: (1) determining the appropriate method for a learning task, (2) selecting a form of media that matches the method to be presented, and (3) selecting, modifying or designing the material specifically in the form of media. The latest research by Mc Alpin & Weston, 1994 (in Smaldino, 2005) presents certain criteria that are important in media assessment.

**U: Utilized media and materialism**

The paradigm shift in learning from teacher–centered to student—allows learners to utilize the material, either independently or in small groups rather than listening to teacher presentations classically.

**R: Require Learner Participation**

Educators who realize active participation in learning, will increase learning
activities. John Dewey in the 90s had proposed the partition. Further developments emerged cognitive learning theory that emphasizes mental processes, also supports such active participation. Behaviorists suggest that individuals should do something, so learning is a process for trying different behaviors with pleasant results. With this approach, learning designers have to find a way for learners to do things.

From a cognitive psychology point of view it is suggested that the learner builds mental schemata when his brain actively remembers or applies some concept or principle. Constructivists as well as behaviorism view learning as an active process, but the emphasis is different. Constructivist flow emphasizes more on mental processes, not on physical activity.

E: Evaluated

Evaluation and revision are the most important components for the development of learning quality. Firstly, the results of the learning statement on the objectives will help to develop criteria for evaluating the performance of learners both individually and in groups. to assess the achievement of learning outcomes depends on the nature of that goal. There are purposes that demand cognitive skills, for example remembering OHM laws, distinguishing adjectives from adjectives, concluding something. Both Assessing methods and media, Evaluation also assesses learning methods and media. Learning can help to obtain data in a subtle way. For example: teacher discussions with learners indicate that learners prefer self-learning at the time of group presentation. Conversations with media specialists will focus on the specific value of media in a learning unit, which is needed to improve learning in the future. Revision The last step is to look again at the results of the evaluation data that will be collected. Is there a gap between what is expected and what happens. Do learners achieve a goal? How do learners react to the material and media presented? If the evaluation data shows weaknesses in certain components, go back to that section by planning and revising them.

The indicators obtained from this Assure model are seen from the chart below:
Research Samples

The trial was conducted to 30 students of grade XI TKJ who had previously used virtual box media applications in basic network computer subjects in the Department of Network Computer Engineering SMKN 1 Painan. While the sample in this study was 58 students of X TKJ SMKN 1 Painan.

Research Instruments

The tool used for data collection in this study is a questionnaire. Polls are used to obtain data. Question items are created by following the Likert Scale model. Where each respondent can choose an answer by cross-marking (X) on the answer sheet. Alternative answers to each item are strongly agree (SS), agree (S), undecided/neutral (N), disagree (TS), strongly disagree (STS). After the data is collected then in the analysis by describing or describing the data that has been collected by presenting the data through tables, graphs, pie charts, mode calculations, median, mean, calculations, percentiles, calculation of data dissemination through calculation of average and standard deviation and percentage calculation.
RESULTS AND DISCUSSION

Table 1. Recapitulation of Respondents' Achievement Levels

<table>
<thead>
<tr>
<th>No.</th>
<th>Model Assure</th>
<th>TPR (%)</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Analyze Learner Characteristic State Objectives</td>
<td>82,32</td>
<td>High</td>
</tr>
<tr>
<td>22.</td>
<td>State Objectives</td>
<td>80,69</td>
<td>High</td>
</tr>
<tr>
<td>3.</td>
<td>Select methods, media and materials</td>
<td>77,29</td>
<td>Medium</td>
</tr>
<tr>
<td>4.</td>
<td>Utilize media and materials</td>
<td>82,80</td>
<td>High</td>
</tr>
<tr>
<td>5.</td>
<td>Require Learner Participation</td>
<td>78,65</td>
<td>Medium</td>
</tr>
<tr>
<td>6.</td>
<td>Evaluate (rate)</td>
<td>75,76</td>
<td>Medium</td>
</tr>
</tbody>
</table>

In this study, quantitative data was obtained from a questionnaire distributed to 58 students majoring in Network Computer Engineering with question items that have been tested for validity. The questionnaire consists of 6 stages, namely a) Stages Analyze Learner Characteristic, b) State Objectives (Stating Goals), c) Stages Select method, media and material (Choosing methods, media and materials), d) Utilize media and materials, e) Require Learner Participation (requesting student participation), and stage f) Evaluate (assess).

From quantitative data analysis for each stage in assure model, seen from Analyze Learner Characteristic (analyzing the character of learners) is in a high category of 83.32%. State Objectives (Stating Goals) is in the high category of 80.69% and The Select Method, Media and Material (Choosing methods, media and materials) is in the Medium category of 77.29%. Utilize media and materials (utilizing media and materials) obtained a presentation rate of 82.80% in high categories. The Require Learner Participation stage (requesting the participation of learners) obtained a respondent achievement rate of 78.65% with a moderate category. And the last stage evaluate (assess) obtained the respondent’s level of 75.76 % with a moderate category. And the results of the six stages are 82.76% that fall into the high category. Indicators in this study are assure model stages. From the results of quantitative data analysis, it can be concluded that virtual box...
media is very helpful for teachers and students in the learning process because of the lack of support for infrastructure and the lack of planning from educators in the utilization of virtual box application learning media. If the school has to meet all the needs of teachers and students. In addition, with the application of virtual box media students are more passionate and motivated in learning so as to improve student interaction and learning outcomes.

CONCLUSION
This research is feasible and reasonable because it does not contradict the theory. And the implementation of virtual box defense media can still be continued for the next year in exchange for limited facilities and infrastructure of network practice in schools and can be used to study at home. Good usage process for teachers and students can improve effectiveness and efficiency. This means that the implications of virtual box learning media can be used to convey basic network computer learning materials and improve understanding on learning concepts. Virtual box learning media can also help students in learning independently outside of lesson hours.

REFERENCES

Biodata Penulis
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