

Effectiveness of Problem-Based Learning Application with Video Assistance on Improving Medical Record Understanding

Agus Riyanto*, Syukri Hamzah, Hadiwinarto Hadiwinarto

Bengkulu University, Indonesia

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Abstract

The study's purpose was to determine whether there was an increase in understanding of medical records that were not taught and taught using the video-assisted Problem Based Learning model. This research is experimental in the form of a Quasi Experiment with a control group. Still, it cannot fully function to control external variables that affect the implementation of the experiment. The research design used was a "Nonequivalent (Pretest-Posttest) Control Group Design." The research population was all nursing students from STIKES Bhakti Husada Bengkulu. The research sample is class IA as the control class and class IB as the experimental class. Data collection was carried out using medical record comprehension tests in the form of pretest and post-test, observation, and documentation. Data analysis showed that students' understanding of medical records in the experimental class using the Problem Based Learning learning model as a learning model was in the high category, with a percentage of 81.05%, while the control class using conventional learning models was in the medium category, with a rate of 69.30%. Secondly, from the results of the analysis of hypothesis testing using the t-test, the value of $\text{sig} = 0.01$ is obtained. Thus there is an increase in the understanding of medical records of students taught through the Video-assisted Problem Based Learning model.

*Alamat Korespondensi:
E-mail: agusriyanto105@gmail.com

INTRODUCTION

Learning is a change in behavior or appearance, with a series of activities, for example, reading, observing, listening, imitating, etc. Learning will also improve if the subject learns to experience or do it. Learning is a process of interaction between the human self (id-ego-super ego) and the environment in the form of personal facts, concepts, or theories. In this case, there is an intention that the interaction process is: (1) the process of internalization into the learner, (2) is carried out actively, with all the five senses playing a role (Darmadi, 2017). Learning is a process of seeking knowledge that can be done anywhere using the media and can be obtained by conducting dialogue, reading books, and conducting research. Learning is a process of remembering and gaining knowledge, and a process that can be done anywhere and anytime in obtaining a truth or a skill that can be mastered and used according to needs. (Yuanta, 2020).

Medical records are written and recorded information about identity, anamnesis, physical determinations, laboratories, and diagnoses of all medical services and actions given to patients. Medical records have a comprehensive meaning, not just recording activities, but have an understanding as a system for organizing medical records starting from recording as long as patients receive medical services, followed by organizing, storing, and issuing medical record files from the storage area to serve requests/ borrowing by patients or for other purposes. Due to the complexity of managing medical records, it is time for every modern hospital to replace traditional (manual) medical record management with electronic ones. Even more than that, an integrated electronic health record system (RKE) can be built. Electronic medical records (RME) are expected to improve hospital management's professionalism and performance through three benefits, namely general, operational and organizational benefits. It must be admitted that the change from a manual system to RME is not easy; it needs a hard effort in the form of a patient safety movement campaign. (Handiwidjojo, 2015)

Management of medical records in hospitals to support the achievement of orderly administration in an effort to achieve hospital goals, namely to improve the quality of health services in hospitals. Based on the pre-research interviews, one of the essential things that are regulated in the management of inpatient medical records at Semarang City Hospital is the time for returning medical record files related to the completeness of filling in medical record files. Especially for hospitalization, the problems faced will be more and more complex. In Semarang City Hospital, many documents still need to be completed, and the time for returning files is more than the specified time, which hinders further processing (Giyana et al., 2012).

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Using an inappropriate learning model can lead to boredom, lack of understanding of the material, and monotony. Hence, students need more motivation to learn, mainly because the information technology-based lecture material will be easy to understand with direct practice. Based on the results of observations, researchers found that teachers still use discussion and demonstration learning or lectures. Discussion learning will make students less interested in learning and understanding concepts due to a lack of visualization. There are still many students who need help understanding the material. As for the demonstration/student lecture method, sometimes it tends to

be passive and only the teacher plays an active role, resulting in passive students remaining passive and only active students who are interested in and understand the material. Even though students' understanding of concepts is fundamental, understanding them correctly and adequately is necessary to develop and apply them in real situations (Saharsa et al., 2018). 4C skills enable students to face and adapt to the development of the environment, compete, make use of the potential to identify and solve problems, create opportunities, work effectively, improve their verbal and analytical skills, reflect on themselves, socialize, be heedful to the environment, and control egos and emotions, and develop thoughts and ideas to solve problems (Tohani & Aulia, 2022)

Improving students' ability to speak is a success in increasing learning outcomes at SMP IT Istiqomah Bengkulu, the assessment is carried out based on mastery of the material, self-confidence, flexibility, and mastery of the audience's atmosphere. Because speaking is a tool for communicating with one another (Riyanto et al., 2020), video tutorial learning media will help simplify the learning process for students and lecturers. Students can learn in advance by seeing and absorbing learning material more thoroughly. Thus, the lecturer can explain the material sparingly so that the learning process can be more engaging, effective, and efficient. With the above considerations, it is necessary to conduct research on improving the quality of learning in visual programming courses using learning media in the form of video tutorial learning media (Wirasasmita & Putra, 2018).

Using a problem-based learning model (Problem Based Learning) educators/teachers can provoke or trigger all students to play an active role in the learning process. Because it presents contextual problems that stimulate students to learn, the focus of learning lies on the core concepts and principles of a discipline of study, involving students in problem-solving investigations and other meaningful tasks (Saharsa et al., 2018).

Problem-based teaching is a learning method that exposes students to practical problems as a foothold in learning; in other words, students learn through problems. According to Made Wena, a problem-based learning strategy is a learning approach that confronts students with practical problems in the form of ill-structured or open-ended stimuli in learning. (Wena, 2010: 91). The Problem Based Learning Learning Model is a learning model that confronts students with problems, where these problems teach students to construct their own knowledge, and develop higher-order thinking skills, as well as develop students' independence and confidence. Problem-based learning (PBM) aims to master the learning content of heuristic disciplines and develop problem-solving skills. Problem-based learning (PBM) is also related to learning about a more expansive life, skills in interpreting information, collaborative and team learning, and reflective and evaluative thinking skills. (Hasanah et al., 2017).

Learning media comes from Latin, which means between. This meaning can be interpreted as a communication tool used to carry information from a source to a recipient. When associated with learning activities, the media can be interpreted as a communication tool used in the process of carrying information from instructors to students (Mandalika & Syahril, 2020). Media is a physical form that conveys messages and stimulates students to learn (Batubara & Batubara, 2020). The era of the industrial revolution 4.0 is an era where almost everything is controlled by technology, including in the world of education. The impact of the 4.0 industrial revolution era in the world of education is that there are more and more technology-based learning media that make it easier for teachers to deliver material not even having to face to face. This technology-based learning media facilitates the learning process in terms of effectiveness and efficiency. There are several technology-based learning media that can be used to support the learning process. These media include Audio Media, Visual Media, and Audio Visual Media. This learning media can be implemented in all existing materials; in addition, it can be implemented at all levels of education; of course, teachers are required to continue to innovate with the learning media that will be used. Many benefits can be felt with the existence of technology-based learning media, besides being able to attract student

learning interest it can also improve learning achievement results. Because technology-based learning media is expected to be utilized in the learning process (Firmadani, 2020). The dimensions of knowledge abilities will also need to be taken into account in order to create healthy habits. Since the 1970s, the tradition of developing the seven habits of highly successful people has started, with Covey reading hundreds of books, essays, and more. (Chappuis, 2004) is described in his book entitled. (a) Be constructive, (b) begin with the end in mind, (c) Put first things first, (d) Think win-win, (e) Look first to understand, then to understand, (f) synergize, and (g) Sharpen the saw. The book has been the most readable book by readers in the world. After its publication, more than 150 million books have been sold and translated into 38 languages. According to (Silalahi, 2017), these seven behaviors constitute the fundamental concepts of human effectiveness, expressed in behavioral and personality psychology (Jarad et al., 2020). 21st -century learning in managing the package C equality education is a must for every educational institution to organize it in order to students develop all of their potential and abilities. Each component of education must be held in a quality manner (Barell & Barell, 2007)

The term understanding comes from the root word understand, which according to the Big Indonesian Dictionary is defined as much knowledge, opinion, flow, and proper understanding. Understanding itself is a process, method, or act of understanding or comprehending. In learning, understanding means the ability of students to be able to understand what is being taught by the teacher. In other words, understanding is the result of the learning process. Thus, it can be understood that understanding is a mental process of adaptation and transformation of knowledge (Hoiriyah et al., 2019). In previous research, learning media had also been developed as a medical record information system and received appreciation from students (Riyanto, 2020). This research adds alternative learning media in the Health Information Systems course to further enrich and deepen students' understanding of the implementation of medical records.

METHODS

This research is experimental research, this type of research is a quasi-experimental research type (quasi-experimental), where the design has a control group but cannot fully function to control external variables that affect the implementation of the experiment. The design of this study was the Nonequivalent (Pretest-Posttest) Control Group Design (Handley et al., 2018).

The population in this study was the entire Semester 1 Nursing Study Program, STIKES Bhakti Husada Bengkulu, which consisted of. The sampling technique in this study was simple random sampling (class). Simple random sampling (class) is a way of determining the sample by random class. The research instruments that will be used to collect data are learning achievement tests and observation sheets. Quantitative research data analysis techniques used in this study are descriptive and inferential.

RESULTS AND DISCUSSION

Giving an initial test called a PretestPretest with 20 concept understanding tests, then teaching students using the Video-assisted Problem Based Learning model. After that, at the next meeting, the researcher gave students an understanding test of medical record material with the same number of questions totaling 20 numbers, namely 20 multiple choice questions. Giving this test aims to determine the increased understanding of student medical record material using the Video-assisted Problem Based Learning model. Understanding of student medical record material on the concept comprehension test after categorizing there were two people with a percentage of 6.01% student conceptual understanding was in the deficient category. There were two people with a 6.01%

understanding of student medical record material in the low category, seven with a percentage of 32% in the medium category, and seven in the high category. Ten students are in the very high category with a percentage of 35%. So the value of students' understanding of concepts in the experimental group applied using the Problem Based Learning model has an average value of moderate and very high. Mark's significance in testing the hypothesis using the SPSS program for the t-test, namely 0.01, so the hypothesis in this study can be proven because 0.01 is smaller than 0.05. This means that there is a significant difference between the understanding of medical record material for students who are taught and students who are not taught using the Video-assisted Problem Based Learning learning model towards increasing understanding of medical record material for Nursing students.

The results of this study indicate that there is a significant increase in understanding of medical record material between students who are taught using the Video-assisted Problem Based Learning model and groups of students who do not use the Video-Assisted Laboratory-assisted Problem Based Learning model. This can be seen in the analysis of the t-test that has been done. Where the experimental class has a sample of 52 samples and the control class has 46 samples, and the average obtained for the experimental class is in the medium, high, and very high categorization. Based on the criteria for testing the results obtained, it can be shown that the t value is 0.01, so statistically, it can be concluded that H1 is accepted and H0 is rejected, namely there is a significant increase in understanding of medical record material among students who are taught using the assisted Problem Based Learning model. Videos with students who are not taught using the Problem Based Learning model with video assistance in the Nursing study program. An increase in students' understanding of medical record material was shown by the increased scores obtained by students in the experimental class compared to students in the control class. So that the success indicators of this research can be measured by obtaining 80% of students who get the maximum score in the experimental class, Learning by using the Problem Based Learning model students are required to be able to solve problems by discussing with group friends, students dare to express their ideas and be confident when presenting the results of group discussions. In the experimental class, student learning mastery increased compared to the control class. Thus learning using the Video-assisted Problem Based Learning model can improve understanding of medical record material.

In addition, the video-assisted Problem Based Learning learning model that is applied to the experimental class can improve students' understanding of concepts. This can happen due to various factors, both internal and external factors from the students themselves, the learning process in class using new learning methods or models can attract students to pay more attention to the material presented, while the control class does not experience a significant increase in students' understanding of concepts, because the learning method or model used by researchers makes students feel bored and not too interested in paying attention to the material presented by researchers. Learning media can be presented in an interesting way using multimedia-based software. Multimedia-based software consists of data processing system components in the form of programs to control the performance of computer systems. In the eyes of education and training, it can be made more interesting by visualizing it in the form of moving images accompanied by a brief explanation in the form of accompanying sound images so that it can be well received by students (Pramitasari, 2020)

CONCLUSION

The results of understanding the medical record material of students who are not taught using the Video-assisted Problem Based Learning model mean that the average student score is 69.30. The results of students' understanding of medical record material taught using the Video-assisted

Problem Based Learning model; the average student score is 81.05; this shows that the average student's conceptual understanding is in the high category, so the Problem Based Learning model has a positive influence on understanding student concept based on the test instrument (learning outcomes) provided. There is an increased understanding of medical record material between students who are taught using the Video-assisted Problem Based Learning model and students who are not taught using the Video-assisted Problem Based Learning model.

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