

STUDENTS' AND TEACHERS' PERCEPTION OF THE IMPLEMENTATION OF E-LEARNING: INDONESIAN CASES

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Abstract: This study aims to provide information about teachers' and students' perceptions learning implementation based on e-learning which has been conducted at Vocational High School Karya Nasional (Karnas) in Kuningan regency on July - December 2019. This study used a survey method with Likert scale 1-5. The population in this study are 50 students and 50 teachers of Vocational High School Karnas. The instrument used is a questionnaire to capture the perception of students and teachers on the learning implementation based on e-learning at school which has been applied at school. Reliability of the results obtained from the calculation value of r 0.97 for the questionnaire distributed to the teachers and r 0.99 for questionnaire distributed to the students. The results of students and teachers perceptions study learning based on implementation of e-learning at Vocational High School Karnas based on teachers respondent answers to perceptions of infrastructure aspects indicator showed 3.86 as the mean value. On the perception of the education management aspects indicators showed 3.61 as the mean value. In the perception of human resources aspects, the mean value is 3.51. Based on students respondent answers perceptions of the infrastructure aspects indicator showed 3.84 as the mean value. In the perception of the management aspects of education indicators, the mean value is 3.47. In the perception of human resources aspects, the mean value is 3.79. Based on the results of this study, it can be concluded that learning based on implementation of e-learning in Vocational High School Karnas is not well, because the internet connection are sometimes slow and disconnected, there are some teachers and students who do not understand about information technology and communication, also do not understand the procedure of learning implementation based on e-learning, and there are still some students who do not have a laptop / net book thus hindering the learning process.

Keywords: *perceptions; e-learning; learning outcomes*

INTRODUCTION

The development of information technology can improve performance and enable various activities to be carried out quickly, precisely, and accurately so as to increase productivity. In addition, the development of information technology has also influenced many areas of life, one of which is the field of education. The development of information and communication technology has brought enormous changes to the advancement of the world of education. Along with these developments, learning methods have also experienced many developments, both personal learning methods, learning media or the learning process. The form of the development of information technology that is applied in the world of education is e-learning (electronic learning).

E-learning is a technological innovation that has a very large contribution to changes in the learning process, where the learning process is no longer only listening to material descriptions from the teacher but students also carry out other activities such as overcoming the limitations of

time and space between students and teaching staff, accessing learning materials every time and repeatedly, increasing the quantity of students, being able to communicate with fellow students, students with teachers, or other groups outside the school institution, for example via the web, chat, and email. With e-learning, students can learn teaching materials that can be visualized in various formats or forms that are more dynamic and interactive or students will be motivated to be further involved in the learning process.

E-learning or online learning can be done by combining several types of learning resources such as documents, images, videos, and audio in learning. The learning material can be used by students by watching or reading. Learning resources like this are the main capital in developing online learning. Because, if the teacher packs learning as attractive as possible and in accordance with the characteristics of students, then the learning objectives can be achieved even in online activities. E-learning is structured with the aim of using an electronic or computer system

so that it can support the learning process. Allen (2013) stated that e-learning is an educational system or concept that utilizes information technology in the teaching and learning process. Here are some definitions of e-learning from various sources: (1) Distance learning process by combining principles in the learning process with technology (Chandrawati, 2010). (2) The learning system that is used as a means for the teaching and learning process is carried out without having to meet face-to-face between teachers and students (Ardiansyah, 2013).

According to Rosenberg (2001), the characteristics of e-learning are network, which makes it able to quickly repair, store or retrieve, distribute, and share learning and information.

The characteristics of e-learning according to Nursalam (2008) are: (1) utilize electronic technology services, (2) take advantage of the advantages of computers (digital media and computer networks), (3) using self-learning materials and then storing them on the computer, so that they can be accessed by lecturers and students anytime and anywhere, (4) utilizing the learning schedule, curriculum, learning progress results, and matters related to educational administration can be viewed at any time on the computer.

As for the benefits of e-learning are: (1) flexible: e-learning provides flexibility in choosing the time and place to access the trip, (2) independent learning: e-learning provides an opportunity for learners to independently control the success of learning, (3) cost efficiency: e-learning provides cost efficiency for the administration of the organizers, the efficiency of providing physical facilities and facilities for learning and cost efficiency for students is the cost of transportation and accommodation.

Furthermore, Pranoto, *et al.* (2009) stated that the benefits of e-learning are: (1) the use of e-learning to support the implementation of the learning process can increase students' absorption of the material being taught, (2) increase active participation of students, (3) increase active participation of students, (4) improving students' independent learning abilities, (5) improving the quality of teaching and training materials, and (6) improve the ability to display information with information technology devices, which is difficult to do with ordinary devices.

Each method and technique has its advantages and disadvantages, as in e-learning, the advantages of e-learning is it provides flexibility, interactivity, speed, and visualization through the

various advantages of each media. According to L. Tjokro (2009), e-learning has many advantages, namely: (1) more easily absorbed: using multimedia facilities in the form of images, text, animation, sound, and video, (2) much more cost-effective: no need for instructors, no need for a minimum audience, can be anywhere, can be anytime, and cheap to reproduce, (3) much more concise, meaning that there are not many class formalities, straight to the point, subjects as needed, and (4) available 24 hours/day – 7 days/week: that mastery of the material depends on the enthusiasm and absorption of students, can be monitored, and can be tested with e-test.

Learning with the e-learning model requires more additional equipment (such as computers, monitors, keyboards, etc.). According to my experience in the field that have applied e-learning in our classroom using e-learning for several years that the disadvantages of e-learning are as follows: (1) lack of interaction between teachers and students or even between students themselves, (2) the tendency to ignore academic or social aspects and instead make business/commercial aspects grow, (3) the teaching and learning process tends towards training rather than education, (4) the changing role of the teacher from previously mastering conventional learning techniques, is now also required to know learning techniques that use ICT (information, communication, and technology), (5) not all places have internet facilities (perhaps this is related to problems with the availability of electricity, telephone, or computer), (6) lack of human resources who master the internet, (7) lack of mastery of computer languages, (8) access to adequate computers can be a problem for students, (9) students can be frustrated if they cannot access graphics, pictures, and videos because of inadequate equipment, (10) availability of infrastructure that can be met, (11) information may vary in quality and accuracy so guidance and inquiry features are required, and (12) students can feel isolated.

Talking about perception, according to Retnoningsih and Suharso (2005, p.759), "perception is a response or direct discovery of an absorption process of a person knowing some things through his five senses." Meanwhile, according to Slameto (2003, p.102), "perception is a process that involves the entry of messages or information into the human brain". Through perception, humans are constantly in touch with their environment. This relationship is carried out through the senses, namely the senses of sight,

hearing, touch, taste, and smell. The same opinion is also expressed by Walgito (2010, p.5), "perception is a process that is preceded by sensing, namely the receipt of a stimulus by the individual through the senses or also called the sensory process."

According to Toha (2003), the factors that influence a person's perception are internal feelings, attitudes and individual characteristics, prejudices, desires or expectations, attention (focus), learning processes, physical conditions, mental disorders, values and needs as well as interests, and motivations. The second is external: family background, information obtained, knowledge and needs around, intensity, size, opposites, repetition of motion, new and familiar things or unfamiliar objects.

At Karnas Vocational High School, it has been three years of implementing e-learning-based learning in the normative, adaptive, and productive subject groups. Based on the observations done, there are several problems in the implementation of e-learning-based learning, namely the internet network is already available but the internet access speed capacity is less than optimal, this can be seen in the internet network that suddenly disconnects or is slow when it is accessed simultaneously, and there are still some students who do not have laptop. Thus hampering the teaching and learning process, teachers, and students still do not understand what, how, and the concept of e-learning-based learning due to lack of socialization and some preparations that must be made before implementing e-learning-based learning so that teachers and students find it difficult to implement or apply e-learning-based learning to students in the learning process. In this regard, the readiness of teachers and students is more important because if the teachers and students are not ready to implement e-learning-based learning, the implementation of e-learning-based learning will not work as expected. For this reason, teachers and students are expected to be able to prepare for the implementation of e-learning-based learning, because teachers and students have a very important role in implementing e-learning-based learning. With the implementation of e-learning-based learning, it is expected to improve the quality of learning for teachers and students.

Based on the explanation above, the researcher is interested in conducting this research with the aim of knowing the perceptions of students and teachers on the implementation of e-learning-based learning at Karnas Vocational High School

which has been implemented within a period of three years.

METHOD

This study used quantitative research with the instruments as data collectors.

The procedures taken in making the questionnaire are as follows: (1) Determine the indicators that form the basis for the preparation of statement items and create a grid of research instruments. (2) Develop a questionnaire design and then consult with the supervisor for suggestions, opinions, and improvements. Then the actual questionnaire is made. The questionnaire contains respondent data and questions. The two data collection tools are used in this study, the filling can be done by filling in and putting a check list () in the available column. In each question item the respondent can choose one of the 5 alternative answers provided. Of the five alternative answers for positive statements, each is given a score of 5 for strongly agree, 4 for agree, 3 for undecided, 2 for disagree, and 1 for strongly disagree, and for negative statements are given a score of 5 for strongly disagree, 4 for disagree, 3 for undecided, 2 for agree, and 1 for strongly agree. (3) Conduct a pre-test to 10 teacher respondents and 10 student respondents to test the validity and reliability of the research instrument. After analyzing the test results, the validity level was obtained, 16 invalid statements were obtained from 34 valid statements for teacher questionnaires and for student questionnaires, 3 invalid statements were obtained from 22 valid statements. From the pretest that has been carried out, both questionnaires have a reliability value, which is obtained (r_{xx}) = 0.96 for teachers and (r_{xx}) = 0.98 for students, it can be said that the value has a high reliability value because it is located between 0.80 - 1.00.

After the instrument is declared valid and reliable, then the actual research is carried out on the sample used as the respondent.

FINDINGS AND DISCUSSION

Based on the calculation of data about the perceptions of students and teachers on the implementation of e-learning-based learning at Karnas Vocational High School, it is known that: (1) The average value for the indicators of the infrastructure aspect in the teacher's questionnaire results has a value of 3.85 and the student's questionnaire results are 3.83. (2) The mean value for the indicators of the education management aspect in the teacher's questionnaire results has a

value of 3.60 and the student's questionnaire results are 3.46. (3) The average value for the indicators of the human resource aspect in the

teacher's questionnaire results has a value of 3.50 and the student's questionnaire results are 3.78.

Table 1. *Research result*

Indicator	Sub Indicator	Indicator Average Score	
		Teacher	Students
Aspects of infrastructure	Personal Computer (PC)	3,86	3,84
	Computer network components		
	Computer Network Server Classification		
	Multimedia equipment access schedule		
Aspects of Educational Management	Aspects of Material Substance	3,61	3,47
	Aspects of Learning Communication Display		
	Aspects of Learning Design		
Aspects of Human Resources	General knowledge of computers	3,51	3,79
	Knowledge of the internet		
	Skills in operating		
	Developing teaching materials		
	Increasing effectiveness and efficiency		

Based on the results of research on student and teacher perceptions of the implementation of e-learning-based learning at Karnas Vocational High School in Kuningan, it can be concluded that in the infrastructure aspect there is already the availability of supporting media such as personal computers (PCs) / laptops, LCDs, and projectors during the process of implementing e-learning-based learning. The internet network is available and can be accessed in all areas of the school environment, but if it is accessed simultaneously there are still obstacles, namely the internet network is sometimes slow and disconnected, then the classification of the school's computer network server already has a standard hard drive and a standard processor. Then the website provided by the school to implement e-learning-based learning can be accessed for 24 hours or login/logout at any time whose access schedule is set by the server. Based on the results of research on student and teacher perceptions of the implementation of e-learning-based learning at Karnas Vocational High School on indicators of education management aspects, it can be concluded that the application of e-learning-based learning is classified in the good category because the SK-KD is clearly stated, the learning objectives are in accordance with the SKKD, learning materials are in accordance with the curriculum 2013 and KTSP, learning materials are not in accordance with learning objectives, instructions are clear and easy to understand in the application of e-learning-based learning, subject matter is in accordance with the ability level of students, sample questions

are in accordance with learning objectives, practice questions are in accordance with learning objectives, the exercises made allow students to have competencies beyond the expected basic competencies, contain topics according to indicators, learning materials are presented in full, contain learning activities related to the needs of students, the material presented has a hub. In conjunction with other materials, the sentences used are simple sentences, some teaching materials are innovative and the material presented is in accordance with scientific rules. Based on the results of research on student and teacher perceptions of the implementation of e-learning-based learning at Karnas Vocational High School on the indicators of the human resource aspect, it can be concluded that in the implementation of e-learning-based learning there are still some teachers and students who do not understand information and communication technology, do not understand the procedures for implementing e-learning-based learning, therefore teachers and students should be given training on information communication technology and training on procedures for implementing e-learning-based learning.

CONCLUSION

Based on the results of the research that has been explained regarding the perception of students and teachers on the implementation of e-learning-based learning at Karnas Vocational High School as a whole, it has not been going well as seen by the internet network which is sometimes slow and

disconnected and there are still some teachers and students who do not understand information and communication technology and also do not understand the procedures in the implementation of e-learning-based learning.

Based on the results of follow-up research that can be given are as follows: Good cooperation is needed between school principals, teaching staff, students, and information communication technology managers so that the implementation of e-learning-based learning can run optimally so as to improve student learning achievement and evaluation is needed routinely once a month about the use of information and communication technology in the implementation of e-learning-based learning at Karnas Vocational High School.

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