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Abstract

The aim of this study is to determine the use of the Self Directed Learning model through the use of moodle technology media in which the learning model can enhance the quality and effectiveness of student learning independently so that students can use technology devices in a correct and proper way. This study utilizes a quantitative approach to the design of OneGroup Pretest-Posttest Design with a pre-experimental research technique. The researcher used cluster samples in the process of collecting samples. The data collected from this study was further analyzed and conclusions were reached using the Prerequisite Test of Analysis and the Paired T-Test Test for hypotheses. The findings of the study with the descriptive statistical analysis showed that the pre-test average value was lower than the post-test average, in description there were differences in the average learning outcomes between the pre-test and post-test. Based on the results of the Paired T-Test statistics, Ha is accepted as having t-count value (13,691) greater than T-table (2,131). The results of the pre-testand posttesting are differenced on average so there is a significant effect of self-directed learning using moodle to improve student learning achievement in academic writing skills. The average value of the experimental class was included in a sufficient category, according to calculated results from Gainscores. It means learning through self-directed e-learning is quite effective in order to improve students ' academic writing abilities. Self-directed learning through Moodle and learning resources are quite effective and efficient in improving student learning and can encourage students to learn on-campus as well as at home, train students to be ready for learning, allow students to participate actively during face to face teaching and learning activities so that students can enhance learning outcomes.

Keywords : self-directed learning, academic writing, Moodle

INTRODUCTION

Today's technological revolution has practically and effectively transformed social thinking and perspective. Where the speed of data transmission and capture of information becomes very crucial for enhancing education. Education is the main factor in enhancing human resource quality. therefore, it is important to improve the quality of education itself which is strongly influenced through the education system, including curriculum, material, educators, learning methods, and also the media used in learning. One of the efforts to enhance the quality of education in Indonesia is

utilizing communication and information technology in the education sector. According to Harputra (2018), the present English language learning technological innovation would support learning goals by using different techniques and approaches. A positive approach to technology to accelerate the distribution of education and development through the use of new technology.

Technology that is constantly growing requires us to preserve to attempt improving education quality in this country, including through the use of ICT to support independent learning. Kasworm (1991) describes self-directing learning as a personal characteristic in order to educate developing individuals who have moral, emotional and intellectual independence (in Hamzah, 2007).

Independent learning is component of the behavioral theory, according to (Bell, 2006) and Akroyd (2006), which states that a student's achievement is affected by behavior, motivation, and aspects of the learning environment. Chamot (2000) stated that self-regulated learning is a situation for learners have control over the learning process by applying the knowledge and application of appropriate strategies to understand their tasks, enhancing decision-making, and learning motivation.

Self-learning Strategies allow students to learn independently from varied sources of instructional materials, to have control of learning and time flexibility and to learn, lies in learners. Therefore, independent learning can be defined as a learner which places the learner as the individual in control, the supervisor, the decision-maker or the initiative, with or without the help of others, in fulfilling and attaining achievement with his own learning (Mudjiman, 2008).

Inline to Knowles (1975), Guglielmino (1991) Gibbons (2002), and Candi (1993) that Self Directed learning is an increase in knowledge, competence, achievement and personal self-development, which starts by learning self-planned and self-managed planning at its very own initiative, realizing self-learning needs in achieving learning goals by creating self-learning strategies, in addition to self-assessment of learning outcomes and having the responsibility to become agents of change in learning.

Several studies both at home or even abroad have shown that the use of teaching materials in the form of e-learning media can enhance education quality. At the same

time, in this generation of e-learning, public awareness of the teaching and learning process using e-learning could be even greater.

The self-directed e-learning application is intended to overcome the problem of separation of space-time between the students and the teachers through moodle. Self-directed e-learning refers to the process of learning that occurs in online courses using Internet networks in cyberspace (Pannen, 1999). Moodle is a software package that utilizes a computer (laptop) and other gadgets to develop the system and learning process. Students can then access the results of the development of the moodle over the internet. This application is referred to as the Learning Management System (LMS) or Course Management System (CMS) as the learning system and process (Amin, 2012).

The self-directed e-learning strategy to support the implementation of the learning method is expected to enhance students ' absorption from the teaching material. The approach is to increase the participation of learners. It will enhance student self-learning abilities. It also improves the quality of education and training materials. Improved ability to display information using information and technology devices that are difficult to do with ordinary devices; expanded the reach of the education process through the use of computer networks, not just for time and space. In order to achieve this, it should be noted that the displayed information should not only offer perfection priority to the provision of correct information; focus on the teaching and learning techniques; focus on the techniques used to evaluate the progress of students and storage progress data of students.

Therefore, researchers wanting to collaborate on the Self Directed e-Learning model through moodle media will be able to improve the quality and effectiveness of student learning independently. This means that students can use technology devices correctly and precisely.

METHODOLOGY(Bold Times New Roman, 12)

A quantitative method is used in this research because all results presented in the research can be measured and converted as numbers. In this study, used a pre-

experimental research method with the design of OneGroup Pretest-Posttest Design. This technique describes how the results were observed in a group starting with the pre-test then given treatment (Sugiyono, 2017). The results of the test were evaluated with the posttest, whether or not results are increased. Pretest-posttest design for Formula One Groups:



Figure 1.Formula of Pre Experiment One Group Pre test-Post test Design

The first thing with experiments conducted with a single sample design is to test a sample that has not been treated as a pre-test (O1). After the time record has been reached, the treatment (X) is then conducted for eight meetings using the self-directed e-learning model. The tests were conducted after students have been treated to measure students ' levels of academic writing skills given using the experimental variable (X). In the posttest results, data are obtained from the experiment. Then the data is analyzed using t-test (Arikunto; 2007).

In the process of taking a sample, the writer used the cluster sample and the number of the whole sample was 16 students.

From the data obtained through this analysis through the SPSS program ver. 22, the analysis and test of the hypotheses using Paired Test, which compares the mean between group 1 and group 2, are the results that are obtained using parametric statistics. The results are analyzed and conclusions. If the value of t-count is smaller than t-table, then Ha is rejected, when t-count is larger than t-table, Ha is accepted.

RESULT/FINDINGS

The process of learning within the experimental group by methods of self-direct elearning through Moodle begins with discussing the registration material for elearning account and introducing the use of e-learning with Moodle, pretest, applying to learn by using self-directed E-Learning and post-test.

Before the learning process begins the teacher explains the indicators and learning objectives. The teacher provides motivation and appreciation to determine the extent to which students' knowledge of learning material. In this experimental class, the teacher applies self-directed E-Learning through Moodle in the class.

The teacher explains the indicators and learning goals before the learning process starts. The teacher motivates and appreciates the extent to which the learning materials were recognized to students. The teacher used self-directed e-learning by Moodle in this experimental class.

Students should take an active role in the learning process, where students are the central focus of learning and the teacher is a facilitator. The teacher only attaches topics on the E-Learning site (yuliadamanik.moodlecloud.com) as well as examples of material questions and discussion forums as a place where teachers and students interact without a face-to-face meeting.

Descriptive statistical analysis is used to describe the results of this study, which show a minimum value of 50, a maximum value of 60 and an average value of 53,62 for pre-test. While the minimum value for the posttest is 67, the maximum is 93 with an average value of 80.43. The following table shows in detail:

	N	Min	Max	Sum	Mean	Std. Deviation
PRETEST	16	50,00	60,00	858,00	53,62	3,86
POSTTEST	16	67,00	93,00	1287,00	80,43	8,11
Valid N (listwise)	16					

Table.1. Descriptive Statistics

Based on the table above, the average pretest value in the experimental group has been shown to have initial conditions with a low class (53.62). Following the implementation of learning using the self-directed e-learning model based on moodle, the average post-test score is in the high category (89.43). In the description, there are differences between the average learning outcomes in the pretest. So that the average value at the pretest is lower than the average value of the post-test. then the Paired Test statistics were conducted, next to prove that the difference is significant or not.

After the normality test and the variance homogeneity test, the findings of the data are distributed and homogeneous variances are obtained. Then use SPSS ver 22 to make the t-test statistics. The findings of tests carried out by students on the English Language Learning Program (experimental class) in the fourth semester are as follows:

]	Paired Diffe	erences				
		Mean	Std. Deviation	Std. Error Mean		ence Interval ifference	t	df	Sig. (2- tailed)
			Deviation	Weall	Lower	Upper			
Pair 1	PRETEST - POSTTEST	-26,812	7,833	1,958	-30,986	-22,638	-13,691	15	,000

Table.2. Paired Samples Test

There is a mean paired difference value of -26.81 based on the table above. It means the difference between the average pre-test and post-test results. Next, indicate t-table with df 15 that is equivalent to 2.131 at the value of 0.025. It is known that the value of t-count is negative and equal to-13,691, meaning that the average value of the research results is below the lowest average in the pre-test. The value of t-count in this case is positive.

Thus, the t-count value (13,691) exceeds t-table (2,131) and Ha is accepted. So it can be concluded that there are differences in the average between the results of pretest and posttest and there is a significant effect of learning by using self-directed e-learning through moodle in improving learning outcomes in academic writing skills in students of English language study program fourth semester of the academic year 2018/2019 University of Graha Nusantara. The following table provides the calculation of the effectiveness of self-directed learning through moodle:

Table.3.	The	Result	of	Test

No	Pre-test	Post-test	Gain Score
1	50	85	35

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			E-10,
No	Pre-test	Post-test	Gain Score
2	53	72	19
3	55	93	38
4	50	67	17
5	55	92	37
6	50	68	18
7	55	78	23
8	60	90	30
9	55	90	35
10	60	80	20
11	55	82	27
12	50	78	28
13	50	80	30
14	50	80	30
15	50	80	30
16	60	72	12
Min	50	67	
Max	60	93	
Average	53,63	80,44	67,03

The findings show that the average value of the experimental class is 67.03 and is included within sufficient category based on calculations of Gain scores above. This indicates that learning through self-directed e-learning by moodle is effective in enhancing students' academic writing skills.

CONCLUSION

The research findings based on descriptive analysis showed that in the fourth semester of English Language Study Program of the 2018/2019 academic year at Graha Nusantara University, there were differences observed with the increase in the results of learning using self-directed e-learning through moodle for academic writing lessons. The student learning results obtained from the average posttest value in the experimental class were above the average pretest study value.

This proves the situation that students need a more interesting and understandable learning model that makes students easy to grasp the materials and not boredom which encourages interaction between teachers and students so that students can comprehend the material.

The application of moodle-based e-learning not only makes it possible to learn in the classroom but also at any time and anywhere without having to face each other, as long as both parties are connected to the Internet and students become more active in finding subjects attached or written by the teacher at the E-learning portal.

The conclusion is that self-directed e-learning through moodle and learning resources are more effective in enhancing student learning outcomes. Through learning using self-directed e-learning has proven to be a more effective learning model and allows students to study both on classroom and at home independently, train students to be prepared for learning, allow students to participate actively during face to face teaching and learning activities so that students enhance learning outcomes.

Based on the conclusions from the results of this study, there are a number of suggestions, namely (1) The teacher or course creator needs to optimize other forms of activity in Moodle so that students are more interested in using e-learning. Different training and education on the use of moodles as an independent learning model are then important to enhance teachers ' competences. (2) teachers and students must apply in this situation and use the internet as a way of discussing and sharing information through self-directed e-learning Moodle-based so that they are no longer limited to time and space. Without having to wait face to face in classes. (3) Teachers should always motivate students to participate in classes both in e-learning and conventional as well. (4) In order to make e-learning more attractive and not just considered as a complementary lesson, the teacher or course creator has to improve its ability in e-learning course management.

REFERENCES

Amin, I. M. (2019, Juni 2). Moodle Pembelajaran Berbasis Web. Retrieved from http://www.ishaqmadeamin.com/2012/12/moodle-pembelajaran-berbasisweb.html.

- Bell, P. D. (2006). Can Factors Related to Self-regulated Learning and Epistemological Beliefs Predict Learning Achievement in Undergraduate Asynchronous Web-based Courses? *Perspectives in Health Information Management*, 1-17.
- Bell, P. D., & Akroyd, D. (2006). Can factors related to self-regulated learning predict learning achievement in undergraduate asynchronous Web-based courses? *nternational Journal of Instructional Technology and Distance Learning*, 5-16.
- Chamot, A. U., Barnhardt, S., El-Dinary, P. B., Carbonaro, G., & Robbins, J. (1996). *Methods for teaching learning strategies in the foreign language classroom and*. Washington, DC: Clearinghouse on Languages and Linguistics.
- Gibbons, M. (2002). *The self-directed learning handbook: Challenging adolescent students to excel.* San Francisco: Jossey-Bass.
- Guglielmino, P. J., & Guglielmino, L. (2003). Are your learners ready for e-learning. The AMA handbook of e-learning. New York: American Management Association.
- Hamzah, U. B. (2010). Model pembelajaran: menciptakan proses belajar mengajar yang kreatif dan efektif. Jakarta: Bumi Aksara.
- Harputra, Y. (2018). Using the applications of information and communication technology in English teaching. *Elm və İnnovativ Texnologiyalar Jurnalı*, 39-50.
- KNOWLES, M. S. (1975). Self-Directed Learning A Guide for Learners and Teachers. Chicago: IL Follett Publishing Company.
- Pannen, P. (1999). engertian Sistem Pendidikan Terbuka dan Jarak Jauh. In d. (. Tian Belawati, *Pendidikan Terbuka dan Jarak Jauh*. (pp. 11-29). Jakarta: Universitas Terbuka.
- Sugiyono. (2016). *Metode Penelitian Kuantitatif, Kualitatif dan R&D, Cetakan ke-24.* Bandung: Alfabeta.