Commitment, Motivation, and Involvement of Students in Improving Academic Performance

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ABSTRACT

The use of technology in distance learning is now a trend in addition to face-to-face learning that cannot be done directly. But not all courses can be done remotely as in practical courses. The importance of using modules in remote practical learning helps students understand and improve skills in these courses. The purpose of this research is to develop an online learning module in business computer practice courses. Module testing is carried out to see the effectiveness of remote practical learning so as to improve performancestudent academics. The results of this study indicate that the use of modules helps in the distance learning process even though practical courses must be conducted face to face. Hypothesis testing shows that student commitment to improve academic performance has a positive effect so that there is an intention to acquire business computer practice learning skills. Meanwhile, motivation and involvement in class showed a significant effect. These results indicate that a commitment at the beginning of learning will encourage students to improve academic performance.

Keywords: *Commitment, Motivation, Engagement, Academic Performance, Module, Business Computer, Online Learning*

1. INTRODUCTION

The development of technology and information provides improvements to various aspects of life, especially education [1]–[4]. Many countries are competing to develop effective learning methods by utilizing developments in technology and information so as to improve the quality of education which in turn has an impact on academic performance. The development of information technology also has an impact on social interaction, modern economy in a country. In higher education, the role of information and communication technology is very helpful in the obligation to provide teaching, research, and community service.

Recently, the use of technology in the field of education has received a lot of attention [5]. This is aimed at equal distribution of education throughout the region. Many developing and developed countries design distance education methods whose goal is that everyone in both urban and rural areas obtains the same education. Problems that often occur in developing countries are the lack of equal distribution of education, lack of availability of facilities and infrastructure so that the use of information and communication technology
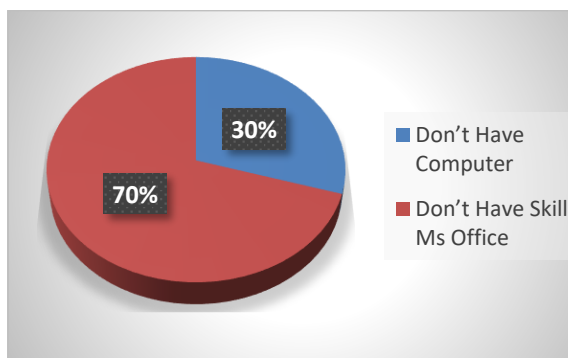
is expected to all levels of society have access to the same education. According to [6] that the structuring of education through technology by designing classes so as to encourage high-level skills and thinking. This is supported by research conducted [7] that the use of multimedia in learning will improve students' thinking skills compared to the face-to-face method. Research conducted [3], [8] also explains that the use of e-Learning in learning will improve academic, social, idea, and research skills.

At the end of 2019, the world was shocked by the Covid-19 disease outbreak which had an impact on various aspects of life. As a result, many countries have imposed lockdowns for all activities including the teaching and learning process in schools [9]. One of the affected countries is Indonesia, so the government through the Ministry of Education and Culture ordered all schools and universities to carry out the virtual learning process. So that schools and universities began to design virtual learning processes through the use of E-Learning either created by themselves or using a platform. According to [8] that the use of E-Learning helps educators and students to obtain independent information and knowledge. One of them is Medan

State University which implements virtual learning which is carried out in mid-March 2020. The learning process is carried out by utilizing E-Learning such as Sipda, Zoom, Google Meet and other products. It's been almost 3 semesters the implementation of learning has been done virtually.

This virtual learning does not always provide benefits or progress for students. This is because there are obstacles faced by students in the implementation of learning such as the availability of facilities, supporting facilities, or networks. Especially in practical courses where the implementation of learning must include direct practice while learning is carried out virtually. As a result, the learning process is not maximized. Such as the implementation of learning in the even semester of 2020/2021 where business computer application learning is carried out in the first year student business education study program. Under normal conditions, this course is carried out practically in a computer laboratory, but due to the current pandemic, it must be carried out virtually so that there are obstacles that cannot be directly practiced by students. The use of E-Learning used in this study uses google meet. Many E-Learning can be used in learning such as zoom, edmudo, google meet, sipda, and other e-learning. But according to the teacher and the ease of use, the E-Learning used is google meet.

Based on the initial survey conducted on first year students related to the practical learning of business computer applications, the following results were obtained.

Figure 1 Condition of Business Computer Application Students

The picture above shows that 70% of students who take computer application courses do not have the skills/understanding in using MS Office because they do not practice good learning at school . While 30% indicated that they did not have supporting facilities and infrastructure such as computers, making it difficult to practice using computer applications for business. In addition to the above problems, the unavailability of practice modules makes it increasingly difficult to learn this course at other times, so it is important to choose the right method so that learning can run more

effectively [9], [10]. One of the appropriate methods in virtual learning for practical courses is by providing learning modules whose purpose is to help students repeat the material after the course is finished. It is hoped that virtual learning through module creation can increase motivation, student satisfaction, and class attendance [11]–[13]. In contrast, according to [14], [15] shows traditional learning is more effective than online learning in terms of increasing motivation, satisfaction and attendance and has an impact on decreasing test scores.

One measure of the success of using modules in business computer application practice courses is student academic performance. Academic performance is the result achieved by students after carrying out the lecture process. Many factors affect academic performance where in this business computer application course there are obstacles such as the lack of availability of facilities and infrastructure as well as previously acquired skills, so it is important to know the factors that determine academic performance achieved by students. According to [16] that the importance of interaction, motivation, course structure, knowledge, and facilities on academic performance and student satisfaction. This is also supported by research conducted [17]–[19] which shows that motivation, engagement, academic interest, and commitment in the classroom have an impact on academic performance. Therefore, with the above problems, researchers are interested in examining the use of E-Learning in online learning for practical courses with various obstacles faced by students related to facilities and infrastructure and facilities that ultimately have an impact on their academic performance. The factors used in measuring academic performance are motivation, involvement, and commitment in online learning that takes place during the pandemic.

2. LITERATURE REVIEW

In the current pandemic conditions, universities are required to use online learning methods that utilize e-learning in the learning process [9]. E-learning itself is an implementation of technological and communication developments that bring changes to aspects of life, be it social, economic, educational and other aspects of life [1], [4]. According to [20] that there is a theory that underlies e-learning learning called constructivism theory which explains the types of new learning methods/strategies. This theory plays an important role in producing new learning methods, one of which is the theory of dialectical constructivism where learning methods emerge through individual experiences with social interactions, where knowledge reflects the external world filtered through culture, language, beliefs, and interactions with others, direct learning and modeling. . Information and communication technology is a technology that

processes new information which includes computers such as broadcasting, cellular telecommunications, and so on [1]. The development of information and communication technology includes the development of globalization that we cannot contain and must be used to improve the lives of many people and increase student creativity [3], [21].

According to [22], there are three learning environments, namely (1) online learning, (2) face-to-face, (3) blended learning. Through the use of technological developments, developments in the world of education can be through the development of online or virtual learning methods [23]. So far, learning is done using traditional methods, namely through direct face-to-face interaction between educators and students. But through the implementation of the development of information and communication technology, learning can be done online or virtual through the use of E-Learning. Through E-Learning, students will easily obtain information and knowledge independently [8] and can improve higher order thinking skills [7] . The forms of E-Learning that are often used in learning are Zoom, Google meet, Cisco, and others. The E-Learning that is often used in the online learning process is using Google Meet. Many advantages such as easy to use and free to use. According to research conducted [24] resulted that learning using Google was more efficient and effective and reduced time in evaluating assignments and student attendance. According to [25] that a learning using online methods is said to be successfully determined by a group of students consisting of: (1) social presence, (2) cognitive presence, (3) teaching attendance. This is supported by [16] that online learning includes interactions that are not done face-to-face, the freedom of space and time compared to traditional learning methods. Research conducted by [11]–[13] shows the results that online learning is better than traditional learning. But research conducted by [10], [14], [15] shows the opposite result where the traditional method is better in terms of motivation, satisfaction, and student attendance.

Motivation

Motivation is the drive that a person has to achieve something he wants. In online learning, it is important to motivate students to improve academic performance. According to [26] that motivation helps develop new skills in facing existing challenges and achieving success. Motivation can be measured by expectations and willingness [17] where expectations which include academic expectations, career, political involvement, social interaction can motivate in improving academic performance in higher education [27]–[29]. The results of research conducted by [30] show that students can improve academic performance if they are willing to study in the study program. This is supported by

research conducted by [27] that motivation that comes from within oneself in choosing in the academic field is the reason for improving academic performance. The importance of interaction in online learning, student motivation, instructor knowledge, and facilities have a positive impact on academic performance [16], [31], [32]. The importance of motivation as the power of creativity and readiness of learners in learning and academic performance [33], [34]. But research conducted by [35], [36] shows that motivation does not affect student academic performance in online learning. So the importance of the instructor's role in guiding online learning so that learning objectives and motivation are clear in online learning [37].

Involvement

The involvement of students in the learning process is participation in online learning. Students who are involved in the online learning process show participation to be able to take part in online learning which will ultimately improve their learning achievement. Students who are not involved in the learning process show a lack of care or only follow the requirements of the lecture so that there is no desire to improve learning achievement. In online learning, interaction can be done through synchronous tools such as video conferencing, audio channels, and asynchronous tools such as email [38] for the purpose of increasing interest in learning. Research conducted though [17] shows that simultaneously involvement has a significant effect on learning achievement but partially shows no effect. Research conducted [18] also explains that student involvement in class will increase their learning achievement. In online learning the importance of interaction which is a factor in learning [31] both between teachers and students and interactions among students [39].

Commitment

Commitment shows the desire in oneself to achieve one that is desired. The commitment in this study was measured by academic interest and learning behavior. Academic interest shows the desire of students to attend lectures well. Students who are not interested in attending lectures will not develop themselves in obtaining learning goals, understanding and intellectual development [40], [41]. Interests tend to develop skills and talents which will ultimately affect academic performance [42], [43]. In addition, interest will increase personal control, emotions, and feelings so that in the end it will affect academic performance [44], [45]. However, research conducted [46] shows that interest has no significant effect on academic performance. In addition to interest in learning, learning attitudes also show how committed students are in participating in online learning. Students who have a good learning attitude can be seen from how they behave during the online learning process. Someone's

dislike of a course or entering a study program that is not interested will affect their learning attitude. When students have good learning attitudes, they will always be present and show good attitudes in the learning process [47]–[49]. Through this good learning attitude during the learning process, it will help students receive material, improve thinking skills and ultimately improve academic performance [50]. But research conducted by [44] does not show that attendance has a significant effect on learning achievement.

3. RESEARCH METHODS

This research is a quantitative and developmental research where the learning module is developed first and then uses the module to determine the increase in academic performance through data collection data derived from questionnaires given to respondents. The location of this research in the Faculty of Economics, State University of Medan. The results of this study become a reference for evaluating e-learning learning at the Faculty of Economics, State University of Medan, especially academic performance. The research population is students of the Business Education Study Program, Faculty of Economics, Medan State University. Sampling used a random sampling method with the criteria that all students had carried out online learning using the platform during this pandemic period, especially in business computer application courses in the even semester of 2020/2021. Data collection is done online through the google form application. Researchers arrange questions and test the validity and reliability. Then after valid and reliable questions compiled into google form. The link from the google form is given to students to fill out. The analytical technique used in interpreting and analyzing the data is using the Structural Equation Model (SEM) which aims to determine the relationship between exogenous and endogenous variables where this model allows effects that are in line with temporary theory and for simultaneous evaluation of variables (including latent variables); In addition, SEM also provides model fit statistics. Prior to testing the model, the classical assumptions were tested first.

4. RESEARCH RESULTS AND DISCUSSION

This study aims to look at the use of business computer application modules to improve the academic performance of students in the business education study program. The population in this study was 60 students consisting of 2nd semester students who took business computer application courses, namely classes A and B. This study looked at the effectiveness of using modules in improving academic performance as seen from involvement, commitment, and motivation. Due to the pandemic period, filling out the questionnaire was done online. The number of respondents who filled out the questionnaire was 53 people or 74% of the total

research population. This is because researchers find it difficult to supervise respondents to fill out the questionnaire. Before looking at academic performance, first, the implementation of business computer application modules for students is carried out.

Implementation Phase (Implementation)

Implementation is the application of the use of modules in the learning process. The learning process is carried out online with the aim of how practical courses that should be carried out in a computer laboratory during distance learning can be done at home.

This implementation will provide an illustration that computer application courses can be done online and can be repeated at home aiming to improve student skills in using computer applications for business needs. The following are the results of the implementation of the module on students.

Table 1. Implementation Results for Students

Information	Degree of Achievement	Category
Ease for Users (Learnability)	86.26	Practical
Usability (Efficiency)	83.90	Practical
Effectiveness of time	82.26	Practical
Average	84.14	Practical

Source: Data processed

Based on the implementation of the module on students, it was found that 86.26% of students found it easy to use the module in the distance learning process. Meanwhile, 83.90% found that the business computer application module has efficient use in supporting practical learning at home. In addition, 82.26% that the use of the module will have time effectiveness in the learning process. So that in testing the implementation of the use of the module, it can be concluded that the category of testing is practical in the distance learning process. The following is a comparison picture of the implementation of the degree of achievement of the module implementation.

After testing the implementation of the module, the researcher tested the effect of using the module through involvement, commitment and motivation in the online learning process on academic performance through the use of a business computer application module. The following are the characteristics of the respondents in this study.

Characteristics of Respondents

The subject of this research was the second semester students of the Business Education Study Program, Faculty of Economics, State University of Medan. While the object of this research is to examine the use of practice modules in learning business

computer applications in improving academic performance related to involvement, commitment, and motivation during distance learning. The following are the characteristics of the respondents in this study.

Table 2. Characteristics of Respondents

Characteristics		Total	Percentage
Gender	Man	9	17
	Woman	44	83
High School Major	Science	11	22
	Social	25	47
	Vocational	17	32

Source: Data processed

Based on the table above, the results of the characteristics of respondents consisting of 9 men or 17% while women are 44 people or 83%. These results indicate that the participation of respondents in filling out the questionnaire is dominated by women compared to men. The total population is 70 people and 53 people fill out the questionnaire. The second characteristic of the respondents in this study is the majors taken during high school. Based on this it also shows that 11 people or 22% of respondents came from the Natural Sciences department while 25 respondents or 47% came from Social Sciences and the remaining 17 people or 32% came from vocational school. So it was concluded that most of the research subjects came from social sciences and were in accordance with the business education study program.

Hypothesis testing is done by testing the effect of motivation, involvement, and commitment to have a significant effect on the academic performance of students of the 2nd semester business education study program, Faculty of Economics, State University of Medan on business computer application courses that are carried out remotely

Table 3. Hypothesis Testing

	Original Sample (O)	T Statistics (|O/STDEV|)	P Values	Conclusion
Motivation -> Academic Performance	0.242	1.330	**0.184**	Hypothesis rejected
Engagement -> Academic Performance	0.328	1.505	**0.133**	Hypothesis rejected
Commitment -> Academic Performance	0.346	2.349	**0.019**	Hypothesis Accepted

Source: Data processed

Based on the table above, it shows that among the independent variables that affect academic performance, the results show that student commitment in participating in online learning has a positive and significant effect on academic performance

obtained. This can be seen from the significant level of 0.019 or less than 0.019. Meanwhile, the motivation and involvement of students in participating in online learning has no significant effect on academic performance.

Table 4. Coefficient of Determination

	R Square	R Square Adjusted
Academic Performance	0.243	0.197

Source: Data processed

Based on the table of determination coefficient above, the R Square value is 0.243 or 24.3%. This means that the influence of motivation, involvement, and commitment variables on student academic performance is 24.3% or is said to be weak. The rest is influenced by other variables that are not included in this study. This can also be seen in hypothesis testing which shows only 1 independent variable or commitment variable which has a significant effect on academic performance. Meanwhile, motivation and involvement have no significant effect.

Discussion

This study aims to look at the use of business computer application modules for practical courses that are taught remotely. The problem faced in this research is that many respondents do not have computers and skills in the use of business computer applications at the time of the initial survey. The business computer application course is a practical course that should be carried out in a computer laboratory. Due to the pandemic, all learning activities must be carried out online, causing difficulties for students in repeating related learning facilities and infrastructure. Therefore, it is important to use modules that help students participate in distance learning for practical courses. Based on testing the implementation of the use of the module, it was found that based on the description of ease for users, usability, and time effectiveness, it was obtained that the module was categorized as practical and easy to understand in the distance learning process. Modules can help students understand the material and repeat it again to get a better understanding.

The next test is to see student attitudes in the form of student motivation, involvement, and commitment in participating in online learning which aims to improve academic performance in business computer application courses during online learning. The first variable, namely motivation, shows the encouragement of students to take this course, which shows insignificant results where the score is less than 5%. These results indicate that student motivation is not a factor that shows a significant influence on academic performance and contradicts research conducted [17], [26], [47]. Online learning has been carried out for

quite a long time during the pandemic so that it is possible for students to get bored in learning that is carried out remotely. These results also indicate that student motivation during the learning process does not significantly increase academic performance.

The second variable that affects academic performance is student involvement in the online learning process. Involvement here looks at student interactions during the online learning process. The results of this study indicate that student involvement has no significant effect on improving student academic performance. this result contradicts the research conducted [17], [29] which shows that there is an influence of engagement on academic performance. This is due to the interaction during the learning process as a response so that online learning can be carried out properly. Distance learning is carried out in the absence of direct interaction, causing the importance of interactions such as questions during the learning process. However, because it is a practical course that is not carried out directly, it cannot significantly improve academic performance.

The last variable that affects academic performance is commitment. The commitment to this research shows the seriousness of students in participating in online learning during the pandemic. Students who are committed will promise themselves to be able to carry out practical lectures online. With this commitment, it will improve academic performance because students will be more serious in participating in the online learning process. The results of this study indicate a significant influence between commitment to academic performance. The results of this study are in line with research conducted [17], [30] which shows that commitment has an effect on student academic performance. This statement is supported through a commitment to increase students' desire to participate in online learning so that it will increase understanding and knowledge development [41]. According to [47], [48] that the commitment shown through a good attitude will provide good study habits for students which will ultimately have an impact on performance.

5. CONCLUSION

Based on the above discussion, it can be concluded that the use of business computer application modules can assist students in taking business computer application practice courses. In addition, the existence of motivation and involvement does not significantly affect the academic performance of students. Meanwhile, commitment in participating in online learning has a significant effect on improving academic performance. Based on the conclusions above, suggestions can be obtained so that practical learning can be carried out face-to-face due to the importance of facilities and infrastructure that support the implementation of learning for practical courses. In addition, motivation and direct interaction are important to improve academic performance, so it is recommended that learning be carried out using blended learning so that students can further improve their academic performance.

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