IMPLEMENTATION OF FLIPPED CLASSROOM TO INCREASE STUDENT ACTIVITY, MOTIVATION, AND LEARNING OUTCOMES IN THE INTEGRATED GOVERNMENT GRADUATE PROGRAM (S1 PIN) MULAWARMAN UNIVERSITY

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ABSTRACT

Lectures become the center of learning who dominate the activities in traditional classrooms. Most of the learning time in the classroom is spent on lecturing than students' activities which causes a lack of motivation in learning. The study aims to: 1) increase activities of both the lecture and students by implementing Flipped Classroom; 2) to increase students' motivation by implementing Flipped Classroom; 3) to increase students' learning achievement by implementing Flipped Classroom. The study used a classroom action research methodology which consisted of 3 cycles. There were four stages in the research: planning, implementation, observation, and reflection. Data of the study consisted of 1) activities data of both lecture and students through observation and documentation; 2) students' motivation data through online questionnaires on Google Form and observation; 3) learning achievement through an online quiz on Edmodo. At the end of Cycle III, it was found out that there was an increase in activities of both lecture and students, student motivation, and learning achievement by implementing Flipped Classroom.
Keywords: Flipped Classroom, Learning Process, Motivation, Learning Achievement

INTRODUCTION

Technology has an important role in changing education from conventional to technology-based learning. (Evans, 2011) The significant growth of technology in education has replaced traditional learning, such as blackboards and chalk in the learning process, with technology-based learning. The role of technology in education is part of the curriculum, teaching system, teaching aids, and tools to improve the overall learning process. (Raja & Nagasubramani, 2018) Modern technology requires teaching lecturers to use the technology. Various attempts have been made during the early 21st century to formulate the core challenges for learning due to social and cultural changes around the world.(Voogt et al., 2013) Differences in teaching and the use of technology positively impact the attitudes of lecturers and students towards ICT.(Christensen, 2002) Technology should be used appropriately with relevant and structured methods to support learning.(Jamaludin et al., 2016)

Lecturers still dominate teaching-centered learning activities so that student learning activities are more likely to listen to explanations, answer lecturer questions, and do practice questions. Activities like this make most of the learning time in the Classroom more active by lecturers than students, such as discussions, group presentations, and question and answer. The lack of student involvement makes them less motivated and passive in learning. The flipped classroom teaching methodology is

the center of the educational process. Students play a very active role with lecturers who guide and facilitate the learning process. (Foldnes, 2016) The results of previous studies have shown that integrating technology into teaching using Flipped Classroom can improve students' knowledge and understanding before entering the Classroom. Students are actively involved in in-class activities and attract students' interest in exploring learning materials more deeply. (Bergmann & Sams, 2014) Some of the objectives of this research are to improve: 1) the activities of lecturers and students by implementing Flipped Classroom in the TOEFL Preparation Study Program of the PIN FISIPOL Unmul Study Program; 2) student learning motivation by applying Flipped Classroom in the TOEFL Preparation Study Program PIN S1 Study Program at FISIPOL Unmul, and 3) student learning outcomes by applying Flipped Classroom in the learning process of TOEFL Preparation Study Program PIN FISIPOL Unmul.

LITERATURE REVIEW
Why Flipped Classroom

Heinze & Procter (2004) and Singh (2003) argue that the flipped Classroom is learning facilitated by an effective combination of different teaching and learning models. The combination is online teaching conducted via the internet and offline in traditional classrooms. Students learn offline and actively outside the Classroom in the form of videos. The Flipped Classroom concept has been around for several years and has caught the attention of educators around the world. (Brewer & Caroll, 2016) The results showed that teaching was different and positively impacted student learning. (Shimamoto, 2012) At present, the focus of higher education on learning is reversed not only to meet needs but also to increase the

differentiating factors between one higher education and another. (Brownlow, 2016) Studies on the effectiveness of Flipped classrooms are diverse and multiplying. The flipped classroom result variables that have been studied are the learning environment, and student perceptions and student learning outcomes are more active and effective. (Clukey, 2016) These studies have been carried out in various fields of science and disciplines. , such as Music; (Collins, 2016) Nursing; (Creekmore, 2016) Program Planning; in the subject of Anthropology. (Kurban, 2016) MEF University is the first and only university to fully use Flipped Classroom in the world. (Afrilyasanti et al., 2017)

Flipped Classroom has been implemented in English as a Foreign Language (EFL) at SMA Negeri 8 Malang.(Apriyanti et al., 2017) It is proven that the application of Flipped Classroom provides a meaningful perception and positively impacts students writing competence. Likewise, the implementation of the Flipped Classroom and the development of learning device products in Physics learning in Class X SMA Negeri 1 Metro. In this study, the Flipped Classroom was applied to increase student activity, motivation, and learning outcomes in the TOEFL preparation course at the S1 PIN FISIPOL Unmul Study Program.

METHOD

The research was conducted through Classroom Action Research (CAR). According to Kemmis and Mc Taggart's model, the research flow consists of four main activities: planning, implementation, observation, and reflection. (Arikunto, 2013) This research was conducted in Class Class 2017 Class A Study Program PIN S1 FISIPOL Unmul with research subjects totaling 30 people. This school was chosen as the research location because the

researcher acts as a lecturer in the TOEFL Preparation course. This research was conducted in the even semester of the 2019/2020 Academic Year, from March to May 2020. As an indicator of the success of this action, if the following criteria are met: 1) the percentage value of lecturer and student activities is at least 50% in the Good category; 2) the average value of student learning motivation is at least 69% in the high motivation category; 3) classical student learning completeness with a minimum of 85%. The data in this study include 1) data on the activities of lecturers and students; 2) data on student learning motivation; 3) student learning outcomes data in the form of grades. This study's data sources are 1) students; 2) lecturer/researcher, and 3) observers. Data collection techniques using observations about the activities of lecturers and students applying, documentation, and tests. Then, the data collection procedure is as follows: 1) data on the activities of lecturers and students are obtained by observing the researcher and an observer using the respective Observation Sheets about the activities of lecturers and students. Apart from this data, documentation was also carried out using a camera; 2) student motivation data obtained through student answers to the statements contained in the Student Motivation Sheet instrument through Google Forms and observations; 3) learning outcomes data in the form of values obtained by taking tests after learning takes place through Edmodo. Data analysis was carried out in a quantitative descriptive way.

RESULT

Based on the results of initial observations by researchers, students have adopted passive learning through the grammar-translation method in Structure & Written Expression learning. Lecturers still dominate learning activities, so learning is still lecturer-centered. Student learning activities mostly listen to explanations, answer lecturer questions, and do practice questions. The low involvement of students in learning makes them less motivated and less active in learning. Pre-test results show that two students get a score of 400 and above as required for the minimum passing grade. The Structure & Writing Expression section (Section 2) is the part with the least number of correct answers compared to the other two sections

1. Cycle I

The class action plan implemented was the researcher: 1) making learning scenarios (RPP), observation sheets, questionnaire sheets, and test sheets used in the implementation in Cycle I; 2) discuss all the results of the design with observers and make revisions based on existing inputs based on the results of the discussion; 3) prepare and select a learning platform that will be used in the implementation of class actions; 4) train the use of observation sheets for the learning process and student activities to observers; 5) train students in operating the Edmodo platform; 6) prepare YouTube-based learning videos according to the material that has been determined; 7) Uploading learning videos to the Edmodo application, and 8) prepare learning tools that will be used during learning. After applying the class action in the first cycle, the average results obtained are shown in table 1.

Table 1. Average Results of Application of Flipped Classroom Actions in Cycle I

No.	Research Problem	Result
1	Lecturer activity in the application of Flipped Classroom	69,6% (Good)
2	Student activity in the learning process	61% (Good)
3	Student learning motivation	38,57% (Low)
4	Student learning outcomes	38,9% (Very Low)

Source: Research Results Cycle I (2020)

2. Cycle II

The action plan implemented in Cycle II is that researchers: 1) create learning scenarios (RPP) and test sheets used in the implementation of Cycle II; 2) discuss with observers and revise all the results of the design based on existing inputs; 3) prepare YouTube-based learning videos according to the material that has been determined; 4) upload learning videos to the Edmodo application; 5) prepare learning tools used during learning. After the implementation of the class action, the average results obtained are as follows:

Table 2. Average Results of Application of Flipped Classroom Actions in Cycle II

No.	Research Problem	Result
1	Lecturer activity in the application of Flipped Classroom	77,8% (Very Good)
2	Student activity in the learning process	62,4% (Good)
3	Student learning motivation	87,1% (Very High)
4	Student learning outcomes	78,8% (Enough)

Source: Research Results Cycle II (2020)

3. Cycle III

The action plan implemented in Cycle III is the researcher: 1) the researcher makes learning scenarios (RPP) and test sheets that will be used in the implementation of Cycle III; 2) discuss and revise for action on all the results of the design with observers based on the existing inputs; 3) prepare YouTube-based learning videos according to the material that has been determined; 4) uploading learning videos to the Edmodo application; 5) Prepare learning tools that will be used during learning. After the implementation of the action, the average results obtained are as follows:

Table 3. Average Results of Application of Flipped Classroom Actions in Cycle III

No.	Research Problem	Result
1	Lecturer activity in the application of Flipped Classroom	86,1% (Very Good)
2	Student activity in the learning process	68,5% (Good)
3	Student learning motivation	99,05% (Very High)
4	Student learning outcomes	94,4 % (Very High)

Source: Research Results Cycle III (2020)

DISCUSSION

1. Lecturer Activities

In Cycle I, the activities of lecturers got an average of 69.6% in the Good category. Even though the average is in a Good category. The results of the action reflection in learning that were improved before entering the second Cycle included: 1) the uploading period of learning videos that were too close to the class meeting schedule so that students who had poor internet access could not watch the learning videos; 2) greetings and greetings that can be conveyed in a relaxed manner to melt the learning atmosphere; 3) providing motivation before the main activity and closing the lecture at least so that students are more motivated; 4) delivery of titles and sub-materials, learning objectives are conveyed before entering into core activities; 5) simple assignments are needed for students that show how well students understand the material studied at home; 6) most students are passive during the learning process by not asking questions or opinions in class and not even engaging in discussions; 7) delivery of one-way clarification by lecturers without involving students; 8) the division of discussion groups can be reduced in the form of pairs so that all students are involved in the discussion; 9) giving examples of sentences being discussed consisting of 2 sentences, namely different sentences and the same sentences for each group; 10) discussion time can be limited so that students stay focused on discussion activities; 11) students who present the results of group discussions are students who are quite active in learning activities so that lecturers need to appoint students who are less active to convey the results of their discussions; 12) delivery of conclusions related to the examples of sentences given and given examples of other sentences so that students understand more about the material at the meeting; 13) online quizzes are given a deadline.

In Cycle II, the implementation of the action was carried out fully online due to the ongoing Covid-19 pandemic. Lecturers also have to change and adjust the lesson plans according to online learning. A zoom is software for video conferencing and distance learning used to replace face-to-face meetings according to a schedule that has been agreed with students. Whatsapp as a means of direct (synchronous) communication between students and lecturers is more often used in Cycle II due to the unstable internet access constraints experienced by some students when accessing Edmodo. The results of the reflection of corrected actions entering Cycle III, especially those related to the learning process, include 1) the problem of unstable internet access that makes it difficult and hinders students and lecturers in the learning process both to access Edmodo and the implementation of online learning via Zoom; 2) lecture time cannot take place according to the face-to-face schedule because it needs to be adjusted to other lecture schedules; 3) open access to online quiz assignments without time limits and students are required to report problems to the lecturer if they experience it automatically when taking the quiz. This happens due to unstable internet access constraints; 4) students are more likely to be passive during online learning by turning off the camera and refusing to ask questions or opinions; 5) delivery of titles and sub-materials as well as learning objectives are delivered briefly before the main activity; 6) conclusions or verifications are presented as clearly as possible and are two-way in nature to find out whether students understand the material presented; 7) class control is carried out better during online

learning so that the lesson plans carry out the learning process; 8) encouragement is given to students who have difficulty or are passive to be actively involved in submitting opinions and questions; 9) appreciation is carried out on the work, discussions, opinions, and questions from students to make them more motivated. There is an increase in lecturer activity through the application of Flipped Classroom by 8.2%, with an average of Cycle II = 77.8% (Very Good).

In Cycle III, the things reflected in Cycle II have been resolved and implemented well so that progress occurs. This increase can be seen in lecturer activities which show an average percentage of 86.1% in the very good category, and an increase from Cycle II to Cycle III is 8.3%. Although the final average percentage result in Cycle III did not reach 100%, the increase from Cycle II to Cycle III showed that the learning process by applying Flipped Classroom was running and carried out very well.

The application of Flipped classrooms in the learning process strengthens the increasing interaction between lecturers and students. The results showed that students seemed to be responsible for learning on their own, and there was a change in the role of the lecturer as a supervisor or facilitator in using the Flipped Classroom; the results of this study are in line with the research of Bergmann et al. (Bergmann & Sams, 2014) The role of the lecturer in the application of the Flipped Classroom is very important because the lecturer becomes a learning facilitator and does not merely transfer learning directly. The role of the lecturer must correct misunderstandings in learning and increase student participation. Because the role of the lecturer is an important factor in the application of Flipped Classroom in the Classroom. (Bergmann & Sams, 2014;

Fulton, 2012; Millard, 2012; Schmidt, S. M., & Ralph, 2014), among these roles, are the lecturer: 1) creating learning conditions based on questions; 2) be a mentor to make learning easier; 3) create interaction between students; 4) personalize learning for each student; 5) use appropriate technological equipment for learning; 6) create interactive discussions; 7) increase student participation; 8) sharing learning videos as activities outside the Classroom; 9) provide feedback using teaching strategies.

The obstacle faced by lecturers in implementing Flipped Classroom is the large availability of learning videos for free, so lecturers need time to determine appropriate videos with learning materials. (Nawi et al., 2015; Ozdamli & Asiksoy, 2016) Lecturers have difficulty knowing whether they are carrying out their responsibilities outside of class, such as accessing recommended instructional videos and doing assignments independently. In line with previous research, lecturers also have difficulty controlling all students in independent learning when implementing Flipped Classroom. (Ozdamli & Asiksoy, 2016)

During this Covid 19 period, one of the challenges to implementing Flipped Classroom for students is the availability of an internet connection that is not adequate in conducting online lectures during the pandemic; the learning process is completely dependent on an internet connection. Internet connection in several cities and regencies, such as East Kutai, West Kutai, Bontang, and others, is not always easy and smooth as in Samarinda City and Balikpapan City. Likewise, with the costs that students must incur to study online. This challenge impacts the duration of online lectures via Zoom being shortened to save students' internet quota, also used in other courses. The next obstacle is the use of the learning platform. Namely, Edmodo

does not run optimally in lectures with unstable internet connections, so the use of Edmodo is combined with the use of Whatsapp. Another obstacle faced by lecturers was the rejection of students at the beginning of the application of Flipped Classroom (Ozdamli & Asiksoy, 2016; et al., 2016) because students were used to the traditional learning process. To make changes and innovations, lecturers need to be patient by taking several cycles so that all students need time to adapt and change their mindset and way of learning. Students think that learning material through learning videos and online is very difficult.

2. Student Activities

Several problems become reflections of actions related to student activities while implementing Cycle I actions, namely: 1) students who have poor internet access do not watch the learning video until it is finished and do not even watch it at all. Researchers can solve the problem by sharing videos via Whatsapp and directly through the Class Leader; 2) most students are passive in the learning process, do not ask questions or opinions in class, and are not even involved in discussions; 3) some students did not volunteer as group representatives to convey the results of the discussion. However, all students access Edmodo to take online quizzes. The average student learning activities through the application of the Flipped Classroom in Cycle I was 61%, with a good category. However, based on the results of the reflection at the end of Cycle I, the researcher improved and improved for the next cycle in the hope of providing a significant improvement on student activities in Cycle II. Cycle II reflections related to student activities include: 1) the problem of unstable internet access that makes it difficult and hinders students in the learning process, both to access Edmodo and

the implementation of online learning via Zoom; 2) due to unstable internet access experienced by some students, so they cannot access learning videos on Edmodo; 3) discussion and analysis of sentences with partners in groups are carried out via Whatsapp because for students it can be accessed more easily and does not require a stable connection; 4) students are more likely to be passive during online learning by turning off the camera and refusing to ask questions or give opinions, so policies are needed, namely: if they do not turn on the camera, they are considered absent at the meeting; 5) lack of interaction between fellow students during online learning. Changes in learning online make students have to adapt to the use of Zoom in the application of Flipped Classroom Cycle II. This change can be seen in the increase in student activity that is not too high from Cycle I to Cycle II, only 1.4%. Still, this increase shows a positive increase in student activity in the application of Flipped Classroom. The results of student learning activities in Cycle III showed an average percentage of 68.5% in the good category, and an increase from Cycle II to Cycle III was 7.1%. Although the final average percentage result in Cycle III did not reach 100%, the increase from Cycle II to Cycle III showed that the learning process by applying Flipped Classroom was running and carried out very well.

The role of students shifts from passive learning recipients to active learning implementers in the Flipped Classroom. (Bergmann & Sams, 2014) Students are more responsible and participate in their learning activities, watch videos and use learning materials before class meetings, participate in class discussions, interact with lecturers and their friends, and give and receive feedback and participate in group work. It turns out that students prefer learning with their respective learning

abilities and styles; students prefer Flipped classroom learning compared to traditional learning. (Butt, 2014; Roach, 2014) Flipped Classroom learning conditions the classroom into a more active and meaningful learning place. (Rajesh, 2015) Students who initially received teaching passively turned into active actors in the classroom. The roles of students in the application of Flipped Classroom (Bergmann & Sams, 2014; Formica et al., 2010; Milman, 2012; Overmyer, 2012) are: 1) responsible for independent learning; 2) watch learning videos before entering class and prepare themselves with learning materials; 3) learn at their own pace; 4) interact with lecturers and friends, receive and give feedback; 5) participate in class discussions; 6) participate in group work.

By the results of previous studies, the biggest obstacle students faced was the availability of a limited internet connection that was not supported by adequate facilities. (Nawi et al., 2015; et al., 2016) This obstacle is faced with implementing online lectures during the pandemic; the learning process is completely dependent on an internet connection. The majority of S1 PIN students live in West Kutai, East Kutai, Bontang City, and Nunukan. Internet connections in these cities and regencies are not always as easy and smooth as Samarinda City and Balikpapan City. Likewise, the costs that students must incur to study online need to purchase internet quota packages, they have to spend funds

3. Learning Motivation

The average student learning motivation in Cycle I showed the results of 38.57%. In this Cycle, the average results obtained indicate the category is still low. The results of this study indicate that most students initially felt unmotivated in learning using Flipped Classroom. Most students had difficulty understanding the

material, felt unhappy when TOEFL learning was taught using Flipped Classroom and felt unhappy in the learning process. We're not enthusiastic about learning in an atmosphere class and less interested in TOEFL courses. However, almost all students realize that there are differences in the way lecturers teach using Flipped Classroom compared to previous learning. The lecturers' lack of Motivation during learning becomes an important note in the reflection of Cycle I, which must be corrected in the implementation of Cycle II actions.

In Cycle II, lecturers motivated students by giving positive feedback and appreciating their work. This lecturer's effort affects the average result of Cycle II, which shows 87.1%. The majority of students gave positive answers to almost all statements, except for the indicator of feeling happy in the TOEFL course. Only 12 students still did not like the course, and as many as 12.9% of students still needed to be given more understanding and Motivation in Cycle III learning. Based on table 3 above, it can be seen that student learning motivation through the application of Flipped Classroom increased by 48.53%, with the average in Cycle II, which showed 87.1% in the very high category. This change indicates that the increase in learning Motivation through the application of Flipped Classroom occurs gradually, starting from the actions of Cycle I to Cycle II. Giving Motivation is done by lecturers in the form of providing positive feedback and appreciation of student work, which also positively impacts student attitudes and Motivation in learning.

In Cycle III, almost all students were well motivated. This increase in Motivation can be seen in that all students give positive answers to almost all indicators of learning material. However, one student still feels unmotivated in learning and is not happy

with the TOEFL course. However, with an average Cycle III of 99.05% with a very high learning motivation category, almost all students feel very highly motivated in the application of Flipped Classroom.

Flipped Classroom learning involves students in active group activities. (Chung, 2021) The active participation of these students has a positive impact on increasing learning motivation. Learning motivation affects learning, maintains learning activities, and shows the direction of learning. Learning motivation arises when students are actively involved in classroom activities. This active involvement shows that flipped learning has a positive effect on learning motivation because the curriculum and student interest increase due to innovative teaching methods and designs. Students are more motivated in learning by applying the Flipped Classroom. (Angelina, 2020; Roach, 2014; van Alten et al., 2019) The high Motivation to learn for students impacts improving learning outcomes because students feel happy and satisfied in learning activities.

4. Learning Outcomes

In Cycle I, the average student learning outcome was very low at 38.9%. This shows that the application of Flipped Classroom in this Cycle does not affect student learning outcomes. Lack of activity and learning motivation in learning is a factor that affects student learning outcomes in this Cycle. The application of Flipped learning that has not been maximized contributes to student learning outcomes which are very low. The learning outcomes of each meeting are obtained by filling out online quizzes through Edmodo by students.

In Cycle II, the Enough category's average student learning outcomes were 78.8%. In this Cycle, there was a significant improvement from Cycle I as several changes in the implementation of Flipped

Classroom had been made. Changes made by lecturers are the result of reflection from the implementation of the previous Cycle's actions. Even though it is quite adequate, the learning outcomes in this Cycle are still below the classical student learning mastery limit, at least 85% of the total number of students getting the individual student learning completeness score, which is 65.

In Cycle III, improvements to the application of actions based on the results of the reflection of the previous Cycle were also carried out, and student learning outcomes showed a satisfactory average of 94.4%. In this third Cycle, student learning outcomes have met the requirements for classical learning completeness, which is at least 85%, so that the application of Flipped Classroom is not continued in the next Cycle. The average obtained in this Cycle shows that almost all students feel very highly motivated, which impacts increasing satisfactory learning outcomes in the TOEFL Preparation course in the PIN FISIPOL Unmul study program.

Learning that applies Flipped Classroom positively impacts student learning outcomes. (Angelina, 2020) Student scores have increased significantly after implementing flipped learning. Flipped Classroom also enhances student self-learning. Similarly, what has been conveyed by Van Alten et al., students in Flipped Classroom achieve higher learning outcomes than in traditional classes. They are satisfied with the Flipped Classroom learning environment. (van Alten et al., 2019) Flipped Classroom results in increased student learning outcomes informal assessments, but implementing Flipped Classroom also faces challenges in student admissions, especially if learning is taught at a limited capacity. (Kugler et al., 2019) Therefore, teachers or lecturers should also prepare various learning facilities both

offline and online by the criteria for applying Flipped Classroom.

CONCLUSION

With the implementation of the Flipped Classroom, there is an increase in the quality of learning, especially in the activities of lecturers and students, learning motivation, and student learning outcomes gradually starting from Cycle I to Cycle III. The results of this study corroborate the findings of previous studies. In the application of Flipped Classroom, there are several obstacles or limitations experienced as has been conveyed in previous studies, such as the availability of a smooth internet connection and an impact on the duration of learning and the maximum use of Edmodo, the costs incurred by students to participate in online learning which is a part of the application of Flipped Classroom, especially in the availability of internet connections, so that there were student objections at the beginning of the application of Flipped Classroom.

There was a gradual increase in learning motivation and student learning outcomes starting in Cycle I to Cycle III. The Cycle III actions for each stage of activity were rated very high. Flipped learning in this research is active learning. It seems that active student participation has a positive impact on learning motivation. This increase in learning motivation supports the theory in previous studies that high motivation impacts high learning outcomes. Flipped learning has a positive impact on student learning outcomes. It seems that the increase influences the increase in learning outcomes in learning motivation through the application of Flipped Classroom in the learning process.

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