Project-Based Learning assisted by Zoom Application Online in TEFL Class

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ABSTRACT

The advanced digital technology demands all educational level in Indonesia to revitalize the curriculum. This curriculum does not only integrate the use of ICT in the teaching-learning process but also focuses on students-center learning. Education Faculty aims to support students as teacher candidates to have both knowledges of teaching and understanding subject matters. TEFL (Teaching English as a Foreign Language) is a subject which explains the pedagogy knowledge to pre-service teachers. This study aims to investigate the implementation of PjBL with Zoom Application Online towards the students' learning achievement on the TEFL subject. Descriptive qualitative research design with 52 students was employed to investigate how PjBl with Zoom improves students' learning achievement. Reflective Journal and a test were used to collect the data of the research. Data from reflective journal were analyzed descriptively while the data from a test were analyzed statistically. After analyzing the data, the finding of the study reveals that the percentage of the students who have a high score is 79%, while the students with a low score is 21%. This finding is supported by data from students' reflective that PjBL encourages them to work cooperatively before presenting the project via Zoom Application Online. Learning through Zoom makes students more focus because of accessibility to the forum. In addition, zoom provides opportunity to record the lectures which enables the students to watch as well as to study wherever they are.

Introduction

Living in the era of revolution 4.0 demans people who have cognitive competence suported by hard skill based on the background knowledge, the skill of critical thinking and ICT. Suryandari state that critical thinking skills, creative, communicative, problem solving and literacy culture are life skills possessed by Indonesian young generation in facing 21st century. These competences are fruitful to anticipate rapid changes and to answer increasingly complex challenges. Therefore, educational institutions must be managed by professional educators. In *Law* of *2005* on *teachers and lecturers emphasizes that teachers are a profession that requires qualified skills and knowledge in preparing for the golden generation* [1] [2].

Teachers in the 21st century have enormous and complex challenges in educating their students compared to the previous era. Teachers deal with students who are far more diverse, learning materials that are far more complex and challenging, as well as the standard of the learning process and the demands of achieving higher students' thinking abilities [3]. Teachers are not only required to have the ability to teach, manage class activities effectively but are also demanded to be able to build effective relationships with students and the school community. They must be able to integrate technology in their classroom to support teaching improvement and continuously reflect and improve learners' performance [3]. 21st-century learning is expected to be able to enhance the skills and ability of students in critical thinking, problem-solving, collaboration or cooperative, and communication or interaction [1].

TEFL stands for Teaching English as a Foreign Language is a course aimed at teaching prospective teacher students to know and understand theories of language acquisition and learning, various issues in learning English and methods of learning English. Preparing the Previously, TEFL learning was conducted using the lecture method, but the results of learning this subject were not satisfactory. This is not only proven by the small number of students who have passed the TEFL course with good grades but also their difficulties in making learning tools when programming micro-teaching courses. The number of students who a got high score last semester was 45%, while the percentage of students who scored low was 55% with a total of 42 students. They do not yet understand how to choose appropriate learning methods that enable students to learn actively and promote students' critical thinking skills, and how to design learning that fosters students' habits of working collaboratively and cooperatively during the learning process. This has an impact on the competence of prospective teacher students' skill and ability in carrying out teaching practicum in secondary schools [4].

Regarding the phenomena, teacher candidate students must train how to criticize the problem appeared in their surrounding by experiencing it in their lesson. Project-Based Learning is considered the model which teaches students to develop their critical thinking skills, ability to innovate, and social skills. Teachers in the 21st century are required not only to have skills in operating Microsoft Word, Excel, or PowerPoint but also to use ICT to develop their teaching competencies. For example, teachers must be able to use the internet to build their scientific insights. They even have to be able to carry out E-learning.

ICT-based learning allows teachers to familiarize learners to become skilled at using ICT to access learning materials available on the internet. Furthermore, the teacher can assign students to work on ICT-based assignments. For example, because of limited learning time emphasizing on speaking skills in the classroom, dealing with by applying video conferencing with Googlezoom is a solution. So that speaking skills are not longer ignored in the teaching and learning process [5]. Summarized the results of their

research that the use of online media learning webinars such as Skype and Zoom makes it easy for students to interact verbally with peers and share their presentations through sharing display features.

Education faculty as an institution that prepares prospective professional teachers who are literate towards the development of ICT in the learning process and have a good understanding of the various learning models to encourage students to improve their ability to think and innovate. Prospective teacher students are also required to be able to apply such learning models, so that they become educators who are ready to face millennials who have very diverse characteristics. The use of information technology as a learning medium has long been used extensively. Because universities are required to use ICT during the teaching-learning process in preparing teacher candidate students to have skills in using ICT [6].

Based on this phenomenon, prospective teacher students must be prepared to become teachers who are ready to serve in the 21st-century era. The combination of Project-Based Learning and ICT is expected to be able to sharpen students' skills in critical thinking, problem-solving, collaborating/collaborating, communicating globally and skillfully using ICT to develop pedagogy skills and knowledgeable in scientific fields.Based on this phenomenon, prospective teacher students must be prepared to become teachers who are ready to serve in the 21st-century era. The combination of Project-Based Learning and ICT is expected to be able to sharpen students' skills in critical thinking, problem-solving, collaborating/collaborating, communicating globally and skillfully using ICT to develop pedagogy skills and knowledge in scientific fields.

In the past, students have relied more on the use of printed references in developing their knowledge. In this study, students are trained to access more up-to-date references online.Basically, a lot of research has been done on the use of learning models based on Project Based Learning, but there is still little research on how to integrate PjBL with video conferencing media. This research tries to integrate PjBL with Googlezoom.Students undertake the process of learning activities through project-based learning and present their learning outcomes through the Zoom application. Google zoom is a video conference tool provided by Google to facilitate face-to-face online interaction. This device also provides features for the distance learning process by presenting a presentation slide or PPT. Even participants can record these activities so that the presentation materials are accessible. Another reason for integrating ICT in the teaching-learning activities is the familiarity of the digital techonogy among students (nursehang).

Learning through Zoom aims to overcome the limited time available by students to present the results of their activities in the classroom. Besides that, learning activities through zoom is considered more effective in increasing students' understanding because they become more focused on listening to individual or group presentations in more pleasant circumstances and conditions [5]. PjBL also provides experiences for prospective teacher students to apply blended learning.

In this study, the researchers not only share their knowledge but also provide an opportunity for students to find suitable reading material based on the given topics.The objective of this study is to determine whether the Project Based Learning (PjBL) assisted model Zoom has an effect on the TEFL learning outcomes of English Language Study Program students. Besides the students' perspectives towards the implementation of PjBL supported by Zoom is also interesting to investigate.

Method

This type of research is descriptive qualitative research design which describes the results of the implementation of Project-based learning models using Zoom. The research instruments used to collect data in this study were a test and a reflective journal. In the reflective journals, students are asked to summarize the learning material they have learned after the implementation of the project-based learning aided by zoom and their opinion about the application of that learning model, while the test is used to obtain data on student learning outcomes.

The population in this study were all students who took the TEFL (Teaching English as a Foreign Language) course in the Even semester of the 2018/2019 academic year consisting of seven parallel classes. The research sample was Class F because students in this class was willing to be a research sample using accidental sampling techniques. Prior to the selection of the research sample, the researcher gave the students' willingness form because this study requires the students' commitment to access the internet either to access material or to use Google Zoom.

Internet technology can provide benefits for teaching staff to carry out the process of teaching activities that are fun, effective, and efficient. Higher education is encouraged to carry out lecture processes with ICT media. In connection with the advantages of PjBL and ICT in the learning process, the researchers designed the application of project-based learning and Zoom for prospective teacher students in the TEFL Course as follows; First, pproject preparation where the lecturer divided students into groups. Each group member discussed an agreement on the place and time of group work. This was done because the projects carried out depend on the use of internet media, so that students should discuss where to work the project. Then project plan - each group was given questions that must be answerd through the project. The lecturer instructed each group how to work on the project assigned based on the time allotted. Students collaboratively identify the questions that had been given and share who was responsible for each section related to the question. For example how to obtain material resources, who will look for reference material, who compiles the project and who presents the results of the project. The third step is project implementation. The group works on parts that had been designed based on the allotted time. The lecturers monitor the students' project progress.The results of the project are in the form of slide presentation materials that contain a theoretical framework of topics that have been prepared for each group. Each group presented their work in the form of PPT using the Zoom application. Next, project presentation. Students presented the results of the project through Zoom which were conducted outside the face-to-

face class based on the agreed time. Finally, project evaluation. The project was evaluated in three aspects namely; the quality of the project and collaborative work that starts from the planning, implementation and project presentation stages.However, this article only presents the data on the improvement of students' learning outcome after experiencing project-based learning assited by Zoom.

The technique used to analyze the data obtained through reflective journals of the lecture process with the project-based learning aided by Zoom was analyzed qualitatively. While the data obtained from the tests were analyzed quantitatively to analyze the effects of that learning method on the students' learning achievement by looking for the individual scores of each student.

Result and Discussions

This study aims to determine the effect of PjBL assisted PjBL assisted by Zoom to improve student learning outcomes in the TEFL course. As PjBL and ICT/Zoom have several advantages in the learning process, therefore the researcher designed the application of PjBL and Zoom for prospective teacher students in TEFL course as follows;

Project Preparation

This stage, students who have been distributed into several groups, discuss the place and time of implementation.The site of the implementation of activities is a place that has internet access because project development needs the support of various sources. The limited reading material in the library requires students to look for learning material on the internet. Besides, the students also had to discuss the time to execute a given project as they were not in the same academic year. It means they had several different subjects to program during the period.

Project Plan

Each group was given questions as a basis for the assignment in carrying out activities. There were six questions taken from the TEFL course material that were made as a theoretical framework in the form of slide presentations conducted by six groups.The purpose of making theoretical framework is to train students' critical thinking on the questions given and write their critical thinking into a theoretical framework. Project work is intentionally provided in groups with the aim to foster student soft skills in a collaborative and cooperative manner. This way teaches them to build mutual respect among group members. However, this study only focuses on determining the effects of PjBL assisted Zoom on student learning outcomes. The research team guided each group on how to work on the project based on a predetermined time frame. Under the guidance of the researcher, students collaboratively identify the questions that have been given and determine who will be responsible for each section related to the question. For example, how to obtain reference sources, who will look for reference material, who prepares project reports, and who presents the project. In addition, each group must also designate who is in charge of responding to questions raised by other groups. The research

team also guided students in groups on how to use the Google Zoom application; starting from creating a group ID and using the features in the application.

Project Implementation

Students made a theoretical framework that covers the whole point in question, then students prepared slide presentations. Before presenting a project, students must try out the online presentation by using Google Zoom. It aims to ascertain if the students can present their project through Google Zoom effectively and efficiently. This trial needs to be done because not all students understand how to be a host and how to join the class. They also needed to practice how to promote PPT in using Google Zoom, as well as how to respond to questions from other groups online. Students also practiced how to record presentation activities using the Google zoom.

Project Presentation

Google zoom application is used to present the results of student projects because students can present presentation slides and record the results of the presentation. Students can also easily apply Google Zoom without paying so that students can follow presentations online based on the agreed time between the research team and students. Groups that present their project results and other groups are in different locations, where they are comfortable and have internet access. Although the students were in different site, Google Zoom can facilitate them to respond to one another. So students who do not yet understand the concepts presented by a group can immediately raise questions.

Project Evaluation

There are three aspects evaluated in this project, namely: assessment of the process which includes the quality of PPT products and collaborative work starting from the planning, implementation, and project presentation stages. The instruments of research data collection are a test and a reflective journal. Reflective journals are intended to see the level of student understanding of lecture material that has been held through the Google Zoom PjBL learning model and students' understanding of the use of the learning model. Students' understanding is measured using tests. Data through tests were analysed using simple statistics. This data is used to measure student learning outcomes when attending TEFL lectures. Lectures using the PjBL learning model approach lasted for six meeting. The student test results are as follows;
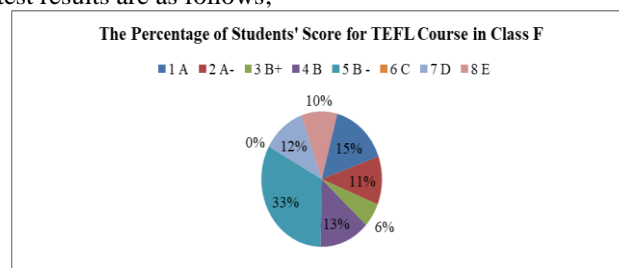
Figure 1 The Percentage of Students' Score for TEFL Course in Class F

The Figure 1 show that student grades are classified into two categories, namely high scores around 79% and low scores around 21%. This shows that the percentage of students who get the highest score in class F is higher than that obtained by students in class A in which learning was done using the lecture method.
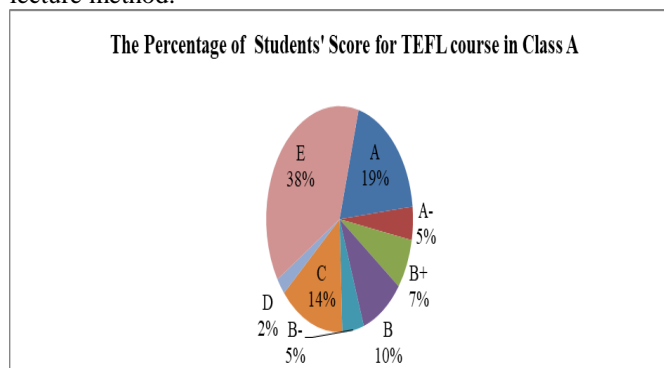
Figure 2 The Percentage of Students' Score for TEFL course in Class A

The Figure 2 show that the number of students who scored high is 45%, while the percentage of students who scored low is 55% with a total of 42 students. By compering the students' achievement, it proves that the application of PjBL assisted by Zoom has a positive impact on the progress of student learning outcomes in a TEFL course. Results obtained by these students are supported by data collected from reflective journals in which students described the positive experience of learning with PjBL assisted by Zoom. Data obtained from reflective journals are labeled and grouped, and their frequency is determined so that an overview of students' experience is gained after joining lectures through the PjBL assisted by Zoom. Table 1 shows that students gave a variety of responses to their experiences during the TEFL course. Some students provide more than one answer, both positive and negative responses from the application of PjBL assisted by Zoom so that the data obtained from reflective journals cannot be presented as a percentage.

Table 1 Students' Responses towards the Implementation of PjBL assisted by Zoom

No.	Description	Frequency
	Advantages of PjBL	
1	Effective and Efficient	52
2	Easier to understand the material	52
	Advantages of Zoom	
1	Learning can be anywhere and anytime	28
2	Group discussions can be conducted even if students are in different locations	6
3	Students concentrate more on receiving material	17
4	Learning becomes more attractive	31
	Disadvantages of Zoom	
1	Requires a stable internet network	23
2	Requires skills in using ICT media	2

Table 1 show that almost all students give positive responses to the application of the PjBL method. None of the students give negative responses. Furthermore, students give positive and negative responses to the use of conference media

through the zoom application. There are four advantages mentioned by students to the application of Zoom. First, 28 students thought that zoom-based media conferences facilitated them to study anywhere and anytime because this application has a device that allows participants to display slides and record the presentation process so that students can access other group presentation materials anytime and anywhere. The zoom application allows lectures to be held outside the classroom.

Another advantage is that zoom-based conference media has a feature that allows students to have long-distance discussions as revealed by six students. The third advantage is learning to use media zoom helps students to focus more on the discussion material (17 students express this advantage). The zoom application allows them to clarify the presentation material of other groups. Figure 2 shows the students' focus on listening to the presentation. It's different from attending presentations in classrooms, which sometimes they are distracted with their friends who are chatting. Using zoom allows students to listen to presentations independently.

Besides, learning through zoom becomes interesting since it has a feature that allows them not only to conduct long-distance group discussions but also can share slide presentations, videos, audio slides, and even students can write or point to the pictures or objects in the slides (31 students state this advantage). Lastly, Zoom facilitates lecturers to control the activities of each group during the online-based lecturing process. Therefore, the lecture process is the same as regular lectures (face-to-face lectures). The application of the PjBL assisted by Zoom inspires students to apply it in the future.

The use of zoom has not only advantages but also disadvantages. One disadvantage is that it requires a stable internet network since an unstable internet network interferes with the project presentation process. The other probles are that zoom application requires students to understand its features, but unfortunately, not all students are familiar with the video conference zoom application, so some of them have difficulty applying the features on the zoom.

Based on the problems that have been aforementioned that students still have low critical thinking skills and lack of motivation to work together or conduct discussions, the researchers were interested in fixing these probles as they affect students' learning outcomes which are still relatively low in TEFL course. TEFL is a course that studies the theory of language acquisition and the theory of language learning. The problems mentioned have an impact on Microteaching courses where students must be able to organize effective, efficient and enjoyable learning based on theories that they have learned in the TEFL course. By applying PjBL assisted by Zoom, prospective teacher students are not only trained to use learning models, but also practice their ability to think critically, be able to use ICT in the learning process, and also improve their learning outcomes in TEFL course.

This study aims to analyze the impact of the application of the PjBL assisted by Zoom on the improvement of student learning outcomes in the TEFL course. The percentage of students getting the highest score is higher than students taught by the conventional method/lecture method. Student

responses obtained through reflective journals support the data of the student learning outcomes. Based on data obtained from reflective journals, it shows that all students provide positive responses to the zoom assisted PjBL learning model. Students are trained to carry out learning activities in teams/groups where they find the skills to plan, organize, negotiate, and make consensus about the tasks assigned to them. Each group must determine who is responsible for each job and how the information will be collected and presented [7]. Project-based learning criteria, according to Suhartatik (2014) emphasizes questions or problems, carry out investigations or constructive designs, and give autonomy to students [8]. Through group work, students better understand the concepts learned because before conducting group discussions, each student must read references relating to the topic of discussion.PjBL allows students to work on projects more easily and quickly because all group members share assignments to work on projects. All this time, when a lecturer gives a group assignment, not all members are involved in carrying out the task. Even some of them only entrust their names to be included in group assignments. Through the use of PjBL the lecturer guides students who have been divided into several groups conducting projects starting from preparation to project presentation. So that all members of each group are involved and active in carrying out the assigned project. Each group is given two weeks to complete the project. Before the project is presented, each group needs to consult the results of the project with the lecturers.

Then, all students who are the research sample responded to the implementation of the PjBLlearning model. They argued that through PjBL, they more easily understood the lecture material because the assigned project assignments had to be discussed in groups. It includes points that will be developed in a theoretical framework based on references that have been previously discussed in groups. This is similar to the findings presented that PjBL helps students to comprehend a theoretical concept comprehensively [9].

PjBL is not a new learning model. It has been widely implemented and developed in developed countries. Since the 16th century, several countries in Europe have applied this method to engineering students [10]. This method was coined by John Dewey with the concept of "learning by doing" in which students do real learning experiences. The process of obtaining learning outcomes with this method is done by working on specific actions in accordance with the objectives [11]. According to Hodgin cited in Suhartatik (2014), learning by implementing the PjBL model emphasizes on students (student-centered). That students who are the subject of learning activities become more independent in completing authentic work as learning outcomes. PjBL accustoms students to work collaboratively, assessment is done authentically, and learning resources can be highly developed [8]. According to Harmer (2007) a good project will encorage students to read sources based on the given topic, discuss, writing the concept or theory, and possibly present the result orally. Students might find the solutions to real-world problems through working in collaborative groups. This is what distinguishes PjBL from conventional learning models that are still teacher-centered when learning resources tend to be uniform, and assessment aspects emphasize results rather than processes [12]. That is

why states that it is recognized that PjBL is effective and fruitful in the 21st century education [13] .

The progress of ICT has enabled the use of various types of media simultaneously. For example, the students have alternatives in finding learning resources without relying on the printed sources, either through the internet or in the form of e-learning application software that can be accessed for free or paid. The digital age makes it easy for everyone to get the information needed just by using their fingers through electronic media such as PCs, laptops, or cellular phones. The learning process is not limited by space and time because the teacher or lecturer can do blended learning. The use of teleconference media with google zoom does not only facilitate the face-to-face video conference, but users can display presentation slides. In this case, virtual classrooms can be created so that they can provide a solution to the inadequacy of face-to-face time in the classroom. But still must prioritize the quality of learning

Students as prospective teachers are not only trained to hone the skills that are required as professional teachers, including pedagogical competencies, social competencies, personality competencies, and professional competencies, but they experience themselves the implementation of learning models that they will apply when they become a teacher. Lecture materials about strategies, models, and learning media will not benefit them if they do not understand the concepts well. So that in TEFL courses, students are allowed to do a project-based learning model. In addition to having experience in the implementation of the PjBL learning model, students are also encouraged to enrich their scientific insights by finding various learning resources with ICT. Today, technology is developing rapidly and allows anyone to obtain and provide information independently. Internet technology can provide benefits for teaching staff to carry out the process of teaching activities that are fun, effective, and efficient. Higher education is encouraged to carry out lecture processes with ICT media [14] [6], [15].

Based on data obtained from students' reflective journals, there are four benefits of using zoom for TEFL learning. Learning with zoom makes it easy for students to understand the material presented as they focus on watching the online conference. They might access the conference wherever they are as ICT in terms of Google Zoom enables students to learn anywhere and anytime [16], [17]. Besides, students can access presentation material at any time because the zoom provides a recording feature.

However, because learning using PjBL aided by Zoom is very dependent on a stable internet network, then because in the city of Palu (the city where the research is conducted) the internet network is often unstable; the project implementation process is often disrupted. This is one of the weaknesses of the PjBL assisted by Zoom, which was complained of by students of the research sample.

Conclusion

All students gave positive responses to learning using the PjBL method. All stages of the PjBL, starting from the planning stage to the implementation of the project, teach students to get accustomed to discuss the topics that will be outlined in the theoretical framework as the final result of

the project. Each student has their respective responsibilities in contributing to the completion of the project. Student project presentations are done online by using the Zoom application. The PjBL Characteristics that require work to be done in groups and presented through zoom help students understand TEFL course material. Because at project presentations through zoom, students focus more on concepts that are offered by other groups and are always under control by the lecturer/research team. Zoom also facilitates students to study wherever and whenever because zoom has a slide share and record feature. These features make it easy for students to access presentation material anytime, anywhere. Even zoom also has a pointer feature that allows students to discuss with each other online by pointing out charts or unclear images.

There are two obstacles to this research. The first is the unstable internet network, which is one of the challenges in this research. For the six time presentations of the project using zoom, the research team experienced a problem where internet network conditions were not good, so the presentation process had to be repeated at that time. The second obstacle is that there are some students who have never used the zoom application, so they have difficulty engaging in group discussions online. This also disrupts the project presentation process.

Although there are disadvantages in using the zoom application, in general, the lecture process using the PjBl assisted by Zoom is still considered effective and efficient for improving student learning outcomes. Deficiencies in the implementation of these methods are of concern to lecturers in applying this method in the future.

Acknowledgement

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