

CHAPTER TWO LITERATURE REVIEW

2.1 Previous Study

The project-based assignment is one of the teacher's learning models to make online learning more effective. The first research study was come from Atef Mohammad Abuhmaid (2020), under the title *The Efficiency of Online Learning Environment for Implementing Project-Based Learning: Students' Perceptions*. Meanwhile, the purpose of this study was to examined students' perceptions of the impact of the online learning environment on project-based teaching methods. The data were collected from 154 students, which were divided into two experimental groups. This study showed positive attitudes among students (both online and in-class) toward project-based learning. Besides, the results showed that in-class students had a stronger view of project based-learning than online learning students.

The second study was done by Vit Ardhyantama, Chusna Apriyanti and Lina Erviana (2020), with the title *Project-Based Learning as the Alternative for Distance Learning in COVID-19 Outbreak*. Meanwhile, this study aimed to provide a theoretical illustration of project-based learning for distance learning classes. In this study, the researchers used the library method and analysis to collect classified data according to the research needs. The study results indicate that project-based learning is suitable to be used as an alternative to distance learning during the pandemic with six aspects of considerations: readiness, safety, monitoring, thematic, project learning principles and learning stages.

An online learning class requires computer devices, reliable networks, and the right technology. The following study was done by Dewi Nilam, Winda Purnama Sari and Marlinda Mulu (2020) with the title Explorative study on applying learning model in the virtual classroom during Covid-19 pandemic at the school of Yogyakarta Province. This study was attempted to determine the implementation of online learning activities during the Covid-19 pandemic in Yogyakarta. While the technique samples were taken randomly, covering 4 districts and 1 municipality in Yogyakarta. The results of the study showed that sequentially the most widely used applications to assist in distance learning were Google Classroom, WhatsApp, and Zoom Clouds Meeting.

The last research was done by Muhammad Arifin Baihaqi, Sarwi Sarwi, and Ellianawati Ellianawati (2020), with the research title is the implementation of project-based learning with integrated STEM in distance learning to improve students' communication skills. This study was done to analyze the improvement of communication skills through project-based learning with integrated STEM in distance learning. The research sample was fifth-grade students with a total of 78 students. The results showed that project-based learning with integrated STEM could improve the oral and written communication of each student in the moderate category.

2.2 Theoretical Framework

2.2.1 Online Learning Process

The development of information and communication technology that very rapidly encourages various educational institutions to use the online learning system to

increase the effectiveness and flexibility of learning. Through online learning, learning material can be accessed anytime and from anywhere, in addition to the material that can be enriched with various learning resources including multimedia which can quickly be renewed by the teacher.

Many researchers generally refer to online learning as Web-based learning delivered through the Internet or accessed through an intranet or extranet (Chiu, Chiu & Chang, 2007). Online learning in higher education has been categorized as teaching and learning through asynchronous and synchronous communications via the Internet and with multimedia. It has the capacity for interactivity and was credited with promoting higher order thinking skills in students Bonk & Reynolds (1997 in Hazari & Johnson, 2007).

Thornton et al. (2004) suggests that although online learning is a tool that could improve teaching and learning skills, its effectiveness lies in how the tool is used. It has been found that much unsatisfactory implementation of online learning still occurs in practice (Hogarth & Dawson, 2008). Based on earlier studies (Dillon & Gunawardena, 1995) three main variables that influence the effectiveness of online learning, namely technology, instructor characteristics and student characteristics, still hold true today.

Dabbagh & Ritland (2005:15) said online learning is an open learning environment and distributed pedagogic tools, the internet, network-based technology, to facilitate learning and build knowledge through action and interaction. Online learning is learning that can be done anywhere and anytime, depending on the needs

of human resources (instructors, lecturers, instructors, and students) who carry out these online learning activities.

From the explanation above, the writer concludes that online learning is education that takes place over the Internet. Or we can say, Online learning is when you take courses online instead of in a physical classroom. It is can use to increase the effectiveness and flexibility of learning. Through online learning, learning material can be accessed anytime and from anywhere, in addition to the material that can be enriched with various learning resources including multimedia which can quickly in an open learning environment, flexible, and distributed.

2.2.2 Characteristics of Online Learning

The following are the characteristics of Online Learning proposed by Rudi & Riyana (2007):

1. The students' capture of learning material does not depend on the instructor/teacher, because students construct their own knowledge through teaching materials delivered through the website interface;
2. The source of knowledge is everywhere and can be easily accessed by everyone. This is due to the global nature of Internet media and can be accessed by anyone connected to it;
3. Teachers / educational institutions function as mediators / mentors;
4. Restructuring is needed for education system, curriculum, and management policies that can support the utilization of Information and Communication Technology for optimal education.

The four characteristics above are the things that distinguish online learning from conventional learning activities. In online learning, students' capture of learning material is no longer dependent on instructors/instructors, because students build their own knowledge through teaching materials delivered through online learning. In online learning too, knowledge sources are spread everywhere and can be easily accessed by everyone.

2.2.3 Types of Online Learning

Online learning usage changes enormously, yet all it depends on a rule the online learning is facilitated as a work to disperse data through learning material through electronic or web media so students can get to it whenever and anyplace. The attribute of online learning is the production of an adaptable and conveyed learning climate. In light of the definition, online learning can be separated into four models, in particular:

1. Web-Based Learning

Web-based learning is a remote learning system based on information technology and communication with the web interface (Munir, 2009:231). In Web-Based Learning, students do online learning through a site. They can speak with one another with partners or students through the offices gave by the site.

2. Computer-Based Learning

Computer-Based Learning can be characterized as a self-learning movement that should be possible by students utilizing a computer framework. Rusman (2009:49) suggests that computer-based learning is a learning program used in the learning

process using computer software containing titles, goals, learning materials, and learning evaluations.

3. Virtual Education

Based on the definition of Tavakol (2012:152), virtual education means instruction in a learning environment where teacher and students are separated by time or space and the teacher provide course content through Information and Communication Technology (ICT) based methods such as Internet, multimedia resources, and videoconferencing. Students get the content and communicate with the teacher via the same media.

2.2.4 Advantages of Online learning

The advantages of online learning are providing flexibility, interactivity, speed, visualization through various advantages of each media (Sudjana, 2005: 253).

According to Tjokro (2009: 187), online learning has many advantages, namely:

1. It is easier to absorb, meaning that it uses multimedia facilities in the form of images, text, animation, sound, and also videos.
2. Much more effective in costs, meaning that there is no need for an instructor, no need for a minimum audience, anywhere, and so on.
3. Much more concise, meaning that it does not contain a lot of class formalities, directly into a subject, subjects that fit your needs.
4. Available in 24 hours per day, meaning that mastery in a material depends on enthusiasm and also the absorption of students, can be monitored, can be tested by e-test.

2.2.5 Disadvantages of Online learning

The disadvantages of online learning described by Nursalam (2008: 140) include the following:

1. The lack of interaction between learners and students or also even between students themselves.
2. This tendency can ignore academic aspects as well as social aspects and vice versa make the growth of aspects of business or also commercial.
3. The teaching and learning process tends towards training rather than education itself.
4. Changing a learning role from the original masters of conventional learning techniques is now also required to be able to know the learning techniques using ICT (information, communication, and also technology).
5. Not all internet facilities are available in all places.
6. The lack of a human resource that understands the internet
7. Lack of mastery in computer languages.
8. Access on an adequate computer can be a problem for students.
9. These students may be frustrated if they cannot access graphics, images, and videos because of inadequate equipment (software and hardware).
10. Availability of an infrastructure that can be fulfilled.
11. This information varies in quality and also accuracy so guidance and also question features are needed.
12. These students can feel isolated.

2.2.6 Obstacles of Online Learning

Obstacles in the implementation of online learning, are (Effendi, 2005):

1. Investigation

Although online learning can ultimately save on education costs, it requires a very large investment at the outset.

2. Culture

The use of online learning requires a culture of independent learning and the habit of learning or the following learning through computers.

3. Technology and Infrastructure

Online learning requires computer devices, reliable networks, and the right technology.

4. Material

Design Submission of material through online learning needs to be packaged in a learner-centric form. Currently, there are very few instructional designers who are experienced in making an adequate package of e-learning lessons.

2.2.7 Project-Based Learning

Project-Based Learning (PBL) is an instructional model that is based in the constructivist approach to learning, which entails the construction of knowledge with multiple perspectives, within a social activity, and allows for self-awareness of learning and knowing while being context dependent stated (Duffy & Cunningham, 1996). Thomas (2000) sets five criteria for PBL: projects should be central to the curriculum, focused on problems that drive the students to struggle with major concepts, involve the students in constructivist investigation, student-

driven, and realistic. PBL is an “outlet for every student to experience success” (Wolk, 1994). Furthermore, common features to PBL implementation are an anchor of the activity, a task, an investigation, provision of resources, scaffolding, collaboration, and opportunities for reflection and transfer (Grant, 2002)

Eyring (1997: 1) defines projects, in language learning settings, as “assignments that incorporate student input, with content deriving from real second language use through extensive contact with either native speakers or native texts, integrating language skills and extending over several weeks or more”.

From the definitions above, the writer sees that Project-based learning (PBL) as a dynamic approach to teaching in which students explore real-world problems, issues and challenges, are inspired to obtain a deeper knowledge of the subjects they are studying and more likely to retain the knowledge gained through this approach far more readily than through traditional textbook centered learning. In addition, the students develop confidence and self-direction as they move through both team-based and independent work.

2.2.8 Character of Project-Work

Stoller (1997: 4) identifies six characteristics of project work as follows:

1. Project work is not centered around specific language targets, but around real-world subject matter and topics of interest for students.
2. The teacher offers support and guidance, but project work is student centered.
3. Students can work individually, in a small group or as a class for the completion of a project, but this working together is cooperative rather than

competitive, which means that students share resources and ideas throughout the project.

4. Starting from the use of varied resources and real-life tasks, students will gain an authentic combination of skills and ways of processing information.
5. The completion of project work finishes with an end-product, such as an oral presentation, a report, a poster session, a bulletin board display, and so forth, to be shared with others. Apart from the final product, the process of working towards the end product is also important. Thus, project work has a process and product orientation which enables students to focus on fluency and accuracy.
6. Motivation, stimulation and challenge are potential characteristics of project work which help students gain confidence, self-esteem, autonomy and improvement in language skills and content learning, as well as cognitive abilities.

Based on the essential characteristics above, the writer concluded that the project-based learning (PBL) strategy makes students more independent when they search for the necessary knowledge and information to achieve their project. But themes or projects shared by teachers should relate to real life. Thus, project work has both a process and product orientation and provides students with opportunities to focus on fluency and accuracy at different project-work stages.

2.2.9 Type of Project

Projects can be classified into different types or categories. They can differ in relation to the degree to which the instructor and learners decide on the nature and

sequencing of project-related activities, as shown by the three types proposed by Henry (1994):

1. Structured projects: they are determined and organized by the teacher in terms of the topic, materials, methodology and presentation. It has the following characteristics: The topic is prescribed by the teacher (with students having some choice of options), the methods for collecting and analyzing the information is specified, or it can also offer students several topics from which students choose.
2. Semi-structured: project offers the project area and methodology, but requires the students to take on more responsibility; they are organized by both the teacher and the students.
3. Unstructured projects are defined by the students themselves.

Projects can also differ in the way data is collected and sources of information as demonstrated by the following five types suggested by Stoller (1997: 5) such as:

1. Research projects requiring library research;
2. Text projects which use encounters with texts such as literature, reports, news, media, video and audio material, or computer-based information.
3. Correspondence projects necessitate communication with individuals or businesses through the use of letters, faxes, phone calls or email.
4. Survey projects require students to create the survey instrument and then go out and collect the information for analysis.
5. Encounter projects require direct contact with native speakers or outside the classroom people.

Projects may also differ in the way information is reported. Stoller (1997) identifies three categories all of which yield different end-product as the following:

1. Production projects which involve students creating bulletin boards, videos, poster sessions, radio programs, written reports, handbooks, travel itineraries, menus, letters, and brochures. This entails that the outcome of this type of projects is written production.
2. Performance projects lead to things such as debates, oral presentations, theatre, food fairs or fashion shows.
3. Organizational projects involve planning and forming a club or conversation table or partner program

2.2.10 Advantages of Project-Based Learning

According to Westwood (2008: 34-35), the project approach can be applied in almost all areas of the curriculum as it is useful because:

1. Projects have a 'real world' orientation and promote meaningful learning by connecting new information to students' past experiences and prior knowledge.
2. Students learn valuable processes and skills for gathering and analyzing data.
3. Students are responsible for their own learning, thus increasing self-direction and motivation.
4. The learning process encourages various modes of communication and representation.
5. The approach encourages use of higher-order thinking as well as acquisition of facts.

6. The approach develops deeper knowledge of subject matter.
7. The approach also increases team-working and cooperative learning skills.

2.2.11 Implementation of Project-Based Learning PBL Technique

Schuler (2000) describes the project process in three broad phases: selection of the project topic, data collection and culmination of the project. In the first phase, the project topic is selected based on a discussion of the teachers' and students' ideas and knowledge about the related topics including personal stories and experiences about the topic. A project, as Fried-Booth (1986) maintains, moves through three stages: beginning in the classroom, moving out into the world and coming back to the classroom. These three stages correspond respectively to:

1. Classroom Planning: in collaboration with their teacher, learners discuss the content and the scope of the project.
2. Carrying out the project: learners move out of the classroom setting to complete the tasks they planned like conducting interviews and collecting data.
3. Reviewing and monitoring the work: it includes discussion and feedback session to evaluate the project.
4. In addition to these phases, Fried-Booth (2002) indicates that a follow-up program to meet the language needs of students observed during the implementation stage may be fruitful for students' linguistic competence.

Fried-Booth (1986: 9-10) offers multiple steps including eight stages of development. These are as follows:

1. Stimulus: this is the initial discussion about the main topic and possible suggestions to work on it.
2. Definition of the Project Objective: it includes the discussion and negotiation of the objective of the project work.
3. Practice of Language Skills: this step includes the language that learners need for completing their project. It also introduces many functions like suggestions and asking for information.
4. Design of Written Materials: it includes for instance writing questionnaires for the sake of authentic data. Reading and writing skills are prominent here.
5. Group Activities: this stage is designed to collect information. Students are to agree on the activities that they will conduct.
6. Collection of Information: it puts emphasis on discussing the collected data.
7. Organization of Material: it consists of developing the end-product of the project. The main language skill practiced in this phase is writing.
8. Final presentation: the learners present the final product to the whole classroom.