

A Review of Experiential Learning based on Flipped Classroom

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ABSTRACT

The world of education continues to produce many innovations in providing attractive learning services for students. In addition to the innovation factors presented, inventions in the world of education must also pay attention to the effectiveness factor. In this era of industrial revolution 4.0, the world of education must also adjust to any changes that occur in it. We all know that the use of conventional learning models has no positive impact on the achievement of learning objectives. Teachers or other educators must present learning content that is interesting, interactive and stimulates student activity in carrying out the learning process.

In the world of learning, we often hear a learning model that is so interesting that it asks students to learn. This model is an experiential learning model that is very familiar in the learning process at all levels of education. This experiential learning model is characterized by making direct learning experiences of students associated with the learning topic being discussed. This article will also discuss a flipped classroom-based experiential learning model. The combination of 2 (two) learning models is interesting because it will highlight the side of the student learning experience (experiential learning) and the side of online learning that is carried out outside the classroom using LMS (Learning Management System) assistance, for example: Schoology, Edmodo, Google Classroom and others

Key words: experiential learning, experiential learning based on flipped classroom

1. INTRODUCTION

Experiential learning based on flipped classroom is a combination of 2 (two) learning models, namely: experiential learning and flipped classroom. In experiential learning students will go through 4 (four) stages of the learning process, namely: (1) concrete experience; (2) reflective observation; (3) abstract conceptualization; (4) active experimentation. While in flipped classroom students will undergo the learning process with a reverse classroom scenario. The purpose of the inverted class in this flipped classroom is that students will get learning material outside the class (outside class) and discuss it together in the class (inside class) during face-to-face learning sessions.

In the application of the experiential learning model based on flipped classroom, LMS (Learning Management System) is used in the form of schoology. The use of schoology is to support the flipped classroom model which requires the provision of material to be delivered to students when they are outside the class.

2. EXPERIENTIAL LEARNING

Citing Kolb's (1984) opinion about experiential learning which means a learning model that makes the learner's experience the main key of all learning activities carried out. Kolb states that learning is an experience transformation activity with the aim of forming knowledge (Kolb, 2015). In experiential learning,

students will be given learning activities based on real experiences of each learner related to learning topics.

According to (Dale, 1946) explained that students will experience the following learning experiences:

- (1) Only 10% of students remember what they read
- (2) Only 20% of students remember what they heard
- (3) Only 30% of students remember what they saw
- (4) Only 50% of students remember what they saw and heard
- (5) 70% I remember the students what they wrote and said
- (6) 90% of students remember what they said and did

Menurut According to (Kuh, G. D., O'Donnell, 2013)) in his research on experiential learning says that experiential learning will determine the desired learning outcomes. Furthermore (Jeffrey et al. 2016) explained that the seriousness factor of students in doing experiential learning-based learning will greatly affect the learning outcomes achieved.

According to Keeton dan Tate (Beard and Wilson, 2013) defines the learning experience as an activity of students carrying out the learning process from direct experience. Students will succeed in getting new knowledge by involving themselves as much as there is a learning process (Degeng, 2013)

In essence, student learning activities can take place anywhere and anytime according to the conditions of each student. Learning activities can take place in the classroom, school garden, library, museum, house, public transportation or any other place without being limited by time and place. This is also conveyed by (Wong et.al: 2012) which explains that the essence of a learning process is a condition in which a person undergoes learning activities in many aspects, both time, place and the technology used.

According to David Merrill in (Degeng, 1989) the experiential learning

model is a suitable model applied to the learning experienced by students in understanding knowledge and looking for a deficiency / error. According to Gardner (2004 & Valsiner 2000) learning is an activity that takes place from the process of individual experience.

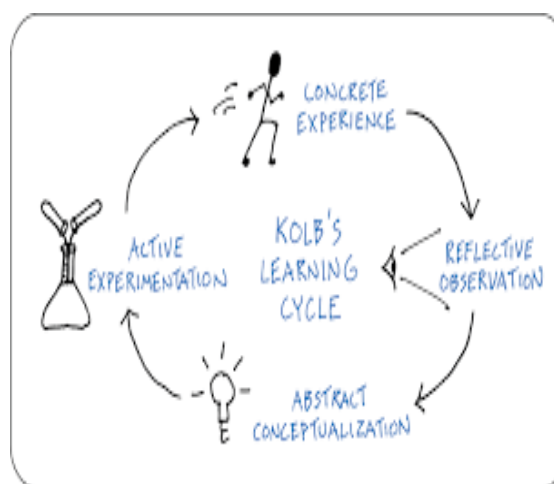


Figure 1. Experimental learning cycle learning

From Figure 1 above, it is explained that the experiential learning process has 4 (four) stages, namely:

- (1) concrete experience (doing/ having an experience)
- (2) reflective observation (reviewing/ reflecting on the experience)
- (3) abstract conceptualization (feeling/ thinking)
- (4) active experimentation (doing/ trying what you've learned)

1. Concrete Experience

At this stage the teacher / lecturer designs a learning process that involves direct learning experiences by students. This stage can be passed by using a study tour learning strategy. The study tour strategy is very useful for students to see and feel directly the object of the visit related to the subject matter being studied in the classroom.

This concrete experience stage can also use a storytelling strategy. This means that students do not need to be invited to visit a particular place or site, but students are given the opportunity to tell the class

about their experiences that are still related to the subject matter being studied to be thoroughly explored and discussed with the teacher and their friends in class.



Figure 2. Learn from experience

2. Reflective observation

At this stage the teacher / lecturer prepares a video or image related to the learning material to be displayed to students. The video or image displayed must be relevant and can add to the student's academic insight. Try to present the video or image that will be displayed that must be able to provide stimulus and sensitivity to students to problems that are being discussed together in learning.



Figure 3 Reflective observation

From the process of watching videos, pictures or power point slides, the teacher / lecturer wants to see the response and try to stimulate the feelings of their

students. Of course the response of each student will be different and varied. The following are some of the students' responses when watching the video or PowerPoint slide that is shown, including:

- 1) There are students who respond casually
- 2) There are those who reach it with gestures that suggest they are drifting into a problem that is being shown in the video
- 3) Some are watching seriously while writing something on small paper

Some student responses to the video or power point slides displayed by the educator are reasonable responses to the stimulus given. This is because each student has their own learning style and different sensitivity. This is of course the task of the teacher / lecturer to facilitate all responses given by students to synchronize them with the learning objectives that are tucked into the video or power point slides given.

3. Abstract Conceptualization

At this stage students will be given the freedom to pour their attitudes on the problems that have been seen in the previous stage into an idea or concept. The idea or concept that is made must have relevance to the material being discussed together. Teachers or lecturers can provide opportunities for students to convey ideas, ideas or concepts that have been prepared to be presented directly in front of the class. This needs to be done to train students to dare to express their opinions in public.

This abstract conceptualization activity is a continuation of the previous stage which has brought students into the subject matter through video shows or power point slides. This stage is important for students and teachers themselves. For students, this stage will give them the opportunity to explore their natural talents in generating bright ideas and ideas. For teachers / lecturers, this stage can be one of the moments to provide individual assessments to students who express their ideas and ideas.



Figure 4. *Conceptualization*

4. Active Experimentation

At this stage students will have the opportunity to try to do a real step / academic activity with direct practice. This active experimentation stage is the final part after students go through 3 (three) stages that involve real learning experience, then continue to watch videos, pictures or power point slides that are relevant to the material, and are given the opportunity by the teacher / lecturer to convey ideas / brilliant ideas and solutions to problems that are being discussed together.

Activities in the active experimentation stage can be done through role play, simulation, laboratory practice and others. This stage is usually very attractive to students because they will be free to express their talents and abilities in activities that involve their psychomotoric aspects.



Figure 5. *Active experimentation*

3. FLIPPED CLASSROOM

In the era of the industrial revolution 4.0, almost all sides of life have adapted to advances in science and technology. This is no exception with the world of education which has also begun to familiarize itself with and adapt to various learning approaches supported by technology. And this has become a new habit for society, especially students, who cannot be separated from various technological advances, including today's technology-based learning.

According to (Bergmann, J., & Sams, 2012) said that basically the concept of a flipped classroom is the activity of providing learning material to be given at home and this is very different from conventional learning which implements the provision of teaching materials in the classroom. The flipped classroom model is also widely associated with constructivist learning.

Flipped classroom has a focus on a computer-based outdoor learning process and interactive group-based classroom learning (Bishop & Verleger, 2013). The flipped classroom model can make learning outcomes increase to a higher level (Albert & Beatty, 2014) In a flipped classroom, the assignment process must be interesting and take the form of challenges and must be in accordance with the video that has been given at home (AlJarrah et al., 2018).

In the era of the industrial revolution 4.0, almost all sides of life have adapted to advances in science and technology. This is no exception with the world of education which has also begun to familiarize itself with and adapt to various learning approaches supported by technology. And this has become a new habit for society, especially students, who cannot be separated from various technological advances, including today's technology-based learning.

Flipped classrooms provide ample opportunities for students to independently control the learning process which is full of challenges (Andone & Vasu, 2016) in (Kravcik & Popescu, 2016).). In a flipped classroom, educators ask appropriate

questions as a form of reflection to find out the level of understanding of students in the discussion frame (Bailey et al., 2017)

Baxter Magolda and King (2012) in (Reidsema et al., 2017) reveal that there are 4 points that discuss the relationship between constructivist learning and flipped classrooms, including:

1. Build social knowledge
2. Teachers must respect and provide validation for what students know
3. Learning should be a process of experiential learning
4. There is a desire to build each other

Teachers or other teaching staff must improve their skills and abilities towards implementing creative and innovative learning strategies by taking advantage of technological advances (Fradila Yulietri, Mulyoto, 2015). Changes and technological advances that have occurred have brought about the phenomenon of flipped classrooms where learning content is delivered outside the classroom through video media and in the classroom through group work and joint problem solving (Blair et al., 2015)

Talking about technology in education, of course we all know that there is a learning model that relies heavily on the sophistication of technology and information. The learning model in question is flipped classroom.

Flipped classrooms can also be used as a means of improving the relationship between teachers and students (Borras Geñe et al., 2017). Flipped classroom designs students to have a lot of discussion in class to gain knowledge and understanding of concepts (Borchardt & Bozer, 2017).

There are 3 (three) important points in a flipped classroom, namely:

- (1) Students watch learning material in the form of videos or other things at home
- (2) Students explore the contents of the video as an important knowledge to be discussed with other students when they are in class

- (3) Students undergo an explanation of the learning material from the teacher (Garcia & Fidalgo-blanco, 2016)

In terminology, flipped classroom is an inverted class. Etymologically, the definition of flipped classroom is a learning model that combines 2 (two) learning activities outside and inside the classroom. Wolf & Chan (2016) explained that the flipped classroom is an inverted class whose activities are passed by providing material in the form of video, audio or pictures in pre-class sessions and in the next session discussing in depth in the classroom.

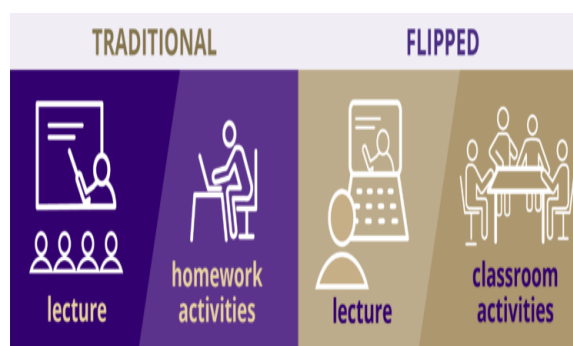


Figure 6. Flipped classroom

If in a traditional class, students receive learning material while in class and end with assignments that must be done outside the classroom / at home. And in fact traditional learning makes students passive and often experiences learning difficulties (Abeysekera & Dawson, 2015).

While in the flipped classroom model, students receive learning material while they are still at home and to be exact, students receive learning material before face-to-face sessions in class. This stage requires the readiness of the teacher / lecturer in designing learning activities that support the implementation of flipped classrooms. This activity can be in the form of preparing videos, pictures or power point slides that are suitable to be conveyed to students regarding the material to be discussed together. Of course, the material in the form of videos, pictures or power point slides given must be interesting and communicative. Interesting means that the material provided must be able to arouse

student interest in learning and student curiosity. And communicative means that the material provided must contain elements of language and content that seem to invite readers to interact.

From Figure 6 above, we can see that flipped classroom-based learning activities provide material to students virtually through YouTube channels, blogs, or asynchronous learning applications before face-to-face starts in class. Meanwhile, when you are in the classroom, learning activities are passed through group discussion activities and doing more research by doing independent or group assignments. This is what distinguishes between the traditional learning process and the learning process in the flipped classroom model which can create a learning atmosphere that involves students actively (Berret, 2012; Milman, 2012; Strayer, 2012)

On the other hand, flipped classrooms will have a positive impact in the form of increased learning outcomes for students who participate in active learning activities (McNally et al., 2017). Flipped classrooms can also create a conducive, unique and fun learning atmosphere and this is good for achieving learning goals (Abdullah et al., 2019)

In the flipped classroom, students can learn through web lectures (learning via the web), article links, e-book links (Bouwmeester et al., 2016)

1. Flipped classroom has several advantages, including:
2. Flipped classroom can help students to understand a certain concept or knowledge that sometimes cannot be understood when using traditional learning.
3. Flipped classroom allows students to be actively involved in the learning process
4. Flipped classroom can be a solution for students who have learning difficulties.
5. Flipped classrooms can provide online learning in accordance with the era of the industrial revolution 4.0

In the implementation of learning with the flipped classroom model, the previous lesson material has been uploaded by teachers / lecturers online to YouTube channels, blogs or asynchronous learning applications, such as: schoology, google classroom, edmodo and others. Furthermore, the teacher / lecturer asks students to watch and learn it and make small notes regarding important points or things that are not understood. Furthermore, small notes in the form of important points or things that have not been understood can be asked and discussed together with the teacher / lecturer and other friends when they are in class.



Figure 7. LMS asynchronous

Some of the applications above can support flipped classroom-based learning which is closely related to the use of technology in its implementation. During the Covid-19 pandemic in 2020, some of the online learning applications above were in great demand and used by the world of education. Of course, the use of some of these applications is based on ease of use and effectiveness factors.

4. EXPERIENTIAL LEARNING BASED ON FLIPPED CLASSROOM

We all know that the experiential learning model is a learning model that emphasizes student activeness through the 4 stages of learning initiated by David Kolb. There are 4 (four) stages in experiential

learning, namely: concrete experience, reflective observation abstract conceptualization, active experimentation. While the flipped classroom has the characteristics of providing learning material during pre-class (in home) in the form of videos, pictures, power point slides and carrying out learning activities in class by discussing together and working on projects, independent assignments or group assignments.

Experiential learning based on flipped classroom is a combination of 2 (two) learning models, namely: experiential learning and flipped classroom. The experiential learning model based on flipped classroom is a combination of two active learning models. This model is predicted to be a very interesting learning model and can be applied to many learning materials or lectures. The reason is that the flipped classroom-based experiential learning model provides ample space for students to develop their talents and abilities in the academic field. In addition, this model is suitable for use in the era of the industrial revolution 4.0, which uses a lot of the sophistication of information technology in every process.

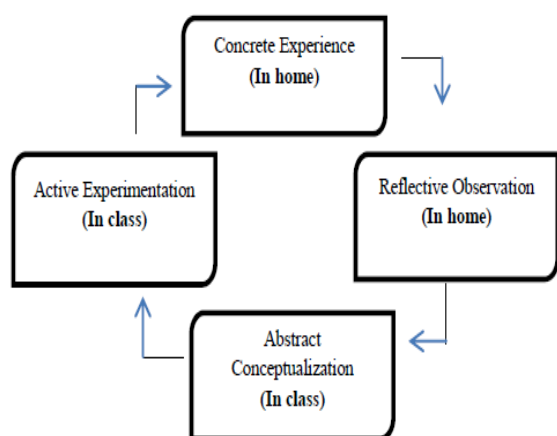


Figure 8. Experiential learning based on flipped classroom

From Figure 8 above, it can be seen that the learning cycle in the flipped classroom-based experiential learning model, namely:

(1) The teacher provides learning materials in the form of videos, pictures or power

point slides through YouTube channels, personal blogs or using the LMS (Learning Management System) application.

- (2) Students carry out their first activities at the concrete experience stage by writing their personal experiences related to the material being discussed by the teacher on the Schoology application account, which is one of the LMS (Learning management System) at home
- (3) Students carry out their second activity at the reflective observation stage by viewing videos, pictures or power point slides that have been uploaded by the teacher virtually on YouTube channels, personal blogs or power point slides at home
- (4) Students carry out their third activity at the abstract conceptualization stage by expressing ideas, ideas or solutions to problems and problems that have been displayed in videos, pictures or power point slides in the previous stage.
- (5) Students carry out their fourth activity at the active experimentation stage by carrying out activities that involve their psychomotrics, such as role play activities, simulations or laboratory practices.

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