Bringing Collaborative Problem Based Learning (CPBL) into a Flipped Classroom: A New Strategy for Teaching Writing

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Abstract: This study is conceptual research. It designs the integration of Collaborative Problem Based Learning model with collaborative learning model implemented in flipped classroom for teaching writing at university. The strength of this model lies on the fact that it is the student-centered approach. Enriching the learning environment with the use of technologies can also offer students better learning opportunities. One method for incorporating technology like videos is the flipped classroom, which brings an innovative perspective to traditional lectures. This study discusses about the model of Collaborative Problem Based Learning which is implemented into a flipped classroom. The flipped classroom involves blended learning - a combination of face-to-face in-class learning and distance learning. It is a perfect choice as the model encourages students' active participation, promotes support from teacher and peers to handle homework and allows more free time in class. The flipped classroom model seems to be more favorable in higher education than in K-12 education. This is because the model lends itself to active learning.

1 INTRODUCTION

Writing is found to be difficult skill by students. It is due to the fact that the process of writing covers many aspects such as content, organization,vocabulary, language use, and mechanics. According to National Writing Project (2003), the complexity of writing causes teaching writing is very challenging task for English teachers in education field. Besides, this complexity may affect the students' attitude on writing. Considering the problems encountered by students, Harmer (Duch et al., 2001) states that teachers should find the appropriate methods and methodological beliefs to lead the teaching practice.

For this reason, it is suggested for teachers to find other methods to teach writing. The use of problem based learning (PBL) can be a solution to stimulate students to develop their writing skill. By utilizing this strategy, the students should be active to manage their own way to learn. The instructor will be the facilitator for giving problems to be solved and possible learning sources to be used. Gallagher and Reynolds (Gallagher, 1997) assert that one of the characteristics of PBL is the use of student-centered approach and teachers are facilitators who serve as the initial stimulus and framework for learning. In addition, enriching the learning environment with the use of technologies can also offer students better learning opportunities. Video is one of effective technological tools for teaching when used properly (Hartsell and Yuen, 2006).

This model attempts to utilize the use of Problem Based Learning which is combined with collaborative learning for teaching writing at university. The strength of this model lies on the fact that it is the student-centered approach. Since the students are the center of learning, they feel free to study the topics they are interested in and manage the way how to study including identifying their learning needs, planning classes, leading class discussions, and assessing their own work and their classmates' work. In addition, students become more effective problem-solvers and self-directed learners while the lecturers become a tutor or cognitive coach who models inquiry strategies, guides exploration and help students clarify and pursue their research questions. This article discusses about the model of Collaborative Problem Based Learning which is implemented into a flipped classroom. The flipped classroom involves blended learning - a combination of face-to-face in-class learning and distance learning. It is a perfect choice as the model encourages students' active participation, promotes support from teacher and peers to

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2 RELATED THEORIES

2.1 Problem Based Learning

Problem Based Learning (PBL) is a total approach to education that challenges students to learn through an active engagement in real life problems. Today, PBL is used extensively in elementary, secondary and tertiary education institutions worldwide, and has also been adopted in various fields of professional training, such as nursing, engineering and architecture, among many others (Ioa,). The key characteristics of PBL are that it involves team work and communication skills, a problem-solving, critical, analytical and creative capacity, as well as individual research.

As (Duch et al., 2001) declare, problem-based learning is one educational strategy that helps students build the reasoning and communication skills necessary for success today. Actually PBL derives from a theory which suggests that for effective acquisition of knowledge, learners need to be stimulated to restructure information they already know within a realistic context, to gain new knowledge, and to then elaborate on the new information they have learned (Kilroy, 2004). Therefore, problem-based learning can be implemented to assist the students to increase their understanding or cognitive competence toward content subjects written in English. By applying this strategy, both students' understanding and communication skills can be constructed.

In brief, the PBL strategy starts the session with the students' activities by giving problems/questions related to the topics that should be discussed in groups. Students classify the questions that they can answer and they cannot answer at that time. The teacher facilitates the students with content materials to help them answer the questions. Then the students share the tasks that will be done individually or in groups. They discuss all the problems together until the tasks are completed. If they get problems they can ask the teacher to verify their answers. Then the teacher invites each group to report their answers to the other groups. The other groups can give comment, questions, or any other addition toward the report of the presenting group.

2.2 Collaborative Learning

Collaborative can be interpreted as collaboration or collaboration. (Laal and Laal, 2012) define collaborative learning as a teaching and learning approach that involves a group of students to work together to solve problems, completing tasks, and creating a product. Meanwhile, Smith and MacGregor (Laal and Laal, 2012) define collaborative learning as a term that incorporates various educational approaches that involve intellectual relations between students, or between students and teachers together. Generally students work in groups of two or more members, seek for comprehension, solutions, understanding, or creating a product. Whereas, according to (Dillenbourg, 1999), Collaborative Problem Based Learning is a collaboration performed by two or more people who have the same goal, to solve a particular problem. This learning involves the cooperation process among students to solve problems as the main process to construct their own knowledge, supported by the initial knowledge the students possess.

(Gunawan, 2006) Classifies five important elements in the process of collaborative learning. They are:

- A sense of togetherness.
- There are mutually supportive interactions among group members.
- There is a sense of responsibility individually and in groups for the success of the learning process.
- Good interpersonal communication skills in a small group.

There is a process of reflection on their functions and abilities to work together as a group.

2.3 Flipped Classroom

The flipped classroom intentionally shifts instruction to a learner-centered model in which time in the classroom is used to explore topics in greater depth and create meaningful learning opportunities while students are initially introduced to new topics outside of the classroom. The flipped classroom involves blended learning, a combination of face-to-face in-class learning and distance learning. Students will benefit from participating in class group discussion and engaging in online video lessons and assignment that must be completed additionally outside of the class time. Comment that the flipped classroom approach "is an integration of face-to-face and online learning experiences—not a layering of one on top of the other". The flipped classroom approach shifts the responsibility from teacher to the students.

According to (Bergmann and Sams, 2012), a flipped classroom can be described as a setting where that "which is traditionally done in class is now done at home, and that which is traditionally done as homework is now completed in class" (p.13). In other words, the sequence is inverted. Meanwhile, according to Lage, Platt, and Treglia (Lage et al., 2000), "Inverting the classroom means that events that have traditionally taken place inside the classroom now take place outside the classroom and vice versa" (p. 32). The flipped classroom helps foster learner autonomy through online video lessons and class activities at campus. Reynard suggests that classroom lessons be used as scaffolding rather than using it as the core instruction as in traditional classes (Reynard, 2007). Teacher should spend class time, a very significant part of learning process focusing on dialog practice, working in groups or demonstrations.

A flipped classroom frees up class time for teachers and presents learning choices to students rather than just informing them in a sit-and-listen format. With this model, teachers "... can deliver this instruction by recording and narrating screencasts of work they do on their computers, creating videos of themselves teaching, or curating video lessons from trusted Internet sites"

2.4 The Learning Model

The learning model is a plan or a pattern that is used as a guide in planning classroom learning. The model is a general pattern of learning behavior applied to achieve the expected competencies/learning objectives. Learning model is a pattern of interaction between students and teachers in the classroom that involves approaches, strategies, methods, learning techniques applied in the implementation of teaching and learning activities. A learning model not only determines what the teacher must do, but it also involves the stages, the principles of the reaction of the teacher and students and the supporting system required.

Arends (Agus, 2009) states that a learning model refers to the approach including the learning objectives, the stages in learning activities, the learning environment and classroom management applied in the classroom. Meanwhile, according to Joice & Weil (Isjoni, 2013), a learning model is a pattern or plan planned in such a way and used to compile the curriculum, organize the subject materials, and give instructions to the instructor in his class. Whereas (Istarani, 50) asserts that learning model is the entire series of presentation of teaching material covering all aspects before, while and after the learning performed by the teacher and all related facilities that are used directly or indirectly in the learning process.

Students are actively involved in an effective and meaningful learning they are the center of learning activities and the formation of competencies and characters. The learning model is very closely related to the learning style of students and the teacher's teaching style. The teacher's efforts in teaching students are very crucial to achieve the success of planned learning goals. Therefore, the selection of various methods, strategies, techniques and learning models is the main thing.

Related to this, (Rusman and Pd, 2012) suggests six characteristics of the learning model. First, the learning model is based on educational and learning theory proposed by experts. After that, the learning model has a specific educational mission or purpose. Then, a learning model can be applied as a guide for improving learning activities in the classroom; for example, the synectic model is designed to improve creativity in language learning. Next, the fourth characteristic is that the learning model has parts of the model called sequences of learning steps (syntax), reaction principles, social systems, and support systems. Furthermore, the learning model has an impact as a result of the application of the model. Finally, the teacher can make teaching preparations based on the learning model used. Moreover, Joyce et al. (2015) state that a model has at least (a) the sequence of steps of learning (syntax), (b) the principles of reaction that explain how the teacher evaluates students and how to respond to what students do in the learning process, (c) a social system that describes the collaboration form between teachers and students in learning or the role of teachers and students and their relationships and the types of rules that must be established/ implemented, (d) support systems that refer to the conditions needed to support the implementation of the learning model, including facilities and infrastructure such as tools and materials, learning environment, as well as teacher and student readiness, (e) effects of the model (instructional and accompaniment effect).

3 FINDING AND DISCUSSION

Based on the literature review and preliminary research, the researchers design a teaching model that suitable for teaching writing which integrate collaborative and problem based learning. This model will be applied in flipped classroom.

Collaborative problem based learning model is a learning model beginning with a problem that can be solved in groups. The guidelines for applying collaborative problem based learning are divided into three

categories: guidelines for teachers, students and guidance for both teachers and students.

a. Guidelines for teachers

- The teacher as a facilitator.
- Create a collaborative learning environment.
- Formulate the focus of the problem.
- Give an explanation when asked by students.

b. Guidelines for students

- Determine how to use information and various sources obtained to solve problems.
- Determine and take into account the time allocation for individuals and groups.
- Formulate the focus of the problem.
- Give an explanation when asked by students.

c. Guidelines for both teachers and students

- Teachers and students collaborate to determine learning issues and objects.
- Teachers and students gather the necessary learning resources.
- The teacher evaluates students, both individually and in groups.

In this model, the steps of collaborative problem based learning are as follows:

- Learning begins with giving challenging problems.
- Students are given the opportunity to identify and design solutions to these problems individually before they learn in groups.
- Students learn in small groups of 4-6 people to clarify their understanding, criticize friends' ideas in their groups, make conjectures, choose resolution strategies, and solve problems given, by clashing arguments.
- Students solve the problem given by the teacher individually.
- Students present the results of solving the problems obtained

Collaborative Problem Based Learning settings are performed in small study groups, in which each group consists of 3-5 students. Before assigning the students to work in group, the teacher first gives the problem to be solved. Then, the teacher asks students to work in group to solve problems given by the teacher. In this model, the intended collaborative problem based learning is a small group based learning model by providing small group problems to be solved and revealing the results of their work to other. The steps applied are:

- Each student is given individual problems.
- The teacher makes a small group of 2-5 students.
- After individual problems are given, students can work in groups with the knowledge gained from individual problems.
- Students solve the problems in groups
- The results of group work are submitted to other groups
- Other groups give responses.

Based on the description above, the steps taken are students completing the problem individually,after students finish the problem in groups, then one of the group representatives presents the results of the group's work in front of the class to another group.

3.1 Model of Teaching

The model of teaching is described below:

3.1.1 Syntax

- Planning

Planning stage is the first activity. In this stage, the lecturer prepares online materials such as video and asks students to watch the video and do the tasks that follow. After that, in the classroom, 3 to 5 students work in a group and start planning their writing by discussing the problem given by the lecturer. At this stage, the students discuss the problem, then, generate the solution of the problem. After that, the possible solutions are listed and constructed into single sentences. In short, at planning stage, the learning starts with constructing ideas from the problems provided. After that, the students work collaboratively to discuss the possible solutions for the problem. In this process, the students might work individually first before coming to the discussion to seek the possible solutions.

- Drafting

At drafting stage, the students write their first draft of writing in a group. They generate the listed possible solutions they have discussed at the previous stage. At this stage, students work together to construct their writing. They might discuss how to arrange the sentences they have constructed to make it united and discuss the appropriate conjunctions to complete the writing product.

- Revising and Editing

After the drafting stage, the next stages are revising and editing stages. At revising stage, the students check the other group's writing and give feedback. It

is done by managing the students to do peer correction. The writer and the corrector check the writing product, then, the corrector gives feedback. This is the activities done for revising stage. After that, editing stage begins after the writer gets some feedback from the corrector. The writers go back to their initial group and they write the second draft based on feedback given by other group's members. Next, they do the second peer correction with different group. The activities are performed like the previous revising stage. In short, the two stages,revising and editing, are done simultaneously. These stages end when the lecturer check the students' writing product and give final feedback related to the structure of the text to each group before they present their writing in front of the class. However, the lecturer needs to observe the students during the activities and give assistance when possible. At last, the students present their writing and stick their final draft in front of the class.

- Evaluating

The last stage is evaluation. In evaluating stage, the lecturer gives final correction and revises students' writing. After that, the lecturer concludes the lesson they discuss that day.

3.1.2 Social System

The social system describes the role and the relationship between the lecturer and the students. The figure the represents the model shows the relationship between the lecturer and the students. Before the planning stage, the lecturer prepares some topics or problems to be discussed by the students. It is the stage when the lecturer makes sure that the students are ready to involve in learning activities by activating students' schemata, developing it, and makes sure that the students know the purpose of the learning that day. The next stage is the time for students to be more active by discussing the problems and planning their writing from the problems they discuss. The lecturer's responsibility is only to monitor students' activity and make sure that the students know what they are doing. The lecturer might give assistance when needed. Since the students are already starting to plan their writing, the role of the students emerges at this stage.

After the planning stage, the students' responsibility is increasing but the lecturer's is decreasing. This is because students are expected to write their first draft of writing by generating the solution of the problem they have discussed at the previous stage. Moreover, at this stage, the lecturer should minimize assisting help for the students. This happens until the last editing stage. Finally, at the last stage which is evaluation, the lecturer becomes the center of the learning process since it the lecturer's responsibility to correct and students' writing product. In addition, the lecturer will also conclude the topic discussed on that day.

3.1.3 Principles of Reaction

The principles of reaction tell the lecturer how to involve students and how to respond to what the students do. It is described in almost all of the stages of teaching. At the planning stage, the lecturer involves the students by discussing the problem and the solutions that they are going to write about. It aims to activate students' background knowledge related to the topic for the lesson. During other stages, the lecturer is expected to respond to the students when they have difficulties in understanding and generating the ideas for their writing.

3.1.4 Support System

Support system describes the supporting conditions required to implement the model. In this model, the students need support system like various books and reference materials to help them find the solutions of the problem given by the lecturer. If it is possible, the lecturer might allow the students to use the internet service to find related sources to the topic.

3.1.5 Effects of the Model

As seen in the figure previously, this model, like other models, result in two types of effects: instructional and subsidiary. Instructional effects are the direct effects of the model resulted from the contents and skills on which the activities are based. Since the model provides problem based learning with the focus of teaching writing collaboratively, it is expected that the students are able to understand the stages in writing, to produce a good writing product, and in the end, eventually to have better language proficiency especially in writing. After that, the subsidiary effects are the indirect effects of the model. Since this model applies collaborative learning in which the students are expected to work collaboratively, there is a possibility that the students will be able to build their communication and critical thinking skills.

4 CONCLUSIONS

The problem based learning approach with collaborative learning strategies is actually a model that combines problem based learning with collaborative learning. Group discussion and brainstorming become the focus to be taught in this model. The distinct

feature of this model is that at the end of the process, there is evaluating stage for the lecturer to correct students writing and conclude the points of the topic of the lesson discussed in the classroom. Hence, it is expected that when the lecturer implements this model, which combined two kinds of learning approaches and strategies, in the writing class, the students will be able to write with better comprehension and competence since they are taught how to write systematically and they are provided with several activities to practice how to write.

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