

Influence of Flipped Classroom on Learner's Empowerment -A study based on English Writing Courses in China

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Abstract

Flipped classroom has been claimed as an effective solution to many problems existing in traditional teaching like increasing engagement and triggering positive learning attitude. However, the influence of flipped classroom on student learner's empowerment remains unidentified, though empowerment is believed to be a significant indicator of active learning. This study aimed to probe into the relationship between flipped classroom and student perception of empowerment in English writing courses in China. After one semester's experiment, the data analysis revealed that there is significant difference between experiment class and control class over empowerment. It can be tentatively concluded that flipped classroom can promote more learner perception of empowerment than traditional classroom.

Keywords: Flipped classroom; Learner empowerment; English writing

1. Introduction

Traditional classroom instruction has been widely criticized for its failure in providing individualized instruction. Although teachers in traditional classrooms have tried to vary lessons for learners of different levels of interest and ability, it is difficult to provide customized instruction to help every individual learners find his or her way (Muldrow, 2013). While flipped classroom is claimed to be able to provide a possible solution. In flipped classroom, students can learn lectures in advance of class time through video or other technologically-supported methods at their own pace and according to their own needs, and then they go back to classroom to participate activity-based learning individually or in groups with their individual understanding of the lecture. The means of delivering content and the ways in which class time for face-to-face interaction is employed vary with the characteristics of the students, background of the instructor, available resources, and the subject matter. In the class, instructors are able to more quickly and accurately detect where learners have mastered well and where they still are struggling. They can optimize individualized attention to the learners (Srivastava, 2014), and provide sufficient remedial support accordingly. With a traditional lecture, instructors might not be conscious of student progress and blind spots until after test (Chickering and Gamson, 1987). Similarly, Hamdan and his associates (2013) declared that in flipped classroom instructors "shift direct learning out of the large group learning space and move it into the individual learning space with the help of advanced technology" (p. 4).

At the same time, the more emphasis on higher-order thinking, team work, and problem-solving abilities, the more traditional classroom is blamed for not developing high-order abilities among students. In traditional classroom, no matter in learning which subject, students are expected to grasp factual knowledge, understand that factual knowledge in the context of a conceptual framework, and organize knowledge in a way that favored by the instructors. Then learners are assigned with homework for further understanding, evaluating and applying but they are left with less timely support and feedback. However, flipped classroom is believed to be able to address this concern. It can provide an opportunity for the learners to learn the contents before attending the class, which is set for helping students remember and understand the contents through reading lecture notes or watch the pre-recorded videos. These are regarded as lower level in Bloom's taxonomy. On the contrary class time in flipped model is designed to work through problems, advance concepts, and engage in collaborative learning (Tucker, 2012), which involves higher order skills like applying, analyzing, evaluating, synthesizing and creating new knowledge. Bergmann and Sams (2012) stated that students have already viewed the lecture through different means prior to class, contact hours in classroom can be devoted to problem-solving, skill development, and gaining a deeper understanding of the subject matter.

No matter for what reason, the flipped classroom instructional model has emerged as a promising alternative traditional lecture-based teaching as it offers a framework for integrating emerging online learning technologies into active and collaborative learning. Though the idea of moving course content outside of the classroom is not new because teachers commonly assign chapters to read before class, the use of technology to provide guided instruction to the students with a video lecture or an interactive tutorial distinguishes itself as a model with bright prospect. Bergmann, Overmyer, and Willie (2013) defined flipped classroom as the practice of moving the tailored lecture content outside the classroom as a pre-class activity for students, and reserve class

time for planned and guided discussion, active learning, practice, and other practical applications of new knowledge. It is more than a reordering of classroom and at home activities. Instead, it represents an expansion of the curriculum including the following two parts: direct computer based individual instruction outside the classroom, and interactive group learning activities inside the classroom. In the first part students are obtaining conceptual understanding, which is also referred as content attainment; while the latter part is for the students to test or evaluate the concept in a novel context referred as concept application (Jensen et al, 2015). Unlike traditional model favoring content attainment, the flipped model puts equal emphasis on gaining content attainment and facilitating concept application among students. Surprisingly, this belief is compatible with constructivist theory. Theoretically, it is expected to increase the effectiveness and efficiency of teaching in various subjects.

2. Literature Review

Many researchers have devoted to determine whether flipped classroom is better than traditional classroom (Sankey & Hunt, 2013; Han, 2015; Jensen, Kummer, & Godoy, 2015). If it is, in what aspects the flipped classroom distinguishes itself from traditional classroom. In terms of academic gains, the results are mixed. Day and Foley (2006) presented that students in the flipped environment scored significantly higher on all their homework assignments as expected. Later, Moravec et al. (2010) reported that flipped model helped students improve their performance by the increase of 21% on exam questions. However, Redekopp and Ragusa (2013) found that there was no significant different change in performance between lecture and flipped classroom strategies when lower-order Bloom taxonomy skills were evaluated by concept inventory and final exams, though there was better student performance in higher-order Bloom taxonomy skills in flipped classroom. The most depressing research findings are that there is no significant difference between flipped model and traditional model. For example, in Occupational Health course, Galway, Corbett, Takaro, Tairyan and Frank (2014) discovered that the final exam scores of flipped class and non flipped class were almost the same. Similarly, Jensen, Kummer, and Godoy (2015) shared the same result even including scores of high-level items and low-level items.

In improving academic performance, student interest and engagement are believed to be two essential factors. Some researchers focused their attention on these two factors to predict the effectiveness of flipped classroom instead of relating to academic performance directly. Stone (2012) claimed that in the small college classroom the flipping model can result in large learning gains and positive student attitudes towards learning process, which in turn help to promote student attitude coming into the course. Strayer (2012) found that students' attitude and impressions showed improvement in the flipped conditions. Craig Anthony Chin used a survey to measure student attitude in data communication course and found that students preferred the flipped classroom to the traditional format. While, Jensen, Kummer, and Godoy (2015) detected that there is no significant difference found in student perceptions, usefulness, and constructive quality of the course. As for engagement, most of the research findings reported that the flipped classroom can increase student engagement in their experimental study (Milliard, 2012; Tucker, 2012; Bergmann, Overmeyer, & Willie, 2011). Sweet (20014) also reinstated that the flipped model can promote student engagement, though she has not done an experimental study on it. In explaining how flipped classroom works among students, Jamaludin and Osman (2014) identified that flipped classroom could enhance students' behavioral, emotional, cognitive, and agentic engagement in active learning.

At the same time, researchers have also showed intense interest in detecting the relationship between flipped classroom and other learning indexes, like favorable learning experience and improved self-perceived knowledge (Takaro, Tairyan and Frank, 2014), increased ability to learn and willingness to communicate privately with the instructor on multiple occasions (Slomanson, 2014), high level of student satisfaction (Kellogg, 2009), increased social construction of knowledge (Sweet, 2014), increased learner's autonomy in flipping ESL classroom (Han, 2015), marked and quantified improvement in conceptual understanding (Tune et al, 2013), increased self-reported learning (McLaughlin et al., 2014), higher motivation and better relationship between students and their instructors (Tucker, 2012), strengthened team-based skills, personalized student guidance, and focused classroom discussion (Milliard, 2012), more space for classroom discussion and active learning with greater modularity and flexibility (Baker, Kutz, and Wilkinson, 2013), clearer purpose for learning (Jensen, Kummer, and Godoy, 2015). Sankey and Hunt (2013) even stated that flipped classroom could address student concerns through managing students' expectations by focusing on learning outcomes and by establishing the relevance of the course to student's professional lives, through authentic learning activities and assignment.

Though there seems to be a great number researches having been done to indentify how flipped classroom work with students, how student empowerment is influenced under it remains unknown. Empowered learners are not only believed to achieve greater content learning but are also thought to better demonstrate high-order abilities such as communication, teamwork, analyzing, and problem solving. Frymier et al. (1996) declared in their research findings that the empowered learners have positive attitudes toward the course content and the

instructor and participate in more activities. Therefore it is necessary to study the influence of flipped classroom on student perception of empowerment.

3. Research Question

In order to address the gap identified in the literature, this study will explore the effect of flipped classroom on student perceptions of empowerment as compared with traditional teaching model. This study measures English learners' perceptions of empowerment using the LES.

The research question in this study is: What is the effect of flipped classroom compared with traditional classroom teaching on student perceptions of empowerment in English writing courses? To answer this research question, Two hypotheses were developed as follows:

H1: There is no significant difference in student perceptions of empowerment between English learners who were taught in a flipped classroom compared with those who were taught in traditional teaching model.

H2: There is no significant difference in all the three dimensions of empowerment between English learners who were taught in a flipped classroom compared with those who were taught in traditional teaching model.

4. Research Method

4.1 Subjects: Two groups of English learners were chosen from a local comprehensive university in China. They were all sophomores in English major and have studied English for more than 10 years. In Group A (n=36), 32 of them were female, and the rest four were male, their age ranged from 19 to 21. In Group B (n=34), 28 of them were female and the rest six of them were male, their age also ranged from 19 to 21.

4.2 Study design. A comparative quasi-experimental design was used in this study. Two groups of English Writing learners were chosen from sophomores of English major in a local comprehensive university. Significant effort was made to ensure as much group equivalence as possible. The same instructor was assigned to the the same course for the two different groups with Group A as the experiment group and Group B as the control group. Moreover, the course of English writing was taught with the same textbook and course materials. The only difference between two groups was that Flipped model was used in Group A; learners were assigned to watch English Writing video at their spare time, in class they were encouraged to introduce, share and challenge what they have learned through these English Writing videos. In Group B, the traditional teaching model was used to lecture English Writing and to require the learners to finish certain tasks to review and consolidate what they had learned in the lecture.

4.3 Instrument. In this study, a structured questionnaire was used that is based on the 18-item version of the Learner Empowerment Scale (LES) (Weber, Martin, and Cayanus, 2003). In this questionnaire, 6 items were loaded on each factor, which achieved high alphas of 0.91, 0.87 and 0.91 for the three subscales: meaningfulness, impact and competence respectively. Sample items of the questionnaire are shown in Table 1. This instrument used a 5-point Likert scale that ranges from 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, to 5= strongly agree.

Table 1. Sample Items from the Instrument Used

Variable	Sample Questions
meaningfulness	I can't influence what happens in English writing class.
impact	I can help others learn in English writing class
competence	I can do well in English writing class.

4.4 Data Collection. After they finished the semester's study in English Writing courses, students from Group A And Group B were asked to finish LES in different classrooms at the same time so that they did not have time to discuss the instrument and answered their LES individually. They finished all the 18 questions and handed in the instruments, which were considered valid.

5. Analysis and Discussion

All the data were collected, and the answers of negative statements were reversed accordingly, and finally processed through IBM SPSS 22. Independent T-test was used to obtain the influence of flipped classroom on overall perception of empowerment, meaningfulness, impact, and competence.

5.1 Influence of flipped classroom on Students' perception of empowerment

Empowerment was first developed for management, Frymier, Shulman and Houser (1996) brought it to the instructional environment, and defined learner empowerment as consisting of three dimensions: impact, meaningfulness, and competence. Impact refers to learner perceptions of whether or not they can make a difference in their classroom, such as influencing the instructor and other students or providing necessary

information for class discussions. Meaningfulness focuses on how valuable learners perceive a task according to their own beliefs and standards. Competence illustrates that a learner feels qualified and capable of performing the learning activities to achieve the goals. Altogether, student perception of empowerment claims that the empowered learners tend to have positive attitudes toward the course content and the instructor, and participated in more activities. Flipped classroom is believed to pay more customized attention to learners with equal emphasis put on low-order and high order skills, which seem to promote empowerment among students.

Table 2 has confirmed its influence on empowerment. The means of Group A is higher than Group B in all three aspects, especially in Impact. Moreover, it reveals that there is significant difference between flipped classroom and traditional classroom in terms of meaningfulness, impact and competence. $P(\text{meaningfulness})$ is 0.00, $P(\text{impact})$ is 0.00 and $P(\text{competence})$ is 0.03, they are all less than 0.05. These prove that students from flipped classroom feel more competent, realized their participation is more influential and English writing class is more meaningful.

Table 2. Difference of Impact on Students' Perception of Empowerment

Item	Means	T	df	Sig.
meaningfulness	A=25.67	4.23	50.85	0.00
	B=23.56			
Impact	A=24.08	6.17	63.82	0.00
	B=19.79			
Competence	A=23.89	2.24	41.89	0.03
	B=22.47			

* $p < 0.05$

5.2 Difference of impact in empowerment

Data from Table 3 reveal that the means of Group A is generally higher than that of Group B, especially in terms of item 2. Although there is no significant difference in Item 1 ($p > 0.05$), there is significant difference between them in the rest five items. Learners from flipped classroom and traditional classroom in English writing courses share almost the same degree of influencing what happens in classroom. While learners from flipped classroom are more likely to believe that their participation influences the class than learners from traditional classroom. These differences illustrate that flipped classroom can promote student confidence more in their abilities in the courses and make them feel encouraged for further learning. In turn, the belief about their impact on English writing learning reinforces their desire to devote more to the course, which is also shared by Houser & Frymier (2009) that empowered learners are more motivated to perform learning tasks whether designated by the instructor or not.

Table 3. Impact

Question	Means	Sig.
1. I can't influence what happens in English writing class.	A=3.94 B=3.65	0.19
2. I have the power to make a difference in how things are done in English writing class.	A=4.06 B=2.85	0.00
3. I believe in my ability to do well in English writing class.	A=4.17 B=3.59	0.00
4. My participation is important to the success of English writing class.	A=4.17 B=3.44	0.00
8. I can influence my English Writing teacher.	A=3.89 B=2.91	0.00
17. I believe in my ability to do well in the class.	A=3.86 B=3.35	0.01

* $p < 0.05$

5.3 Difference of meaningfulness in empowerment

Different from impact, data concerning meaningfulness are more varied. Surprisingly, means of item 12 in Group A is lower than that of Group B, Which means that learners from traditional classroom tend more to believe the work they do in English writing class is not waste of time, though the difference is not significant enough. While in terms of Item 5, 6, 10, 11, and 15, the means of Group A is higher than that of Group B. However, the difference between two groups of learners is limited only to item 10 ($p < 0.05$), item 11 ($p < 0.05$) and item 15 ($p < 0.05$). P value of the rest three items, namely item 5, item 6 and item 12 is higher than 0.05, which means there is no significant difference between them. Learners from flipped classroom are more likely to believe that the work they do in classroom is valuable, the courses will help them realize their goals, and the work they have done during classroom time is meaningful., which echoes that students from flipped classroom

feel that they have an influence on their learning process (Houser & Frymier 2009).

Table 4. Meaningfulness

Question	Means	Sig.
5. The things I learn in English writing class are useful.	A=4.28 B=4.00	0.08
6. I can help others learn in English writing class.	A=4.03 B=3.61	0.06
10. The work that I do for English Writing class is valuable to me.	A=4.53 B=3.71	0.00
11. English writing class will help me achieve my goals in life.	A=4.28 B=3.88	0.01
12. The work I do in English writing class is a waste of time.	A=4.19 B=4.59	0.08
15. The work that I do in English writing class is meaningful to me.	A=4.36 B=3.77	0.00

*p<0.05

5.4 Difference of Competence in Empowerment

As illustrated in Table 5, the means of item 13 of Group A is lower than that of Group B, which reveals that learners from Group B are more optimistic about their ability in participating and finishing the required assignments. The means of other five items of Group A, including item 7, item 9, item 14, item 16, and item 18, is higher than that of Group B in varying degree.

In terms of p value, there is significant difference between them in four items about perception of competence, namely item 7 (p=0.00), item 14 (p=0.01), item 16 (p=0.04), and item 18 (p=0.03). It can be concluded from these four statements that learners from flipped classroom are more likely to believe that they can more capable of performing well in English writing courses than learners from traditional classroom. Flipped classroom can enable learners to take more personal responsibility and ownership of learning activities they perform. Meanwhile, item 9 and items 13 are for the same perception of empowerment, the first one is the positive statement, the latter one is the negative statement about their confidence in English writing. Surprisingly, difference results are obtained from these two questions.

Table 5. Competence

Question	Means	Sig.
7. My participation in English writing class makes no difference.	A=3.694 B=2.853	0.00
9. I can do well in English writing class.	A=4.111 B=4.000	0.45
13. I do not have the confidence in my ability to do well in English writing class.	A=4.194 B=4.588	0.19
14. English class is not important to me.	A=3.972 B=3.647	0.01
16. I do not think that I can do the work in English writing class.	A=4.194 B=3.824	0.04
18. I have what it takes to do well in English writing class.	A=4.000 B=3.588	0.03

*p<0.05

Therefore, in terms of Hypothesis 1, it can be confirmed that there is significant difference between Group A and Group B learners concerning student perception of empowerment. As for Hypothesis 2, it can also be identified that there is significant difference between Group A and Group B learners concerning all three dimensions of empowerment. It can be tentatively concluded that flipped classroom can have a vital influence on student perception of empowerment, which indicates that learners in flipped classroom are more interested in English writing courses than learners in traditional classroom.

6. Conclusion and Limitations

Flipped classroom is believed to be a potential solution to many intractable questions having existed in traditional classroom for years, which is designed as genuine learner centered model instead of learning or teaching centered model. In flipped classroom, learners are entitled with much more freedom to learning process and learning progress, for example they can pause and reflect when they feel confused, they can accelerate the process when they have mastered, and they can also test or challenge each other even the instructors with different mature or immature ideas in the flipped classroom. Instructors are not relieved of teaching; they are

encouraged to prepare the lectures according to their learners instead of textbook so that they can focus more on different learners with different designs.

Differing from previous researches, this study has confirmed the empowering function of flipped classroom with the presupposition that it can ignite and develop learners' interest in learning itself. Flipped classroom can enable learners to participate into learning activities in classroom to hone their higher-order skills and encourage them to believe that they are capable of getting involved in the learning process. Individual learners can start, pause, resume and accelerate their learning at their own pace in flipped context, which can help learners discover the meaningfulness and competence, which are neglected in traditional classroom model.

Admittedly, this study has its own limitations. Firstly, the number of subjects involved in this study is limited, at the same time the subjects are from the same local comprehensive university. Moreover, the experiment time is only one semester, more future researches need to be performed in a longitudinal to verify the effectiveness of flipped model. What's more, the conclusion of this study is primarily based on the data obtained through questionnaire, which might reflect only what the learners believe when they are answering the questions, instead of what they really do in English writing courses. In future researches, interview and class observation are supposed to be added to triangulate the research findings. At the same time, new researches like case study and reflective study can also be done on the changes of individual learners with the passage of time to demonstrate how individualized teaching is achieved.

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