

Improving Teaching Effects of Blended Learning by Stimulating Achievement Goals

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Abstract—During the epidemic of COVID-19, eLearning has been widely used in universities which provides a psychological and technical basis for the reform of blended learning. Blended learning integrates advantages of eLearning and traditional classroom which would become the teaching reform trend. The theory of achievement goals provides a theoretical tool for solving such problems as poor motivation for autonomous eLearning and lack of learning persistence and low participation in classroom activities. To trigger the learning motivation of students with different achievement goals and to improve teaching effects of blended learning, the article puts forward the following suggestions: improving the convenience of the campus network and eLearning platform, releasing gradient eLearning resources, realizing the seamless integration of organization and feedback for pre-class, in-class and after-class instruction, increasing the proportion of process performance and implementing multi-assessment.

Keywords—Achievement Goals; Blended Learning; Learning Motivation; Teaching Effects

I. INTRODUCTION

Network sharing platforms provide a large amount of high-quality online resources, which makes students in many universities share famous teachers' educational resources easier. During the epidemic of COVID-19, eLearning technics are widely used in daily teaching by all kinds of universities and schools, which exposed some problems such as lack of presence, poor motivation and insufficient persistence to learn resulting in unsatisfied learning outcomes. Because blended teaching has integrated with the advantages of eLearning and traditional teaching, it is becoming the focus of teaching reform. In this article, the author tries to explore how to stimulate students' learning motivation based on the theory of achievement goals.

II. BLENDED LEARNING

A. Blended Learning Model

Blended learning is a new teaching mode which integrates the advantages of face-to-face and timely feedback of traditional classroom with the advantages of convenience and flexibility of eLearning. Flipped classroom is a special form of blended learning reversing the traditional teaching structure [1] which requires students to learn autonomous online before

class, to internalize knowledge by listening, discussing and excising in class and to expand knowledge by searching and discussing after class [2], and demands teachers to deepen knowledge, answer questions and puzzles, and guide students to discuss, summarize, report during the process of teaching and learning (see fig. 1). This method can effectively avoid the mandatory requirements of learning content and the dependence on the thinking process in the traditional classroom, and help to improve students' independent learning ability, writing ability and innovation ability [3].

This model extends the teaching process to before and after class. If implemented effectively, it will greatly improve teaching efficiency and effectiveness. The teaching and learning process includes: before class, teachers regularly release videos, texts and other teaching materials according to the syllabus and arrange learning tasks in advance, at the same time students are demanded to complete video viewing and homework according to the schedule. During class, teachers deepen and expand their knowledge, comment on homework and exercises and lead students to discuss on relative subjects. After class, the students' online task completion and discussion are evaluated and students are guided to expand the possible application areas of the knowledge they have learned.

B. Problem Existed in Blended Learning

As a blended learning mode, the flipped classroom makes students the learning center, which requires students to change from passive listener to active learner. Students learn online inattentively before class because they are accustomed to passively accept teacher's indoctrination and lack of autonomous learning and self-control ability. Due to supervision difficulties, some students even do not learn in advance or only open the video formally but do not learn at all. Insufficient pre-class learning may lead students to comprehension difficulties on extended knowledge or in-depth explanations of teachers in the classroom which would made the class discussion formal and the desired effect would be difficult to achieve. In addition, the lack of eLearning facilities may also affect the effect of flipped classroom. Therefore, it is necessary to provide personalized curriculum resources and set multi-level teaching goals to inspire learning enthusiasm and persistence of different students with different motivations.

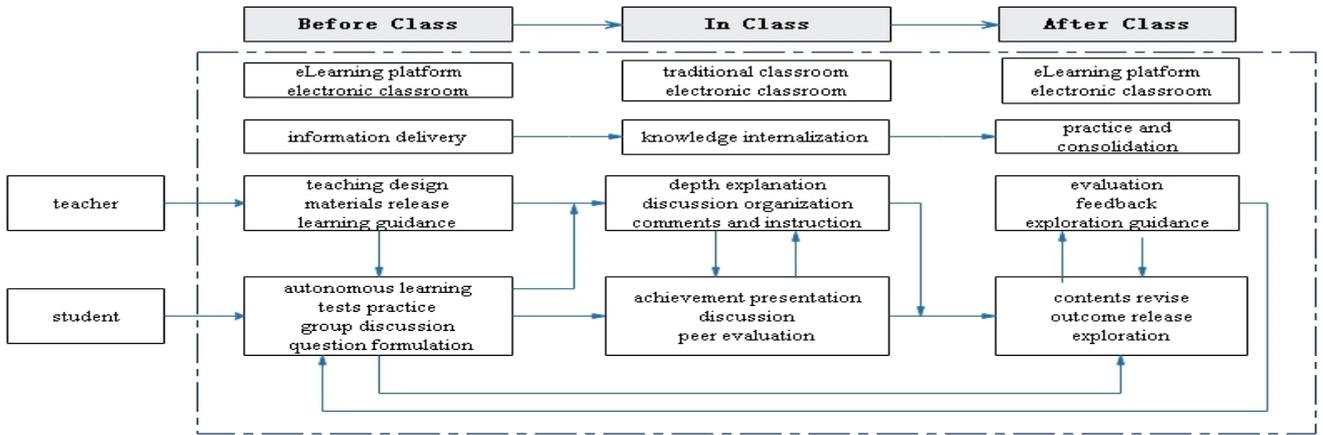


Fig. 1. Procedure of Blended Learning

III. RELATIONSHIP BETWEEN ACHIEVEMENT GOALS AND LEARNING EFFECTS

A. Categories of Achievement Goals

Achievement goal theory believes that human behavior is driven by achievement goals. If the learning behavior adopted by students can produce results that meet their achievement goals, the students would learn more. Dweck (1988) put forward the theory of achievement goals, and divided achievement goals into academic goals and performance goals [4]. Academic goals mean that individuals believe that abilities can be continuously improved through learning and can be achieved through self-control. They usually regard learning and performing tasks as opportunities, and strive to learn new knowledge by completing tasks to enhance personal abilities. Performance goals refer to individuals who regard participation tasks as a way to test their abilities and to surpass others. Individuals with academic goals are driven endogenously with more learning persistence, while the individuals with performance goals are driven exogenously who will be more positive only when they are approved.

Elliot A J & Harackiewicz J M (1996) further introduces the approach-avoidance dimension and divides achievement goals into three categories: academic goals, performance approach goals, and performance avoidance goals [5]. Individuals with performance approach goals pay attention to how to get approve from others, and how to surpass others. While individuals with performance avoidance goals focus on avoiding bad evaluations from others around them, they are usually lacking confidence and always avoid and delay tasks.

B. Influence on Learning Motivation of Achievement Goals

Some research has shown that students with academic goals have stronger self-control ability and higher learning engagement and persistence. Students with performance approach goals have higher learning engagement and learning performance, while students with performance avoidance goals often have weaker self-control ability and lower learning participation and persistence [6]. Achievement goals are also affected by the specific environment. Majority of freshman

hold academic goals, while junior and senior students hold more performance goals [7]. In addition, students' perception on their learning environment will affect their achievement goal orientation [8]. When students perceive that eLearning platforms are easy to operate and have rich, valued and interesting learning resources with challenging tasks, they will tend to learn with academic goals. While students feel that the learning contents are simple and easy to complete, they will tend to learn with performance goals. If the eLearning platforms are not easy operation or expensive, students would avoid learning with performance avoidance goals.

In order to enhance the effect of blended learning and translate students' exogenous learning motivation into endogenous one, teachers should pay attention to stimulating the learning motivation of students with different achievement goals by designing curriculum and tasks with valuation, interest and challenge. At the same time, it is necessary to provide timely and effective feedback on students' discussion and completion of tasks, so that students with performance goal would get the clear expectation on relationship of learning input and performance which would improve their learning motivation. Students with performance avoidance goal would have pressure to change from avoidance behavior to approaching one, because if they delay their tasks they need do more tasks.

IV. IMPROVING TEACHING EFFECTS OF BLENDED LEARNING BY STIMULATING ACHIEVEMENT GOALS

According to above analysis, eLearning platform with characteristics of convenience and inexpensive would induce more students to participate in learning. Students with academic goal would engage more when there are more ample, interesting and valuable learning resources. To students with performance goal, the stronger the correlation between learning behavior and performance, the higher motivation to learn would be. So, the achievement goal theory can be used to provide guidance for the construction and organization of blended learning.

A. Improving the Convenience of the Campus Network

Due to network load and other reasons, many universities do not open the Campus Network to students. Internet access can only be done in fixed laboratories or library electronic reading rooms. If blended learning were operated at the same time by multiple classes, there will be resource congestion, which would bring inconvenience of autonomous eLearning before class and would severely constrain students' enthusiasm. Some investments should be provided to promote the convenience of the campus network, which enable students to learn online at any appropriate time and place. Allowing students to learn online in a convenient, efficient, and inexpensive way can help increase their motivation to learn autonomously.

B. Purchasing the Authority of Using ELearning Platforms by Universities

After the epidemic of COVID-19, eLearning platforms would no longer be free. It would be an irrational choice to develop online courses massively by itself in each university in the ground of there being a large number of high-quality eLearning resources. Universities can purchase the authority of using eLearning platforms which allowing teachers to establish asynchronous SPOC courses according to the relevant syllabus, so that teachers can concentrate on improving depth, valuation and interest of learning resources and researching on how to organize class in order to achieve internalization and transformation of knowledge.

C. Releasing Gradient Learning Resources to Enhance Its Valuation and Interest

Achievement goal theory shows that students with academic goals have intrinsic learning motivation. The more learning resources are helpful for them to learn and master knowledge and skills, the better their self-control and persistence will be. Students with performance goals pursue higher grades, and their motivation for learning is exogenous. Only when they expect their learning behavior to achieve better grades will they show higher self-control and persistence. Many forms of learning platforms can be provided for students, such as MOOCs, micro-classes, resource supermarkets, virtual simulations. By providing resources with different challenges, valuation and interest, students with academic goals would efficiently obtain high-value knowledge and ability through autonomous learning. At the same time, some tests should be contained and immediate feedback of test scores would be necessary, by which the knowledge students just learn autonomously could be strengthened and the correlation between performance and degree of mastery of such knowledge. In addition, the eLearning platform should be capable of recording and feedback students' learning trajectory by which the number and duration of watching videos, documents and materials, as well as the number of discussions and scores evaluated by classmates and teachers can be taken into account as academic performance. By improving the relevance of academic performance and learning effort, learning enthusiasm of students with performance-approach goals can be stimulated.

D. Reorganizing the Teaching Process to Achieve Seamless Connection between Teaching and Learning before, during and after Class

Before class, students' preferences can be analyzed according to the learning trajectory data provided by the eLearning platform, by which teachers can adjust contents and media types using for teaching in a targeted manner, push the default learning path according to the learning consistency and the learning style of the students and allow students to adjust the learning progress according to their own needs.

In class, teachers sort out the specific knowledge learned by the students, and tools such as mind maps can be used to build a knowledge network by which students can be guided to transform fragmented knowledge into a systematic and coherent knowledge system. Classroom discussions and homework analysis can be used to promote students to internalize what they have learned. If group discussions are adopted, the representative to make a speech could be selected by the group member, also could be designated by the teacher and members from other groups could ask questions and also could designate members from the speech group to answer. Both the questioners and the responders would receive bonus points which would stimulate students with performance goals to participate in group discussion by improving the relevance between participation behavior and their academic performance.

After class, the stretched assignments that students should be independently completed by reviewing the relevant materials should be released in time, and teachers should timely evaluate and guide on what students have done. Tasks assignment, submission and evaluation can be feedback timely by using the reminder function of online chat tools, which is very important for strengthening the behavior of performing tasks and improving the relevance of academic performance to their performing behavior.

E. Increasing the Proportion of Process Assessment

The purpose of the assessment is to test the learning effect of the students, but at present, the score of the exam courses in many universities is dominated by the final exam, and the grades in normal learning times only play little role, which results in students paying less attention to regular learning. If students assault learning in the last weeks, they would get desirable performance but it is hard to reflect true abilities and mastery degrees of students, so, this kind of score distribution is not an effective way to guarantee teaching and learning effects.

In the context of blended learning, there are higher requirements for students' autonomous learning before class. It would be difficult to activate the autonomous learning enthusiasm for students with performance goals, if the regular learning process is not included or less included in the score composition. Therefore, the proportion of process assessment should be increased by including scores of quizzes, unannounced tests and homework, times and hours of eLearning, frequency and quality of participation in course discussions [9].

F. Combining Students' Peer-assessment with Teachers' Assessment

Teacher evaluation is the main way to evaluate learning effects in a traditional class, which may result in lacking objective and make it difficult to reflect the true representation of students. It is recommended to introduce multi-agent evaluation method by combing teacher evaluation with peer evaluation.

In group discussions, members of group are clearer than teachers on performance of their partner, so, peer evaluation can more objectively reflect the participation of members. At the same time, peer evaluation also helps to avoid the free-riding behavior of students with performance avoidance goals by reflecting and feedback their avoidance behaviors if they try to procrastinate or avoid participate in group discussions and tasks. By such way, the avoidance behavior of such student would be gradually changed into participation behavior in order to reduce attentions from others. Besides, peer evaluation also helps students to examine each other's learning results and to comprehend and learn other's analysis methods and ideas, which especially contribute to improving initiative and participation for students with academic goals by making students expand their thoughts and learn from each other's strengths to offset their own weaknesses.

V. SUMMARY

During the epidemic of COVID-19, teachers are familiar with eLearning platforms and can skillfully use eLearning technology, which provides a foundation for the development of a blended learning reform that combines the advantages of eLearning and traditional classrooms. Less self-control and low learning persistence caused by insufficient motivation for students to autonomous learn in eLearning are also the difficulties faced by blended learning.

Achievement goal theory guides stimulating students' learning motivation and improving blended teaching effect. However, according to the theory to improving better effect,

teachers should put more effort in pre-class resource preparation, organization and instruction in class, and evaluation and guidance after-class. And only the class size is small better education effects can be realized. At the same time, the evaluation standards of teachers' workload in universities also need to be adjusted accordingly to make sure that teachers' efforts could get the recognition and corresponding rewards, so that the reform process of blended learning would be pushed forward.

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