

Feasibility Analysis on Application of Dynamic Assessment in Flipped Classroom of College English

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Abstract—The research on flipped classroom of college English is experiencing transition from the theoretical phase to the practical phase. In this new classroom teaching mode, traditional non-dynamic teaching assessment is no longer applicable. This study puts forward the hypothesis of applying dynamic assessment to flipped classroom, and analyzes theoretically the feasibility of applying dynamic assessment to flipped classroom from three aspects: teacher's role, learner's status and teaching mode. The result of this study proves that dynamic assessment is a suitable way of teaching assessment for flipped classroom of college English, but we still need further empirical research to examine the specific application of dynamic assessment in flipping classrooms.

Keywords—*Flipped classroom, Dynamic assessment, College English*

I. INTRODUCTION

The development of the open educational resources movement has promoted the development of flipped classroom teaching, and college English has been trying to introduce this new teaching model into its teaching. In this new classroom mode, many components of the teaching have undergone tremendous changes. The traditional non-dynamic teaching evaluation is no longer applicable, and we need to find a new teaching evaluation method. Dynamic assessment can continuously evaluate students' teaching response and learning process. Through the interaction between evaluators and students, it focuses on the students' potential cognitive development level. It is a student-centered and dynamic assessment. The characteristics of this assessment method are consistent with the teaching characteristics of the flipped classroom, which emphasizes the student's dominant position in learning, the importance of teacher-student interaction, and the role of teachers as learning facilitators. Therefore, this study proposes the assumption that dynamic assessment can be applied to flipped classrooms.

II. LITERATURE REVIEW

Literature Review on Flipped Classroom. The flipped classroom is contrary to the traditional teaching process. The knowledge teaching is completed after the class through the aid of information technology. The knowledge internalization is completed in the classroom with the help of the teacher and the assistance of the peers to form a flipped classroom (Zhang Jinlei et al., 2012). The initial stage of flipped classroom research focused on the study of teaching models. There are two most influential foreign models proposed by Gerstein(2011) and Talbert (2011). Gerstein (2011) constructed a circular four-stage model of flipped classrooms. These four phases are: 1. Concept Exploration; 2. Experiential Engagement; 3. Demonstration & Application; 4. Meaning Making. Flipped classrooms usually begins with conceptual exploration, and students explore the relevant conceptual meanings by watching instructional videos themselves. In the flipped classroom, the first step is experiential participation, such as the group's manual practice, games, and so on. Then, through the group's projects and presentations, the learning results are presented and applied. Finally, students complete their own construction of meaning by completing tests, writing blogs, producing reflective podcasts and video podcasts.

Based the teaching practice of his "Linear Algebra" course, Talbert (2011) summed up the implementation process and steps of the flipped classroom, and proposed the systematic structure of the flipped classroom. There were two stages before and during the class. Before the class, the students must first watch the teaching videos, and then finish the guided homework exercises. In the class, the students must quickly complete a small number of tests, and then achieve internalization of knowledge by solving problems, and finally summarize and give feedbacks. However, because this flipped classroom framework is based on the science curriculum, it needs to be adjusted and modified to be applied to the liberal arts classroom.

In China, there are also some famous teaching models of flipped classroom, for example, Zhang Jinlei et al. (2012) constructed flipped classroom teaching model based on Talbert's (2011) flipped classroom structure, the connotation of flipped classroom and constructivist learning theory and systematic instructional design theory. Zhong Xiaoli et al. (2013) constructed a Taiji-ring flipped classroom model based on Taiji thought in Chinese traditional culture and Benjamin Bloom's cognitive domain classification theory. At the same time, there are many empirical researches on flipped classrooms: For example, Hu Jiehui et al. (2014) conducted a teaching practice of English-based flipped classroom based on self-built MOOC. The research shows that this model is suitable for college English teaching. Lu Haiyan (2014) explored college English flipped classroom teaching mode based on micro-course. Through the study of the concepts and characteristics of "micro-course" and "flipping

classroom", and the analysis of the characteristics of college English teachers, the learning characteristics of college students, the current college English teaching mode and the teaching environment, she explores feasibility of using the micro-class based "Flipped Classroom" model in college English teaching in China. However, research on the assessment of flipping classroom teaching is still rare.

Literature Review on Dynamic Assessment. The term "dynamic assessment" was proposed based on Vygotsky's ZPD theory. Feuerstein et al. (1979) developed a series of influential evaluation tools in the late 1970s, which greatly promoted the research and development of dynamic assessment. In the past three decades, dynamic assessment has become a hot topic in the field of western psychology and educational measurement research and application. The definition of dynamic assessment in this study was taken from the definition of Lidz (2003:337): dynamic assessment (DA) is a series of assessment methods for exploring and discovering students' potential developmental abilities through the interaction of evaluators and students during the assessment process, especially with the help of experienced evaluators.

Dynamic assessment research can be divided into theoretical research and empirical research. Theoretical research is mainly about the study of patterns and methods of dynamic assessment. Due to the different concepts and focuses emphasized by different scholars, a series of different dynamic assessment models have been formed. The modes of dynamic assessment are divided into interventionist and interactionist. The two most well-known evaluation methods for intervention are: the Leipzig learning test (LLT) method proposed by Gùthke (1986); and the Graduated Prompt Approach (GPA) designed by Brown et al. (1985). LLT was first called *Lerntest* and consisted of multiple tests, including language tests. The linguistic test program is to present a set of geometric figures to the subject, and a set of artificial language vocabulary is matched, and the test is required to find out the model by completing the task. If the first attempt fails, give testee a implicit hint and let him think about it. The second try was unsuccessful, and the tips were a bit clearer. If it is not successful, the prompt will be clearer. If the final answer is not correct, just tell the correct model and give a correct explanation. In addition to the scores based on the number of reminders and the time spent, the results of the test reported should also include the errors, assistance, and prompting procedures. Gùthke believes that with the help of teachers, children can form, developed and internalize every cognitive function within their zone of proximal development (ZPD). As a result, many of the different types of tests they developed place special emphasis on highlighting the role of testers in repeating, encouraging, and providing system feedback during training sessions.

The GPA follows the "pre-test; study or training; transfer; post-test" process to understand students' ability to learn and transfer. This program also uses a standardized prompting system that is unique in that it adds transfer tasks. The first step of the test is to present the students with some questions and tasks to understand their current level. If students have difficulties, hints, guidance or advice will be given to help them discover the principle of problem solving and apply these rules to solve the problem. Once the student is able to solve the problem on his own, she/he will be presented with a series of transfer problems. First, the evaluator proposes some "near transfer" questions similar with the previous questions or tasks but with some minor changes, and then the "far transfer" with a big change, and finally a more complex, very variable "very far transfer". After the transfer process is completed, post-testing is performed so that the student's maximum possible performance level can be evaluated. In terms of scoring and evaluation, it can be calculated according to the amount of prompts. The more prompts does the evaluator provide, the lower ability to learn and to transfer does the learner have. Conversely, the less the amount of prompts does the evaluator provide, the stronger is students' learning ability and their ability to transfer. The hallmark of this model is that it not only allows us to understand the speed at which students learn new things, but also teaches students the ability to apply the rules and principles they have learned to solve new problems (Brown & Ferra 1985).

Feuterstein is the founder of the dynamic assessment paradigm and a supporter of the interactive dynamic assessment model. The core of Feuterstein's assessment model is the "mediated learning experience" (MLE) theory. He believes that learning is an interactive process, with constant interaction between educators, learners and learning tasks. The MLE-based dynamic assessment procedure proposed by Feuterstein et al. (1979) is called "learning potential assessment device" (LPAD), which is a multi-level, multi-dimensional, multi-faceted test tool. The complete set of LPAD consists of 15 sub-tests. During the implementation of the LPAD, the test implementer adjusts the frequency, sequence, complexity, and test context of the task at any time according to the observations of the learner to arouse the curiosity and interest of the learner, and promote the change in cognitive structure of the learner. The tester actually acts as a mediation. He reacts to the learner's behavior at any time. His concern is the transfer of the learner's cognitive structure, not the level of behavioral performance. It can be seen that the LPAD design is closely related to the intervention, which is process-orientated rather than the result-orientated, emphasizing the interaction between the tester and the learner, and pointing out how the learner can succeed by helping.

Subsequently, some scholars began to conduct empirical study on dynamic assessment. Poehner (2008) constructed a model for the development of second language learners' ability in DA based on Gal'perin's human performance model. Lantolf (2010) studied the teacher-student interaction of primary school in Spanish as a foreign language class when implementing DA in a classroom environment. Domestic dynamic assessment empirical research mainly focuses on English writing teaching. For example, Zhang Yanhong (2008) designed the assessment model of online college English writing teaching and conducted experimental research on the model. However, it has been found in the literature review that applying dynamic assessment theory to flipped classrooms is still a new field of research.

III. FEASIBILITY ANALYSIS ON DYNAMIC ASSESSMENT IN FLIPPED CLASSROOM

In the following part, the feasibility of applying dynamic assessment to flipped classroom will be analyzed from three aspects: teacher's role, learner's status and teaching mode.

Teacher's Role. Zhang Jinlei et al. (2012) pointed out that the role of teachers in the flipped classroom changed from knowledge deliver to learning facilitators and instructors. The change of teacher's role symbolizes that the flipped classroom is a complete subversion of the traditional classroom. With the complete change of teacher's role in the flipped classroom, the traditional unified standardized test is no longer suitable for teaching evaluation. We must find a new teaching evaluation method that is consistent with the teaching concept and mode of the flipped classroom. From the analysis of the teacher's role, the role played by the teacher is the same as the role of the evaluator in the dynamic assessment. In the dynamic assessment, the evaluator assesses learners' zone of proximal development (ZPD) through interaction with the learner, and then provides corresponding mediation to promote the learners' ZPD development when they encounter difficulties. In this process, the evaluator plays the role of facilitator and instructor for the cognitive development of the learner. Therefore, through analysis, we know that the role played by teachers in flipped classroom and the role of evaluator in dynamic assessments are the same, and they are all instructors and facilitators of learning.

Learner's Status. At the same time, the role of students in the classroom is also changed from passive recipients in the traditional classroom to active researchers. Traditional teaching is teacher-centered, while flipping classrooms are student-centered. In the flipping classroom, students need to interact with classmates and teachers repeatedly to expand and create in-depth knowledge based on the learning content. Flipping classroom teaching emphasizes the student's dominant position in learning and the individual's deep development and active learning. Dynamic assessment clarifies the learner-centered philosophy, both in theory and in core concepts. In the interaction of dynamic assessment, the evaluator needs to continuously adjust the mediation help according to the learner's learning needs and responses. The learners' response to the assessment is the main basis for the dynamic assessment. This shows the learner's dominant position in the dynamic assessment. Therefore, both flipping classrooms and dynamic assessments are learner-centered.

Teaching Mode. From the perspective of teaching mode, the traditional classroom is based on the teacher's instruction. The center of the class is the teacher. The final examination of the teaching effect is the traditional standardized test which evaluate the result of the teaching rather than the process. The teaching mode of flipped classroom mainly focuses on problem exploration. With the help of the teacher, the students complete the internalization and deepen knowledge through the process of inquiry, and the students are the center of the whole process. The process pays more attention on the process of internalization of students' knowledge rather than the result of it. This is highly consistent with the dynamic assessment. The dynamic assessment is also centered on the learners to assess their learning process. It focuses on how the learner's ability can be improved with the help of the evaluator. At the same time, the teaching mode of question exploration also highlights the importance of interaction between teachers and students. Teachers are more likely to communicate and negotiate with students in problem exploration. Interaction in dynamic assessment is also critical, and dynamic assessments can only be performed through interaction between evaluators and learners.

IV. CONCLUSION

This study explores the feasibility of applying dynamic assessment to college English flipped classroom teaching from a theoretical perspective. Through analysis, we know that the dynamic assessment and flipping classroom are highly consistent in terms of teacher's role, learner's status and teaching mode. So we can conclude that dynamic assessment is a suitable evaluation method for flipped classroom. However, this study is only a theoretical study, and we need further empirical research to examine the specific application of dynamic assessment in flipped classrooms. Based on the results of this research that have been achieved, we look forward to future research. Computer-based testing is becoming more and more common. There are many advantages of online dynamic assessment. For example, it can manage many learners at the same time; independent individuals can be evaluated repeatedly; evaluation reports can be automatically generated. So online dynamic assessments are less restrictive than dynamic assessments in actual classrooms. Because the dynamic assessment between teachers and students is difficult to perform in teaching, the researchers proposed a model of peer assessment. However, some people may question the feasibility of peer assessment, and research shows that peer assessment is feasible. Swain (2001) pointed out that even in the short interactions of students, they try to use various psychological strategies (such as reference, clarification) when they try to express their ideas. They use these strategies to help themselves and their peers. In addition, Swain also proves that the interaction of peers will lead to the formation and externalization of learners' assumptions. Therefore, they will jointly evaluate these hypotheses, and finally give appropriate responses.

ACKNOWLEDGMENTS

Thanks to the financial support of 13th Five-Year Social Science Project of Education Department of Jilin Province—Research and Application of Dynamic Assessment of Model in Flipped Classroom of College English (JJKH20190747SK). This paper is a part of research results of the project.

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