

Research on the Role of Teachers in Traditional Teaching Mode and "MOOC Plus Flipped Classroom" Teaching Mode*

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Abstract—Based on the background of "Internet plus education", this paper makes a comparative analysis of the limitations of the traditional teaching mode of "teaching before learning", the advantages of the "Mooc plus flipped classroom" teaching mode, and the different positioning of the role of teachers in the two teaching modes.

Keywords—*teacher's role; Mooc; flipped classroom; traditional teaching mode*

I. INTRODUCTION

With the development of information technology, the Internet and information mobile tools represented by computers, tablet computers and mobile phones have been widely and rapidly popularized. Instant messaging, mobile terminals, big data and cloud computing are no longer a fantasy. They are quickly integrated into the field of education and teaching, giving birth to new teaching concepts, teaching modes and learning methods. Under such background of the times, the education reform with "Mooc + flipped classroom" as the main form is sweeping forward like a prairie fire. However, any educational reform cannot be separated from teachers, especially their reforms closely related to classroom teaching. The key factor of the success of an education reform lies in teachers. In the teaching mode of "Mooc + flipped classroom", teachers' comprehension of Mooc and the educational concept reflected behind the flipped classroom, their grasp of the discipline's professional quality, their understanding of students and their ability to control classroom teaching, etc. all have a direct impact on the implementation effect of flipped classroom. All these are reflected by the role of teachers in and out of the classroom. And the emergence of new teaching models and learning styles will inevitably require new teacher role positioning, thus posing new challenges for teacher role transformation.

II. LIMITATIONS OF THE TRADITIONAL TEACHING MODE OF "TEACHING BEFORE LEARNING" UNDER THE BACKGROUND OF "INTERNET PLUS EDUCATION" AND THE TEACHERS' ROLE POSITIONING

The traditional teaching mode of "teaching before learning" refers to the teaching mode with the purpose of knowledge imparting and the main characteristics of teachers teaching knowledge in class and students internalizing knowledge after class. This teaching mode centers on teachers, who are the leader and controller of the class. Teachers control the process and content of classroom teaching and students follow teachers to complete the learning of the content stipulated in the teaching syllabus. The long-term popularity of this teaching mode is due to its absolute advantages in imparting knowledge: knowledge can be transferred on a large scale and efficiently in this mode; every student can get the maximized benefit in this mode; it is easy for teachers to make unified evaluation through this mode. However, everything has its life cycle. With the development and popularization of Internet information technology, the limitations of the traditional teaching mode of "teaching before learning" are gradually revealed.

A. Limitations of Traditional Teaching Mode

1) *Teaching objective: the transmission of knowledge is not equal to the cultivation of ability*: Cultivating high-quality talents with innovative ability is the requirement of education in the era of knowledge economy, which is reflected in teaching to stimulate students' autonomy, cultivate students' critical thinking ability, innovative consciousness and innovative ability. Taking the transfer of knowledge as the main purpose and the passive acceptance as the main form of learning, the traditional teaching mode holds that the quantitative change of knowledge can be transformed into qualitative change of ability. However, the actual teaching practice shows that students' passive acceptance of knowledge and mechanical memorization over time will lead to their lockstep to the teachers and textbooks, and their learning subjectivity will not be given play to.

*Fund project: General planning subject of the 13th five-year plan of education science in Jilin province — research on the role of teachers in Mooc + flipped classroom teaching mode in the era of "Internet +"
Project number: GH170475

2) *Teaching content: the source of knowledge is not equal to textbooks:* In the traditional teaching mode, teachers act on students through textbooks in class, which is the most common way for students to acquire knowledge. The unified textbook was examined by the expert team at the beginning of compilation and has a relatively clear and reasonable structure and goal. However, on the one hand the content of teaching material is limited; on the other hand the renewal of teaching material often lags behind The Times. The outdated textbooks, the only source of students' knowledge, will inevitably lead to the lingering disease in the knowledge that students are learning. Rotten and outdated knowledge cannot well stimulate students' interest in learning and desire to explore, and at the same time it will be useless in the practical application after their graduation. However, the development and application of Mooc make up the deficiency of single textbooks. The richness and interest of knowledge content and the freedom and convenience of learning time and space challenge the authoritative status of textbooks in the source of knowledge and fill the deficiency of the traditional mode of classroom + textbooks.

3) *Teaching object: facing all students is not equal to considering individual needs:* Traditional education mode follows the mass production mode of assembly line, with fixed time, place, course and schedule, failing to meet the differentiated needs of learners. In the traditional teaching mode, students' level and acceptance ability differ, but what teachers can take care of is only the majority at the middle level, and the progress of explanation is often determined according to the average level and the average acceptance ability. The prominent advantage of this approach is that it is holistic and easy to manage, but the problem is that the need of students in higher level cannot be satisfied, while that of students in lower level cannot well grasp the knowledge. Teachers cannot pay attention to each individual student and teach students in accordance of their aptitude. Therefore, the individualization and differentiation of education and the diversification and specialization of talent cultivation cannot be realized.

B. The Positioning of Teachers' Role in Traditional Teaching Mode

The characteristics of the traditional teaching mode determine teachers' position of "leading role", that is, the teacher is the dominant power in the classroom. This is embodied in the following aspects:

1) *The teachers is the initiator of knowledge:* Under the traditional teaching mode, classroom teaching is teacher-led and teaching activities focus on the "teaching" of teachers. As the only source of knowledge, teachers symbolize authority and play the traditional functions of preaching, imparting knowledge and solving doubts. Teachers control the teaching materials, the teaching content, the learning space, and the right of speech on the quality of students'

learning, and are the absolute authority in the center of knowledge, while students are passive receptacle of knowledge.

2) *The teacher is the follower of the textbook:* In the traditional teaching mode, the main content of teaching comes from the teaching materials. Limited by the immature information technology and the circumscribed Internet, teachers could only rely on the limited textbooks compiled by relevant experts in the past. The only way for students to learn is trying to understand the teacher's explanation, and the only source of information is the textbook.

3) *The teacher is the bystander of classroom activities:* In the traditional teaching mode, the teacher is the leader in the classroom teaching and needs to complete the unified teaching task according to the unified teaching outline. Therefore, the teaching of knowledge is usually dominated by the teacher's teaching, and there are few opportunities for students to think, practice, apply and evaluate. Even in the limited classroom activities, teachers, as a bystander, usually do not participate in the actual discussion or learning tasks of students, but simply make a summary and evaluation of the classroom activity.

4) *The teachers is the evaluator of learning:* In the traditional teaching mode, teachers are the subject of evaluation, while peer evaluation and self-evaluation of students are usually not considered as the final evaluation. In addition, the evaluation means in the traditional teaching mode are generally the standard unified, general summative evaluation mainly based on homework and tests, and only a few will be supplemented by some process evaluation of learning tasks. But without means of real-time supervision, examination and evaluation for the whole learning process and result of students, students' individual learning interest, learning motivation, learning will, autonomy, meta-cognitive and other non-intelligence factors cannot be grasped accurately, and the student's final learning results will have to be given a unified and one-size-fits-all assessment.

III. THE ADVANTAGES OF "MOOC PLUS FLIPPED CLASSROOM" TEACHING MODE UNDER THE BACKGROUND OF "INTERNET PLUS EDUCATION" AND TEACHERS' ROLE POSITIONING

"The ten-year development plan for educational informatization (2011-2020)" points out that it's necessary to use information technology to carry out heuristic, inquiry-based, discussion and participatory teaching; encourage developmental evaluation; explore the establishment of a new learner-centered teaching model and advocate network inter-school collaborative learning so as to improve the level of information-based teaching. The teaching mode of "Mooc + flipped classroom" fully integrates modern

¹ Ministry of Education. Ten-year development plan for educational informatization (2011-2020) [EB/OL]. <http://old.moe.gov.cn/publicfiles/business/htmlfiles/moe/s3342/201203/133322.html>

educational information technology and innovates the teaching mode in the new era, conforming to the characteristics of the era of Internet + education.

A. Advantages of "Mooc Plus Flipped Classroom" Teaching Model

1) *Problem-oriented method giving consideration to knowledge transfer, internalization and ability cultivation:* Different from traditional teaching mode, "Mooc + flipped classroom" teaching mode is problem-oriented and puts students in a teaching environment with problems as clues. The Mooc video materials created by teachers not only contain the knowledge that students need to learn, but also connect all the knowledge based on questions. One or several related questions followed by each or several knowledge points can enable students to closely follow the knowledge content in the video, which promotes students to think while learning and grasp students' attention, thus stimulating their curiosity and thirst for knowledge. Flipped classroom teaching is also based on problems and tasks. Problems are the main line running through flipped classroom teaching; teaching contents are presented in the form of problems and generated in the process of problem solving; the teaching process revolves around problems; the application of teaching methods aims to solve problems; and the teaching environment is suitable for problem exploration. Through the discussion, debate, reflection, application and evaluation among students and between teachers and students, students can learn to think and learn in the exploration and solution of problems and actively construct knowledge so as to complete their internalization of knowledge and the development of various abilities.

2) *Sharing high-quality teaching resources with the smart mobile terminal as an assist:* Since 2011, three Mooc alliances, led by Udacity, Coursera and edX, have been established. Tsinghua University, Peking University, Shanghai Jiaotong University, Fudan University and other universities in China have joined these alliances to build and share the world's largest online course network collectively. Since the first year of Mooc, colleges and universities at all levels in China have been actively engaged in its construction and promotion, and there are numerous excellent Mooc resources in various disciplines and categories. Thanks to the extensive coverage of the Internet and the popularity of smart mobile terminals, it is possible to share high-quality teaching resources internationally and among schools. Mooc have become a new and ubiquitous effective way to acquire knowledge in this context. In addition, the organic combination of Mooc and flipped classroom breaks the fixed time and space limitation of traditional teaching mode and enables mobile learning.

3) *Realizing the individuation, differentiation and equity of education with the assistance of information technology and the Internet:* "Mooc + flipped classroom" refers to personalized learning. In this teaching mode, the transfer of

knowledge is moved to the time before class. Students can adjust their learning progress according to their actual situation and existing knowledge structure. Mooc allows students to pause, play back and replay, which meets the personalized and differentiated needs of students at different levels, thus realizing the hierarchical teaching. Teachers can monitor and master students' learning progress and task completion through the online learning platform and understand students' common and individual problems so as to conduct targeted individual guidance. In the offline flipped classroom, teachers can also take account of the needs, levels and abilities of different students through different tasks, and teach students in accordance with their aptitude online and offline, so as to achieve personalized, differentiated and fair education. (Equity in education refers not only to the fair distribution of educational resources, but also to the design of courses, arrangement of teaching schedule and selection of teaching methods according to students' individual needs.)

4) *Enhancing the interaction between students, teachers and students, and teachers with teaching activities as the carrier:* In traditional teaching mode, students are passive receptacles of knowledge, and the interaction between teachers, students and teachers is limited in frequency and single in form. "Mooc + flipped classroom" is characterized by students' initiative and inquiry-based learning. It takes various online and offline teaching activities and learning tasks as the carrier, and is problem-oriented to help students complete the transfer and internalization of knowledge. In the process of finishing collaborative learning tasks, students have more frequent, deeper and more effective interaction than in the traditional teaching mode. With online social platforms, teachers are timelier, more effective and more frequent in answering questions and solving questions for both students as whole and individual students. In addition, the creation of high-quality Mooc resources and the sharing of Mooc and flipped classroom teaching experience and results have also promoted the communication, interaction and cooperation between teachers on campus and between schools.

B. The Positioning of the Teacher's Role in the "Mooc Plus Flipped Classroom" Teaching Mode

1) *The teacher is the capable cultivator, promoter and shaper of students' ability:* The traditional teaching mode emphasizes the subject status and the role in imparting knowledge of teachers. In the teaching mode of "Mooc + flipped classroom", students' online video learning before class focuses on the understanding and memorization of knowledge, which is the foundation of students' comprehensive quality development. The teaching task of the flipped classroom has shifted from the previous emphasis on memorizing and understanding knowledge to the development of high-level thinking ability such as application, analysis, evaluation and creation of knowledge

and the cultivation of students' comprehensive quality. Teachers have realized the purpose of improving students' critical thinking ability, communication ability, cooperation ability, practical ability and problem-solving ability through participatory activities in class like discussion between students, as well as students and teachers.

2) *Teacher is the producer, designer and developer of learning resources*: In the era of Internet + education, learning resources are unprecedentedly broad and rich. This does not mean that the task of teachers is reduced. In the "Mooc + flipped classroom" teaching mode, teachers should take the responsibility of producing, designing and developing learning resources, and pay attention to both online teaching and offline teaching. For example, on the basis of understanding students' learning basis, knowledge structure, learning interest, learning style and individual differences, teachers should integrate resources and select the most effective and appropriate information to make teaching video; design targeted online preview and testing task; construct teaching courses on network platform; design offline classroom activities and problems to be discussed; help students to complete the internalization of knowledge and ability development, etc.

3) *The teacher is the guide, cooperator and participant of classroom activities*: Constructivism learning holds that the premise of learning is that the learning content can arouse the attention of learners and make them willing to construct the learning content in a certain context, so as to activate the existing knowledge and learning motivation of learners, and finally realize the construction of knowledge system and achieve the learning goal. "Mooc + flipped classroom" requires teachers not only to be the organizers of teaching activities, but also to guide students to find, explore and solve problems cooperatively in classroom activities. In addition, teachers should also participate in classroom activities and have in-depth conversations with students to assist students in positive thinking, successfully complete classroom activities, and cultivate students' critical awareness and critical thinking ability.

4) *The teacher is the supervisor, participant and promoter of interactive learning*: Interactive learning is a dynamic and interactive way of learning. In this interactive relationship, learning works for both parties to achieve the goal of mutual learning. In the teaching mode of "Mooc + flipped classroom", teachers carry out student-centered teaching activities by reasonable use of diversified teaching methods to make full use of Mooc and Internet teaching platform resources, and actively and effectively organize and participate in students' learning activities. In addition, they can continuously track and supervise the learning process, learning effect and problems in the learning process of students according to the data provided by the network platform, and timely intervene and assist, so as to realize the smooth progress of interactive learning between teachers and students and among students. What's more, in the

construction of Internet teaching platform resources, cross-school, cross-regional and even transnational cooperation can realize the sharing of experience, resources and results, and promote interactive learning and common development between teachers.

5) *The teacher is the practitioner of personalized teaching*: In traditional teaching, it is difficult for teachers to teach students according to their aptitude with unified teaching mode and textbooks. In the "Mooc + flipped classroom" teaching model, students are the main body of teaching activities, and teachers encourage students to have their own learning opinions, interest and freedom. The personalized teaching is mainly reflected in two aspects: first, the one-to-one teaching mode is adopted in teaching videos. Students can choose the time and space to watch video, adjust their learning progress according to their actual situation, and pause, replay and replay video until they understand what they are learning. In this way, personalized needs of students at different levels can be met, and hierarchical teaching can be realized. Second, whether it is in offline classroom teaching or online after-class tutoring, teachers can provide immediate, effective and targeted guidance and solutions to both common and individual problems of students. Therefore, they can take consideration to the individuality and difference of each student, and teach students in accordance with their aptitude.

IV. CONCLUSION

General Secretary Xi pointed out in his discussion with the representatives of teachers and students of Beijing Normal University that "the importance of teachers lies in the fact that their work is to shape the soul, shape life and shape people. It is fortune in life to meet a good teacher for a person, an honor to have good teachers for a school, and the hope to see batches of good teachers constantly emerge for a nation. "The development of information technology and the popularization of the Internet and intelligent mobile terminals have promoted the transformation of learning methods and teaching models, and thus have put forward new requirements and challenges for teachers' roles in and outside the classroom. The teaching mode of "Mooc + flipped classroom" is the combination of ubiquitous learning, inquiry learning, independent learning and teaching in the new era. Teachers in new era of should have the courage to accept new things and practice boldly; to establish new teaching ideas and update their disciplinary quality, education and teaching quality and information technology literacy; to hold on the idea of lifelong learning and improve their professional quality with the combination of various ways of online and offline, theory and practice, internal and external, individual and team, etc. ; to speed up their own professional development and change the traditional role to become the cultivator, initiator and shaper of students' learning, the producer, designer, developer of learning resources, the guide, collaborator, and participant in classroom activities, and the overseer, participant, and facilitator of interactive learning. They should pay attention to each student's personality and difference and provide each

student with a fair learning opportunity and development space. They are also supposed to develop students' comprehensive quality and practice, innovation ability on the basis of imparting knowledge, so as to be a good teacher with ideal faith, moral sentiment, solid knowledge and the heart of benevolence in the new era. At the same time, the relevant departments of the school should also provide support from the aspects of organization, technology, policy and funds to facilitate the smooth transition of the role of teachers.

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