Exploration and Construction of the SPOC-Based Blended Teaching Mode: Taking the Course of *Preschool Craft* as an Example

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Abstract

The SPOC-based blending learning can effectively stimulate students' learning interest, enhance the interactivity and innovation of teaching as well as diversify the teaching evaluation. As the education system gets informationized, an online teaching mode is made possible by developing the informationized online teaching resources, creating online self-directed learning tutorial and optimizing the effectiveness of online interactions. On the other hand, the analysis of students' learning status comes along with the improved teaching of challenging contents and the optimization of integrated teaching to create a better offline teaching. Therefore, the combination of online and offline teaching successfully elevated the pertinence and effectiveness of the curriculum of Preschool Handcraft.

Key words: SPOC; Online teaching; Offline teaching; Preschool handcraft

INTRODUCTION

SPOC, the acronym for "small private online course", is literally translated as "small-scale restricted online course", a concept proposed by Professor Armando Fox of the University of California, Berkeley in 2013 (Zhang & Xiao, 2015). SPOC, which has not only overcome such disadvantages as the high drop rate of learners and single mode of instruction in the application of MOOC process, but also inherited the advantages of school course, has risen as an emerging teaching mode. The most prominent features of SPOC are its small scale and private nature. Thanks to SPOC's efforts to limit the registration size, teachers have enough energy to answer each student' questions arising in the learning process, which has greatly promoted teacher-student interaction. China's research on SPOC-based blended teaching mode is still in its infancy and lacks system platform construction and resource development. It is especially worth noting that due to the limited application in the past, there is large exploratory space for the application of SPOC in higher learning, especially in the field of preschool craft in institutions of higher learning.

1. THE ORIGIN OF THE RESEARCH

According to the requirements for the cultivation of preschool education talents put forward in *Proposals on the Development of Current Preschool Education from the State Council* and *National Medium and Long Term Educational Plan for Educational Talent Development (2010-2020)*, the current preschool educational cause is flourishing. As a major practice course in preschool education in colleges and universities, *Preschool Craft*, which integrates environment creation, folk art, arts and crafts and modeling design, plays a vital role in improving the aesthetic judgment and practical operation ability of the students majoring in preschool education. However, the following problems still exist in the current *Preschool Craft* course teaching in colleges and universities. Specifically speaking, due to large class size, the demonstration of craft practice cannot be closely

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observed by all students; as the teaching is confined to the classroom, the limitation of time and space has affected students' ubiquitous learning; the teacher-centered teaching approach has reduced students' initiative. As a result, students devote plenty of time and energy to learn but fail to learn efficiently. Therefore, the exploration and construction of SPOC-based blended teaching mode for *Preschool Craft* course make good use of its advantages such as small class size, flexibility and purposefulness and will contribute a lot to solve the problems in current *Preschool Craft* course teaching.

2. THE FUNCTION OF SPOC-BASED BLENDED TEACHING

2016 Work Focus of Educational Informatization in 2016 calls for strengthening the development and application of high-quality digital educational resources for higher education and promoting the digital transformation of higher education courses. The fundamental philosophy of SPOC-based blended teaching is the transformation or reorganization of the processes and methods of classroom teaching through the design and application of digital teaching resources with a purpose to make the teaching more adaptive to the mobile learning in the network learning situation in blended teaching and participatory learning. SPOC-based blended teaching mode has the following functions.

2.1 Stimulate Students' Interest in Learning

It collects different kinds of materials through multiple channels to enrich the teaching resources for preschool craft micro-lessons and make the teaching process vividly and lively, thus enhancing students' learning enthusiasm and improving their abilities for autonomous learning and innovation. Besides, network teaching platform also helps to transform students' classroom learning into mobile learning, which has better satisfied students' needs for the personalized learning of preschool craft knowledge. Students can select what they learn based on their own needs, which can help to find out the unlearnt knowledge as well consolidate the learnt knowledge, thus facilitating the transformation into the "student-centered" teaching mode.

2.2 Enhance the Interactivity of Teaching

Relying on the O2O blended learning mode, SPOC can better promote the organic integration of online learning and offline learning, classroom learning and after-class learning, mobile learning and collaborative learning and the learning before, during and after the teaching. Through the autonomous learning of *Preschool Craft* micro-lesson learning materials, students can gradually create a teaching environment that facilitates the interaction of teaching and learning and the digitalization of teaching resources, teaching management methods and communication modes

to make up for the insufficiency in classroom teaching and strengthen teacher-student connection through need-based autonomous learning. The digital video for the core skills of *Preschool Craft* can help realize mobile learning and promote ubiquitous learning, thus enhancing students' learning initiative and enthusiasm and strengthening interactivity in teaching.

2.3 Boost Innovation in the Teaching Process

In SPOC-based reformed course teaching mode, teachers shift from conventional "teacher-centered" craft teaching to the emerging "student-centered" blended teaching. By redesigning the teaching plan, making teaching coursewares, upgrading teaching materials and integrating various resources, it enables teachers to understand the course better and improve the innovation of the teaching process more effectively. Through the reform of SPOC-based preschool craft teaching mode, it helps students to translate theoretical knowledge into practical operation within the shortest possible time by combining online learning with offline learning and reforms traditional teaching method to improve their craft skills and innovation ability while boosting the innovation of the teaching process. Meanwhile, teachers' teaching level is also greatly enhanced during this process. The design and development of micro-lessons can raise teachers' professional quality and improve the level of modern educational technologies, which can facilitate teachers' reflection after teaching, raise their teaching level and promote the informatized development of teaching.

2.4 Increase the Diversity of Teaching Evaluation

The SPOC platform can help to combine students' self-evaluation and mutual evaluation with teachers' standardized evaluation, realizing the diversification of the subjects of evaluation and meeting the requirements for "multi-evaluation" in modern teaching. Diversified evaluation can help teachers to better understand students' learning and response, monitor the feedback information, adjust their teaching progress and promote the construction of the teaching system based on autonomous learning, thus fundamentally optimizing the teaching effects.

3. CONSTRUCTION OF SPOC-BASED BLENDED TEACHING MODE

The integration of information technology into the curriculum undergoes three steps: (a) a profound understanding of the concrete contents of the course structure change, which is reflected in the change of the four elements of classroom teaching system (teacher, student, teaching contents and teaching media); (b) implementing the "teaching mode" that can effectively change the classroom teaching structure; (c) achieving

the marked improvement of subject teaching quality and students' comprehensive quality (He, 2014). The SPOC teaching experiment that follows the above three steps shows that SPOC-based blended teaching mode can effectively promote the autonomous learning, expand the learning space and enhance the learning enthusiasm of students. Therefore, this research, by referring to the existing experiment modes and processes and taking into account the features of blended teaching and the law of preschool learning, tries to construct a SPOC-based blended craft teaching mode and apply it in the *Preschool Craft* class.

3.1 Online Research of SPOC-Based Blended Craft Teaching Mode

3.1.1 Research and Development of Online Digital Teaching Resources

The research and development of digital teaching resources that are suitable for the course and students' learning features are the foundation and key for SPOC. Teachers need to thoroughly analyze the syllabus and teaching materials of *Preschool Craft* and design the four major thematic teaching resources in *Preschool Craft*, including theoretical knowledge, plane craft, 3D craft and integrated craft, and determine the important, difficult

points and highly confusing points of each subject, trying to provide excellent solutions for the design of digital teaching resources. At the same time, different kinds of craft materials are collected through diversified channels to enrich micro-lesson teaching materials and create digital teaching materials for *Preschool Craft*, which will lay a foundation for students' online learning and improve the quality of the preschool teaching. At the same time, the recoding and application of high-quality digital teaching resources are also very important. High-quality shooting, splendid presentation and accurate narration can guarantee the recoding quality of the micro-lesson. Efforts will be made to enhance teachers' awareness of teaching reform and strengthen their teaching ability and multi-media technology so as to create innovative high-quality multi-element micro coursewares and record excellent digital teaching materials. Based on the practical experience, the digital teaching resources for *Preschool Craft* blended teaching mode are listed in Table 1. The research and development of localized SPOC digital teaching resources can make teachers become the innovators of their own course teaching mode, highlight the practical nature of SPOC-based blended craft teaching mode and give students a sense of face-to-face communication with top teachers.

Table 1
Digital Teaching Resources of SPOC-Based Blended Teaching Mode for *Preschool Craft*

Type	Teaching theme	Digital video
Craft theory	Basic theories for craft skills	1. Types of craft skills 2. Color matching
Plane craft	Paper cutting	1. Symmetrical folding and cutting 2 Asymmetrical cutting
	Paper-pasting picture	1. Flat pasting craft 2. Openwork carving technique
	Cloth-pasting picture	1.Cutting, tearing craft 2.Collage craft
	Plant-pasting picture	1. Natural modeling 2. Cutting modeling
	Shell-pasting picture	1. Whole pasting and fragment pasting 2. Inverted pasting and folded pasting
3D craft	3D paper folding	1. Basic folding 2. Combination and folding
	3D paper quilling	1. 16 basic types of paper rolling 2. Example: *Where is Spring*
	Paper modeling	1. Folded modeling 2. Cylinder paper molding
	Shell modeling	1. Shell arts & craft 2. Shell inlaying craft
	Ball modeling	1. Single-ball modeling craft 2. Multi-ball modeling craft
	Bottle/can modeling	1. Bottle modeling craft 2. Reconstruction modeling craft
	Plasticine modeling	1.Basic techniques for plasticine modeling 2.Plasticine pasting
Integrated craft	Recreational headwear	1. Plane forehead wear craft 2. Semi-3D headwear craft
	Paper costume	1. Newspaper costume craft 2. Paperboard garment craft 3. Sponge sheet craft

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3.1.2 Create Online Autonomous Learning Guide

The effectiveness of SPOC-based blended craft teaching mode provides effective guidance for students' learning by creating a guide for students' online autonomous learning. Based on the features of *Preschool Craft* course and related materials, the guide should scientifically analyze and process the selected key and difficult points in learning to meet students' needs for autonomous learning of preschool craft knowledge. Besides, the guide should direct students to finish the learning task through ingenious enlightenment and positive guidance with refined language and rigorous reasoning within an effective period. Teachers should straighten out and classify the knowledge points and materials of the same subject and design different guides for the autonomous learning of different knowledge points to make sure they are representative, hierarchical and systematic so as to properly guide students' autonomous learning, strengthen students' scientific thinking and broaden their scope of knowledge.

3.1.3 Improve the Effectiveness of Online Interaction

The application of SPOC-based blended teaching mode cannot be separated from online teacher-student and student-student interaction. Only by taking full advantage of such functions as online discussion and evaluation, can be students' curiosity and initiative be fully stimulated. Online interaction can give students multiple identities during discussions such as questioners, respondents and inspirers and enable them to help each other forward through exchanges of experience. Teachers need to maximize the practicality of online interaction by increasing participation and guidance.

3.2 Offline Research Under the SPOC-Based Blended Teaching Mode for School Craft Course

The offline contents of SPOC-based blended preschool craft teaching mode include analyzing students' learning state, improving the teaching of key and difficult points and optimizing integral teaching. The release of craft micro-lessons, students' online autonomous learning and students' online interaction and communication can form interconnection. Refer to Figure 1 for SPOC-based blended teaching mode for *Preschool Craft* course.
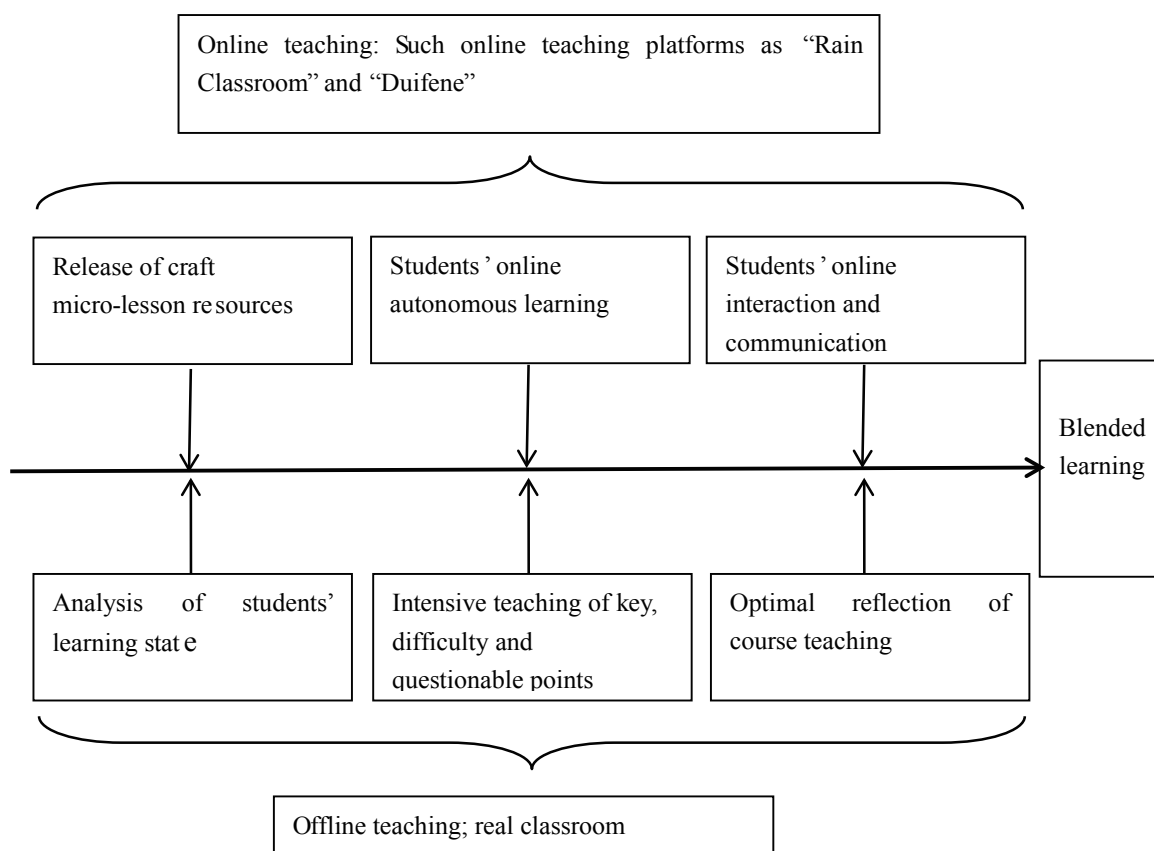

Figure 1
SPOC-Based Blended Teaching Mode for *Preschool Craft* Course

3.2.1 Analyze Students' Earning Status

SPOC online assignment analysis and big data analysis can provide students with effective feedback, including the identification of craft learning progress, the identification of learner activity, the identification of learning effect and the feedback of course testing. Offline teachers can

make their teaching more targeted by analyzing students' learning state.

3.2.2 Improve the Teaching of Key and Difficult Points

After various teaching steps are completed, craft teachers should address the key, difficult and questionable points arising in students' learning process based on students' interaction and response and further clarify these knowledge points to remove students' confusion arising in the real class according to the learning objectives of craft course.

3.2.3 Optimize the Integral Teaching Process

This mode requires teachers to conduct an integrative evaluation on teachers' teaching behaviors, students' learning behaviors (learning frequency, learning time span and learning effect) and teacher-student interaction (including formative evaluation and summative evaluation), and make a new course teaching plan based on the summary and perfection of the above aspects. Then the entire teaching process is completed through the docking, complementation and interconnection of online teaching and offline teaching.

SPOC-based blended teaching can promote students' inquiry-based learning and collaborative learning; offline teaching can make the teaching more targeted through empirical investigation and data analysis. Furthermore, in the teaching reform, random students should be selected to participate in the SPOC teaching experiment (experimental group and reference group). To understand the effectiveness and existing problems in SPOC blende mode in course teaching through empirical investigation can provide constructive recommendations and countermeasures for later optimization of teaching and further enhance the practicality of SPOC-based blended craft teaching mode.

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