Design and Application of Blended Learning Based on WeChat Public Platform

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Abstract. The research made a detailed review of literature on blended learning and WeChat, summarized the principals for design of blended learning on WeChat, including learner-centered, structured content and knowledge, diversified learning style and interactions, proceduralization of learning evaluation. Based on the review of literature on blended learning and WeChat, obey the principals for design of blended-learning on WeChat, The research constructed the model of blended learning on WeChat. The model included online learning, face-to-face learning, and experimental practice. The study took the electronic technology practice teaching as an example to verify the model, and found that the model was welcome and praise by the teachers and students.

Introduction

With the deep application and development of information technology in the education and instruction, blended learning has gradually been accepted by researchers and practitioners. Blended learning organically combines traditional instruction with online learning, synchronous learning and asynchronous learning, individual learning with group learning, and so on. The model of blended learning is of good applicability and versatility. As a kind of popular free social media, WeChat supports a variety of forms of interpersonal communication such as text, speech, image, video, which provides powerful support for blended learning. This research takes electronic process practice course as an example to explore the design and application of blended learning model that based on WeChat public platform.

Review of Literature

Blended Learning

Search papers on blended learning as theme in CNKI (China National Knowledge Infrastructure), and the research on blended learning included these subjects, such as review research, analysis of blended learning based on different theoretical perspectives, research of blended learning based on the different resources or platforms, application of blended learning in different education teaching levels, application of blended learning in teachers' training.

Review research, such as quantitative research of analysis of frontier, hotspot and trends in the field of blended learning research based on Citespace (Xiao Wan etc., 2016); Analysis of the essence of the blended learning (Chen Weidong etc., 2016); Research of the collaborative knowledge building community in (Tong Hui etc., 2016); Definition, strategy, current situation and trend of development of blended learning (Zan Zehui etc., 2009); The successful application models and Instances of blended learning in American university (Zhow Jingping, 2008). The principle and application model of the blended learning (Li Kedong etc., 2004).

Analysis of blended learning based on different theoretical perspectives, such as research to carry out the instruction practice research, to summarize the effective strategies, by which learners
achieved the deep learning with blended learning model based on the theory of deep learning (Wang Yonghua, 2013); Researching on blended learning from the perspective of main intake knowledge, combines organically the corresponding neural parts and the applicable area of study in the specific learning theory, construct an Organic blended learning theory based on the main learning body of the nervous system and learning field. (Zeng Maolin, 2013). Research on application of blended learning in the instruction of online English writing from the ecological perspective (Jin Yanmin etc., 2012).

Research of blended learning based on the different resources or platforms, such as the exploration and practice of blended learning model based on Blackboard learning platform (Zhou Hongchun, 2011). The research in translation teaching with blended learning model based on the network of translation training teaching (Chen Qimin, 2011).

Application of blended learning in different education teaching levels, such as the influence of blended learning for college students' English writing level (Wang Yi, 2011). The research of how blended learning promotes the development of higher vocational students' collaborative learning ability based on Web2.0 (Jin Yiqiang, 2014). The practice and enlightenment of American k-12 blended learning (Bai Xuemei etc., 2016).

Instruction reform and innovation on the environment of blended learning environments, such as, The design of Chinese comprehensive course teaching model based on blended learning (Yuan Ping, 2016). The research of the model and corresponding teaching strategies of electronic schoolbag application on the environment of blended learning (Huang Mingyan, 2013). The research of "case - task" driven teaching model on the environment of blended learning (Ao Qian etc., 2013). The research of seamless learning strategies on the environment of blended learning (Liu Junliang etc., 2014).

Application of blended learning in teachers' training, such as the research of informationization leadership training countermeasures of Primary and secondary school principals on the environment of blended learning (Pang Jingwen etc., 2016). The research of the strategy for improving the effectiveness of the new teacher training under the guidance of blended learning (Li Min etc., 2012). The application of Blended learning mode in college English teachers' information technology training (Tang Jin, 2009). The research of how blended learning is applied to the university teachers' education technical ability training (Li Lin, etc., 2008). The education technology training of college teachers based on the principle of blended learning (Peng Hui etc., 2007).

WeChat Public Platform

WeChat is an emerging ecological media, it is popular with many people after emersion, and is widely used in education, e-government and other fields.

WeChat in the moral education and ideological and political education, such as the exploration of the propagation and optimization of university moral education information based on WeChat. (Li Yufeng, 2013). The analysis about how WeChat influence on college students' ideological and political education and corresponding countermeasures (Wang Zheng etc., 2014). The exploration of the ideological and political education in colleges and universities using WeChat public platform application and so on. (Li Li, 2016). WeChat in e-government and government affairs, the discussion of the application of WeChat in the public service of e-government system (Gao Yunying, 2013). The analysis of the interaction mechanism and deepening path of the Weibo, WeChat of government affairs (Zhang Zhian etc., 2015). Using WeChat to carry out the wisdom e-government construction and so on. (Fang Gang, 2015). WeChat in instruction reform, such as medical humanities education of medical students based on WeChat platform (Wang Yun etc., 2016). Exploration on the practice of Flipped classroom supported by WeChat on the environment of mobile learning (Fan Wenxiang etc., 2015). The exploration on the influence factors of college teachers use auxiliary-teaching of WeChat (Xu Meidan etc., 2014). The comparative study of collaborative learning based on task driven in the support of WeChat and QQ (Wang Xiaoling, 2013). WeChat in the mobile learning, such as the design of mobile learning activity based on WeChat public platform (Wu Junqi etc., 2016). The design of mobile learning activity under the
support of WeChat function (Wang Pengjiao etc., 2015). the exploration on the support functions and design principles of mobile learning by using WeChat (Wang Ping, 2013). In addition, there are some researches about WeChat application status of college students, and some related question discussion such as the applications of WeChat on the connection of home with school, and reading by WeChat, and the copyright WeChat involves.

**Principals for Design of Blended-learning on WeChat Public Platform**

With the rapid development of Internet and smart phones, researchers both home and abroad, put forward many new types of instruction models, such as blended learning, mobile learning, ubiquitous learning and flipped classroom etc. Research on blended learning has become the focus of the instruction reform with information technology today. The nature of blended learning is choosing efficient information transmission channel. The key is to choose the appropriate teaching media, and form the “double-center combination” form of student as subject and teacher as guider, to realize the organic integration of traditional face-to-face learning and network digital learning, to minimize the cost of teaching and maximize the benefit of teaching.[1]

WeChat was launched in August 2012. Its subscription service is mainly for celebrities, government, business, media, and other grass-roots owners to expand their influence.[2] WeChat supports text to speech interaction, WeChat group, automatic reply response, push subscription and sharing a variety of communication channels. It’s a popular mobile application software platform with social function, lower development costs, and friendly interface. WeChat is widely used in college, and suitable for blended learning. The design of blended learning based on WeChat should follow these principles.

**Learner-centered**

WeChat can support multiply study in different place at different time. When carrying out instruction reform based on WeChat, firstly identify the requirements and characteristics of learners, Set learners as the center, meeting diverse, efficient and targeted learning of the learners, build the personalized learning environment based on WeChat.

**Structured Content and Knowledge**

WeChat with convenient and rapid propagation also has negative effects, such as the fragmented knowledge. When teaching with WeChat, it must pay more attention to the systematized and structured content knowledge, and it is better to provide knowledge map or learning path to prevent learners lost or thinking fragmented.

**Diversified Learning Style**

WeChat should be able to support the personalized learning and collaborative learning.[3] Based on the WeChat, blended learning should make full use of the advantages of traditional teaching and online learning to carry out a variety of learning styles, such as learner-centered formal or informal learning, online learning or face-to-face learning, to maximize the benefit of blended learning.

**Diversified Interactions**

Constructivists believed that the acquisition of knowledge was the process of meaning construction through collaboration in some certain situations.[4] It can send information such as course notification conveniently on WeChat. Instant communication and interaction is supported in the WeChat group. Based on the support of rain classroom on WeChat platform, online real-time testing and communication is supported.

**Procedurization of learning evaluation**

Based on WeChat platform, real-time storage of data like learning record and tracking can realize the procedurization of learning evaluation. It can promote the objective and diversified of learning evaluation.
Construction of the Model of Blended-learning on WeChat Public Platform

Based on the review of Literature on blended learning and WeChat, Obey the principals for design of blended-learning on WeChat. The research construct the model of blended learning on WeChat. The model includes online learning, face-to-face learning, and experimental practice. Online learning means studying by courseware online in rain class of WeChat public platform, pushing the interrelated knowledge by WeChat public accounts, students learn online learning resources and traditional learning materials by themselves. Face-to-face learning mainly includes the teacher's classroom explanation, students’ group discussion, and anonymous speech based on WeChat barrage to help introverted students. Experimental practice includes the students' experimental operation, team cooperation experiment, test and practice based on classroom WeChat rain class. At the same time, learning evaluation and feedback are throughout the learning process, and WeChat public platform provides a full range of interactive and resource support.

Application of the Model of Blended-learning on WeChat Public Platform

The study took the electronic technology practice teaching as an example to verify the above model. Electronic technology practice is a professional basic course based on practice teaching. The study used WeChat public account of practice of electronic technology. There are course introduction, rules and regulations, unit testing, integration testing, troubleshooting, announcement and other functional modules. And it provided a mobile learning environment for electronic technology practice study.

The study also constructed the rain classroom of the course of electronic technology practice. There are kinds of online learning materials, such as PPT and micro-video of the course. The modules of "unit test" and "comprehensive test" were made in the rain classroom of WeChat public platform to build test database. Then students could take online examination and test through their own mobile phones. That made the test much more fairness. Set up trouble shooting database. Guided students to fill the form of malfunction before asking the course teacher when meeting practice malfunction, and finish the form of the process of trouble –shooting. Put the typical case of the process of trouble –shooting on the study platform on WeChat, and then the database of the process of trouble –shooting was built for students by continuous accumulation.

Through interviews and surveys, it was found that WeChat public platform of electronic technology practice was welcome and praise by the teachers and students, and they were willing to participate more experiments in further study to explore the effective strategy of teaching with WeChat. You can easily get all relevant data in the process of learning through WeChat, especially related to time and space data.[5]The teachers wanted to carry out more test to explore the process of the students study to perfect learning evaluation.

Conclusion and Implications

WeChat is an essential social tool that everyone needs. The study made full use of open interfaces of WeChat public platform, established online teaching platform of electronic technology on WeChat, to stimulate students' enthusiasm and initiative and to organize teaching activities more efficiently and effectively. The online question-and-answer model made the teacher and students closer, and it eliminated the barriers of time and space of teaching to explain and answer all kinds of problems for the students in time. This study will expand the range of experimental research of this instruction model, and generalize the mobile platform of WeChat subscription to other public basic-course laboratory and professional-class laboratory, to generalize and verify the research results in a larger range.

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References


