A Study of Course Teaching Model in the "Internet +" Era

Huan Cheng-lin[1]

Chen Jian-wei[2]

[1]College of computer science, Yangtze University, No.1 Nanhuan Road, Jingzhou, China
[2]Yangtze University College of Technology & Engineering, No.85 Xueyuan Road, Jingzhou, China
Corresponding author: webhcl@sina.com

Abstract

Using the Internet, big data, cloud computing and other modern information technology as the innovation factors to develop education will overturn the traditional education and teaching model. This article aims to explore the general meanings of course teaching through literature research, analysis the basis of realistic foundation to change using investigation and build the practice pattern in the " Internet +"age. Research suggests that "Internet +" class has characteristics of individualization, mobilization and socialization and data-driven, which will totally change the traditional teaching model I. The popularity and application of "bring your own device (BYOD)" provides the realistic foundation. With the support of BYOD, course teaching in the future will have three stages: preliminary learning before class, deep learning during class and expansive learning after class.

Keywords: Internet +; BYOD; Teaching model

1. Introduction

The action of "Internet +" will be put forward in the government work report in "the two Sessions" in 2015, then the prologue to create new ecological development by using information and Internet platforms technology is opened. A hundred years account greatly, education is originally. The guidance of state council on promoting the action of "Internet + "enacted subsequently, which clearly proposes to explore new education service supply via Internet to promote education service model. In such a background, the education must also keep up with the tide of time and try to make "Internet +" to be the power and approaches of reform and development. From the point of psychology mechanism, the "Internet +" is a binary association. The Internet is one of them and the other one can be a campus, a classroom, teachers, students, etc in education. In school education, course teaching is the main channel and the main battlefield, it is the ultimate foothold of the education policy and the education thought, it is the implementation and the landing place of teaching reform and teaching design, and other elements also gather in it. To explore the course teaching under "Internet +" has seized the gripper of teaching reform, held the key point in the process of teaching quality improvement.

As a new strategy, we are strange to "Internet +".When meets education will face more challenges, as Steve asked. We need to carefully review and in-depth research, to understand its connotation, grasp its essence, grasp the reality of its related conditions, such as to achieve the target, not blindly follow suit.

2. The Connotation of "Internet +" Course Teaching

2.1 The meaning of "Internet +"

"Internet +"develops its innovative forms and morphological evolution under the innovation 2.0 with the factors of Internet, Big Data, Cloud Computing and other modern information technology (Li Jiahou, 2015). "+" is on behalf of the catalysis and blend of all kinds of other things, which helps to reform and develop the traditional forms through Internet.

In recent years, the "Internet +" has affected many industries, such as e-commerce, Internet financial, online travel and film and television, etc. Mentioning the "Internet +" and education in the same breath means we should deeply combine the achievement of Internet innovation and education so as to improve the quality and efficiency of education, to make education more equalization, teaching more personalized, management more precise, the decision-making

ISSN 2239-978X
ISSN 2240-0524

Journal of Educational and Social Research
MCSER Publishing, Rome-Italy

Vol. 6 No.2
May 2016

more scientific (Liu Dongmei, 2015). The new generation of information technology represented by the Internet, Cloud Computing, and big data will also provide strong technical support for the education informatization infrastructure construction and optimal allocation of resources in china, promote education revolution.

2.2 "Internet+" course teaching will subvert traditional teaching model

With the rapid development of Internet and its application in the society, we have been used to work and study. We have been accustomed to using the Internet, and consciously or unconsciously using it to solve problems.These habits make "Internet+" course teaching become a trend and people do it actively.

"Internet+" course teaching has the following characteristics (Li Jiahou, 2015).

2.2.1 Personalization

The Internet provides abundant information, convenient tool for the teaching and autonomous learning environment, which can help students to exert their subjectivity. On the one hand, it provides various choices for students in the learning goal setting, resource acquisition, progress control, learning path and learning time and space. On the other hand, it creates opportunities and provides more convenient ways for the personalized tutoring of one-to-one and many-to-one.

2.2.2 Mobilization

Ubiquitous mobile network and smart phones possessed by everyone enable teaching to move. Teachers and students can use phones to communicate and entertain, and more fashion may be that they can at any time and place use phones to carry out teaching and learning, to share knowledge and experiences, to consult and answer questions.

2.2.3 Socialization

The best education is to learn from life, learn from experience. The unification of knowledge and behavior should be done, and teaching shouldn't be divorced from life and society. On the one hand, vast amounts of network resources and the development of intelligent terminal equipment make the teaching contents no longer limited by textbooks. In class, students can search on the Internet a large number of vivid practical experience. On the other hand, the rise and popularization of socialized software also provides more possibilities for teaching reform.

2.2.4 Data-driven

People have more and more behavior on the Internet, which directly leads to the explosive growth of human behavioral related data. Unconsciously human has entered an era of "big data". "Internet+" education will put education into the era of big data where data drives school and analysis innovates education.

3. "Internet +" is the Practical Basis of Course Changes: BYOD

BYOD is the abbreviation of "bringing your own device". It refers that people in learning and working environment carry their own laptops, tablets, smart phones, or other mobile devices. That students bring their own device (BYOD) into the classroom is the big trend of emerging technology used in education, which was put forward in NMC Horizon Report: 2014 and 2015 k-12 Edition, 2015 Higher Education Edition. Auden and others believed that BYOD is not a single information product, also is not a single way of information application, but rather represents one kind of situation (Li Luyi and Zheng Yanlin, 2012). A survey study on Chinese college students showed, which is produced by Wang Li (Wang Li, Pan Jianbin and Feng Huyuan, 2015), college students' mobile penetration rate is more than 90%. The author in the teaching of the random survey also showed that 99% of the students have a smart phone, 85% of students at the same time is also equipped with a laptop. Refuels-- media Promotion Company's latest annual reports of the colleges-- universities to explore points out that college student spend longer than 3.5 hours a day on the phone. As we can see, using own equipment to learn has had equipment foundation.

ISSN 2239-978X
ISSN 2240-0524

Journal of Educational and Social Research
MCSER Publishing, Rome-Italy

Vol. 6 No.2
May 2016

4. The Course Teaching Model of "Internet +" era

The course teaching of "Internet +" era is to make full use of the Internet information connected, rich in resources, interaction, and effective management, also should fully consider the distinctive function of traditional course teaching in terms of talent training, such as personality, social ability exercise, emotional cultivation, high-order thinking ability training, etc.

4.1 Course teaching model

Through exploration in a few courses teaching, the study put forward flipping teaching model of "three sections and three levels" type under the support of BYOD, as shown in fig.1, which includes three stages, which are preliminary learning before class, deep learning during class and expansive learning after class (Huan Chenglin and Chen Jianwei,2016).
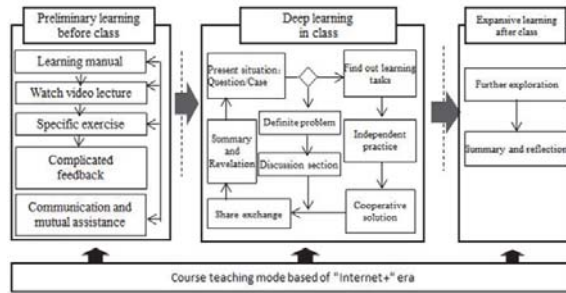

Figure 1. Course teaching model of "Internet +"era

4.1.1 Preliminary learning before class

Under the guidance of study manual, students conduct self-study by watching micro-video, and finish specific exercise. When meeting difficulties, online help and advice from teacher and partners are available. In this stage, students are supposed to memorize and understand fundamental conception and principles so as to make preparation in knowledge for deep leaning in class. The unresolved problems and difficulties are been feedback to teachers through the platform, which will provide important Preliminary for teachers' course teaching strategy.

4.1.2 Deep learning in class

Learners enter learning situations with pre-learned knowledge and pre-formed knowledge net. If it is a problem situation, students find the solution by group discussion. If it is a virtual project situation, independent exploring or collaboration is decided according to the project size. All the following factors like learners taking an initiative part in, seeking help of their teachers and classmates, making use of essential learning materials like information from the internet are necessary for meaning construction in both kinds of situations.

4.1.3 Expansive learning after class

Expansive learning after class is a kind of spontaneous learning conducted by students having interests or need in which learners integrate theory with practice and make exploration. Learners are encouraged to record and share their exploration experience. For example, write a blog or make digital story.

4.2 The characteristics

4.2.1 By piecewise line and level, the learner achieves deep learning step by step.

The flipping teaching of "three sections of three classes" type, which realizes deep learning in target level by section in

dimension of time and space, is corresponding associated with the Broom's theory of hierarchy teaching goal (memorization, comprehension, application, analysis, evaluation and creation) and Willie Horton's classification theory of digital learning activities. Relations are shown in table 1. Willie Horton thought that to achieve learning goals, general need three different types of learning activities: absorb-type activities, do-type activities and connect-type activities (Horton, Wu Feng and Jiang Lijia, 2009). Absorb-type activities, which include reading text, listen to the speech, watching video, etc., encourage learners to get a foundation needed for further study. Do-type activities, which exercise a program to play a game or answer questions, etc., enable learners to experience something related to learning content, and through these activities to practice, exploration and discovery. Connect-type activities help learners to connect knowledge with work, life and the previous study. Common connect-type activities include learner storytelling, research, etc. It can be seen that these three kinds of activity reflects access to information, knowledge internalization and extended learning, as it happens and corresponds to the three stages of teaching.

Table 1. The corresponding relation of teaching stage, activities with the target

Teaching stage	Learning level	Teaching target	Teaching activities
Before class	Basic learning	memorization, comprehension	Absorb-type activities
In class	Deep learning	application, analysis	Do-type activities
After class	Extended learning	Evaluation, creation	Connect-type activities

4.2.2 The new development of the hybrid teaching

The hybrid teaching, which is a mixture of online and offline teaching in form, in deeper level is optimal selection and combination of teaching environment, teaching resources, etc (Zan Huizhan and Li Xiaohua, 2009). BYOD-based flipping teaching of "three sections of three classes" type has obvious characteristics of hybrid teaching, and have a new development. Mainly reflects in: About teaching time and space, in-class and after-class teaching reasonable division of labor, seamless docking; Learning model , according to the requirements of the different characteristics of knowledge and the target, the integrated application of teaching learning, autonomous learning, spontaneous, and additional learning; The teaching target, gradually achieve by piecewise line and level; Teaching forms, a mixture of face-to-face teaching and online learning; The roles between teachers and students, give full play to teachers' leading role and students' main body status; Learning evaluation, a mixture of formative evaluation and summative evaluation.

4.2.3 Network-based teaching support system is the important guarantee.

Reasonable technology can not only reduce labor intensity, can also support for the decision of science teaching. Teaching support system can provide the following support as releasing learning materials, extracurricular learning supervision, communication and interaction, work sharing, online work, online tutoring, online collaboration, interaction evaluation and so on. In addition, it can also record the learning process, and format learning big data. According to big data, teacher analytics learning situation, organize teaching activities and evaluate the learner. A platform with perfect function and simple operation will greatly promote course teaching.

5. Discussion and Summary

"Internet +" that regarded as a national strategy has been promoted in all fields, and even in some areas has been quite successful, but "Internet +" education and course teaching still at the preliminary stage, theory and practice are scarce. Flipping teaching based on BYOD will certainly encounter many difficulties and resistance in the process of practice, such as hardware equipments, ideas or policy guarantee, etc. But the storm brought by the Internet information and the wave of reform is overwhelming. The rise of mobile Internet, cloud computing, big data, information technology and intelligent terminal will provide strong driving force for the development of teaching reform, will make teaching personalized, data-driven, mobile, socialization, and will promote students' deep learning and innovate study.

References

Horton(ed.), Wu Feng, Jiang Lijia (trans). (2009). Digital learning design, Bei Jing: Education science press.
Huan Chenglin, Chen Jianwei. (2016). A Target Design of a Mobile App Providing Supportive Service for Flipped Classroom. Journal of

Educational and Social Research, 6, 27-32.

Li Jiahou.(2015). The era of 'Internet +' in teacher's professional development. The information technology education of primary and secondary schools, 14, 8-10.

Li Luyi, Zheng Yanlin. (2012). BYOD Practice in American Primary and Secondary Schools and Its Inspirations. Journal of modern distance education research, 120 ,71-72.

Liu Dongmei.(2015). Online education for 20 years: from "education + Internet" to "Internet + education". Internet economy, 17, 90-97.

Wang Li, Pan Jianbin, Feng Huyuan. (2015). A study of new classroom teaching mode based on BYOD. Modern education technology, 25, 39-45.

Zan Huizhan, Li Xiaohua. (2009). Blended learning: definition, strategy, current situation and trend of development. China audio-visual education, 30,1-5.