Research on the Reform of Classroom Informatization from the Perspective of Media Integration

Qinxian Chen
School of Economics and Management,
Wuchang Shouyi University
Wuhan, China

Saipeng Xing* a,b
a:School of　Management ,
Wuhan Technology and Business University
b: School of business administration ,
Zhongnan University of Economics and Law

Wuhan,　China

Abstract—**With the rapid development of Internet in our country, the use of mobile terminals is becoming more and more popular. In this situation, the integration of multiple media may produce new results, and also has an important impact on classroom teaching. As the main carrier of teaching, whether students' attention can be focused on the content of classroom teaching is the focus of many scholars. Based on the perspective of media convergence, this paper analyses three interactive forms of classroom informatization: bullet curtain, blue cloud APP and flipped classroom, which are conducive to innovating teaching contents and methods, and also puts forward some problems that should be paid attention to in the implementation process.**

Keywords— media integration; barrage curtain; blue ink cloud APP; flipping classroom; classroom informatization

I INTRODUCTION

In recent years, with the rapid development of the Internet and the increasingly widespread use of mobile terminals, raditional paper media are facing a huge crisis. Among these changes and challenges, information is one of the most significant factors. Especially, the ever-changing technological factors promote the generation and development of media convergence, and then enhance and amplify the impact of information. The integration of media makes the curriculum in colleges and universities in a dilemma, facing both new opportunities and strong challenges.The methods of information acquisition and processing and users' reading habits have changed greatly [1] .Traditional media have to make changes to adapt to the development of the times.The use of media learning is very common in the field of education, but in the era of a wide variety of media, how to achieve satisfactory results in teaching becomes very important. The integration of multiple media provides a possibility to solve this problem.Traditional media, such as books and newspapers, have the shortcomings of not being able to timely feedback information. New media communication takes the network as the carrier, audio-visual as the channel, and has the advantages of multi-party interaction [2].

It gradually occupies a place in mass communication. However, the information content is chaotic, the regional development level is unbalanced, and the prestige is not as good as raditional media. Therefore, multi-media integration can complement each other to achieve the most satisfactory results.

Whether it is using various interactive media, electronic whiteboard or augmented reality technology, or the emergence of new teaching modes such as flipping classroom, creator education, bullet screen video, blue cloud APP, etc., to stimulate students' interest, enhance learners' interaction and thus to improve learning ability is the ultimate goal to pursue.

II MEDIA INTEGRATION AND CLASSROOM INFORMATIZATION

With the rapid development of information technology, the application of "Internet +" in education and teaching is imperative. How to construct an intelligent learning environment and explore the deep integration of information technology and education and teaching has become the background of the deep reform of education. At this stage, multimedia has been widely used in the classroom, whether in basic education or higher education.However, while using the media, teachers neglect to communicate with students, making students become "slaves" of multimedia technology. In today's information society, it is impossible to completely divorce from the media, but to maximize the efficiency of media use is the goal pun thisrsued. I situation, multi-media convergence may produce new results. For example, in mathematics class, when teachers teach sphere volume, they draw a plan on the blackboard, which leads to the students unable to understand the three-dimensional graphics. Later, the geometric sketchpad was used to make a sphere, which was watched by the students on the screen and still needed to be taught by the teachers. In this traditional media environment, knowledge is one-way transmission. Although video or slides can catch the attention of students, the one-way transmission mode cannot be changed.

As far as the traditional curriculum of colleges and universities is concerned, the vast majority of colleges and universities still adhere to the concept of mass communication

in curriculum design and construction, emphasizing the central position of communicators. For young students, the way of acceptance has undergone revolutionary changes, and young students are also easy to recognize and use the emerging means of communication and content. After the expansion of speed, network communication is undergoing profound changes in communication mode, encoding and decoding, and is developing towards the direction of multi-integration. In addition, under the rapid technological innovation of communication, the trend of integration of content, network and terminal is becoming more and more obvious, faster and deeper. At the same time, interpersonal communication, mass communication and network communication also show a trend of accelerating integration. This is reflected in the wide use of intelligent devices, which are more easily favored by young students [3].

Internet media breaks the one-way mode of transmission by communicators, and interaction is the biggest feature. Following from the three aspects of Barrage Curtain ,Blue Ink Cloud, Flipping Classroom, this paper elaborates how to break the traditional use of multimedia through new media, optimize the classroom content and improve the quality of classroom teaching.

III IMPLEMENTING MEANS OF CLASSROOM INFORMATION UNDER MEDIA INTEGRATION

A. *Barrage under Media Integration*

The original meaning of the barrage is to describe the large number of artillery shelling in the military as a curtain of artillery, refers to the commentary subtitles that pop up when watching videos on the Internet. At present, many video websites use bullet curtain mode in classroom teaching, which can not only break the weakness of multimedia one-way transmission, but also improve the frequency of classroom teacher-student interaction [4]. For example, when teachers teach, they often use case teaching method in the process of teaching. In the past traditional teaching, students' enthusiasm of answering questions voluntarily is low. In order to present a better teaching effect, we try to introduce the interactive teaching method of bullet screen video, and set questions with bullet screen. It is not long before the students' replies are displayed on the screen, with questions and answers, and the interaction between teachers and students draws closer instantly [5].

Ballistic screen video helps to strengthen the pertinence and deepen learning. Because of the specific characteristics of the bullet screen video, students can find the important and difficult points of this lesson by themselves if they use the bullet screen video in online learning. Furthermore, while watching the barrage, combined with the problems raised by peers and the analysis given by teachers, we can further understand the application of knowledge in practice, thus deepening the impression of a certain knowledge point. In the barrage video, every student is the problem finder. The knowledge diversity brought by equality enables students to compare their own ideas with others ideas in the process of

learning, or combine or exclude them, so that fragmented learning is also targeted.

Vdanmu is a perfect combination of We chat and bullet screen, and mobile App. It can transmit information sent by mobile phone to computer screen, and automatically generate bullet screen display. It is suitable for interactive use in evening, classroom, lecture and other occasions. Due to the use of micro-bullet curtain in the classroom, some "bowers" raised their heads one after another and focused their attention on the big screen.The content of the bullet screen floats directly on the screen, and the bottom interface of the screen can be switched normally. Content can be words, expressions, pictures. In this way, students can express their doubts and puzzles at any time in the course of listening, and also show their ideas, views, opinions and suggestions directly in the course of listening. The participation of students from time to time improves the pertinence of teachers' teaching and students' enthusiasm for learning [6].

B. *Blue Ink Cloud APP under Media Fusion*

Informationized classroom requires teachers to flexibly use multi-media resources to guide the phenomenon that students use mobile phones to influence the classroom, and to use mobile phones as an auxiliary tool for classroom teaching. As a cloud classroom software, Blue Moyun Class has many functions that can assist teaching [7]. Teachers can interact with students through cloud classes, assign homework, answer for students and so on. Students need to receive invitation codes from teachers, and they can enjoy these functions after registration.

If blue cloud software is used in a class, some resources will be sent to the class, which is more convenient for students to use.In order to activate the classroom atmosphere, some classroom performance links have been set up in the cloud class, including raising hands, rushing to answer, selecting people and group evaluation, and students can be selected randomly by shaking [8]. Students who perform well in class can be evaluated. Practice shows that students prefer to answer questions by shaking and rushing, because these methods are full of stimulation and challenges. Especially shake a shake, in the unknown situation waiting for the excitement of winning the prize can make students feel the joy of the classroom.

Blue ink clouds can also urge students to complete their homework, tasks and tests on time. These activities are completely controlled by teachers. Software also has some visible benefits, such as check-in function, random lot answering, uploading resources, online testing, questionnaires/votes, answering questions, brainstorming, automatic data statistics, and so on [9]. Blue ink cloud is actually very powerful, especially in training exams, the introduction of blue ink cloud, testing, can be accurate statistics, everyone's answers, those questions are high error rate, clear at a glance, can be convenient for targeted guidance.

C. *Flipping Classroom Informatization*

Flipped Class Model is a term translated from English Flipped Class Model. It is generally called "Flipped Class Model". The traditional teaching mode is that teachers teach in

class, assign homework and let students practice at home. Different from the traditional classroom teaching mode, under the "flip classroom teaching mode", students complete knowledge learning at home, and the classroom has become a place for interaction between teachers, students and students, including answering questions and solving puzzles, the use of knowledge, so as to achieve better educational effect. Using video to implement teaching, the popularity of the Internet and the application of computer technology in the field of education make the "flip classroom" teaching mode feasible and realistic [10].

Turn over the classroom to subvert the traditional teaching form of collective learning in the classroom, take the virtual network as the platform, and optimize the classroom teaching structure. There are four main parts: students watch in advance micro-videos guided by thinking or theoretical teaching to stimulate their interest in learning; self-help online answers or self-examination of learning effects to provide an evaluation mechanism; designers and students work together to consolidate the improved classroom links and create a cooperative atmosphere; thinking and reviewing after-school targeted questions, focusing on personalized differences. Flipping classroom can better ensure information communication, smooth teaching process, individualized guidance and customized environment implementation.

For example, there are many excellent courses online in schools, and online elective courses are offered, so students can watch them freely in their free time after class. After watching the teaching videos, whether the students understand the learning content or not, the four or five small questions that follow the videos can help the students to detect in time and make judgments about their learning situation. If some questions are not answered well, the students can look back and think carefully about what has gone wrong. Students' answers to questions can be collected and processed through cloud platform in time to help teachers understand students' learning situation [11]. Another advantage of teaching video is that it is easy for students to review and consolidate after a period of study. The follow-up of evaluation technology enables the relevant links of students' learning to obtain empirical information, which is conducive to teachers' real understanding of students.

IV PROBLEMS NEEDING ATTENTION

A. Students are under too much pressure and distracted after class

In the process of classroom Informatization reform, some schools are always eager to make quick profits, hoping to make full use of all the means of information, but do not consider the students' acceptance of new things. For example, in the teaching of a course, teachers use different platforms for flipping the classroom, requiring students to register, test and brush experience values on each platform, but they do not think whether it is necessary for students to use it. Instead, students regard the means of information as a means and adopt various attitudes to complete the layout of teachers. Seek, this will be counterproductive. When using the relevant teaching

APP, at first the students will reject it. The reasons are: electricity consumption, traffic charges, delay in playing games, delay in watching TV plays, etc. But the software itself is also used to reduce students' use of mobile phones to do things unrelated to the classroom [12], so this is a structural contradiction, which cannot be avoided [13].

As long as teachers communicate well with students before using various new media means, strictly require students to abide by discipline, and strictly prohibit the expression of speeches unrelated to the content of the classroom. If there are questions that can not be answered temporarily in class, they should record them in time. After the end of the course, students will really feel the role of the software and will no longer use it. Exclusion naturally learns more.

B. The use of software is not scientific and skilled

Although the implementation of information technology in Colleges and universities is more vigorous, due to the specific situation of each school is different, teachers are not very skilled in the operation of various software, often there will be a variety of small BUG. For example, students can not receive information, the signal is not good, the phenomenon of students hitchhiking is serious, and so on. From the school level, teachers should be more helpful in choosing better platforms or software, at the same time, strengthen the links with developers, organize large-scale and multi-scale training activities, and strengthen the construction of school network, so as to provide a good guarantee for teachers and students to use various software scientifically and skillfully. From the teacher level, we should better improve our teaching level, not just rely on the platform itself. The most important factor affecting the effect of online teaching is the content of online teaching after the curtain video is modulated or the course is admired.Every teacher should know that the innovation of science and technology can only help people show the teaching content to students more intuitively, but can not completely replace teachers. Therefore, every teacher should ask himself to prepare every lesson carefully, update his own knowledge reserve in time, adopt the auxiliary function of science and technology appropriately, mobilize students' interest in learning, not forget the basis of teaching, lay a good foundation for class, and present good teaching effect [14].

C. Design differentiated assessment forms according to teaching objectives

The various forms of classroom informatization are organized and implemented by students (subject) teachers (leading). The school can view students' learning data more diversified and intuitive online, and formulate evaluation criteria according to the needs of learning conditions. Some colleges do not consider the differences between students' intelligence and non-intelligence, and the scoring of online courses also takes unified video learning, homework, examination, rewards and penalties as a constant standard, which violates the teaching purpose. We should consider setting up a dynamic teaching effect and evaluation mechanism scientifically. In order to stimulate students' sports potential, form the habit of self-exercise, and improve their ability to solve problems independently. Teachers and students timely online communication and interaction, feedback,

teaching in accordance with their aptitude, encourage and fully mobilize the enthusiasm of students.

V CONCLUSION

In the preceding part, based on the cultivation mode of "double certificates" and "double abilities" on the basis of industry, university and research, some main modes of cooperative education between industry, University and research are briefly described, and the key to the implementation of the "double certificates" and "double abilities" talent cultivation mode based on the basis of industry, university and research is discussed in depth.

Encouraging students to participate in certificate training and strengthening teacher training and policy support can not only enrich and improve students 'extracurricular learning efficiency, but also create conditions for outstanding students to stand out. On the basis of the multi-party cooperation training mode established by the school, it is beneficial to cultivate high-quality talents with innovative and practical abilities.

Therefore, it is of great practical significance to deepen the teaching reform, improve the teaching quality, promote the development of teachers and train high-quality knowledge-based applied talents around the training of talents. Combining school with industry and scientific research institutes organically, making use of the advantages of school, industry and scientific research institutes in personnel training, combining the school education environment with the production site environment with indirect knowledge dissemination in classroom and direct experience and ability acquisition in practice organically in the process of students' training, so that schools, teachers, students, society and enterprises can be established broadly.

Universal connection, cultivate students' ability, improve students' quality in an all-round way. Through the cooperative education of industry, University and research, making use of the two educational environments of school and society, and rationally arranging curriculum learning and social practice, we can make the training plan, teaching content and practical links more close to the needs of social development, promote the improvement of students' practical ability and overall quality, and achieve the goal of training applied talents.

REFERENCES

[1] Ding Boquan, "Media Integration: Concepts, Motivations, Advantages and Disadvantages", Social Sciences in Nanjing,vol.11,pp.92-99, December 2011. (in Chinese)

[2] Chen Ying, and Lu Qiang,"Research on the Application of "Micro Course" in Practical Teaching",Journal of Yuxi Normal University, vol. 29, pp.54-57, December 2013. (in Chinese)

[3] Ding Dehui and Li Ziyin,"On the Construction of Course System in Colleges and Universities under the Integration of Media",Media observation,vol.117, pp.71-73,July. 2016.(in Chinese)

[4] He Min, "Research on the Application of "Barrage Curtain" Video Technology in Online Teaching"，Journal of Guangxi Radio and Television University, vol. 30, pp.273,January 2019.(in Chinese)

[5] Lu Yali, "A Preliminary Study on the Application Significance of Ballistic Curtain Online Video in Education", Asia Pacific Education, vol. 20, pp.273,October 2015 .(in Chinese)

[6] Li Haifeng, and Wang Wei, "Barrage Video: A New Orientation of Online Video Interactive Learning",Modern Educational Technology,vol. 25, pp.12-17,June 2015 .(in Chinese)

[7] M. Beranuy, X. Carbonell, and M. D. Griffiths, "A Qualitative Analysis of Online Gaming Addiets in Tretment", Int J Ment Health Addiction ,vol. 11, pp.149-161, October 2012.

[8] Ning Huang. Analysis and Design of University Teaching Evaluation System Based on JSP Platform. International Journal of Modern Education and Computer Science, 2017, 7(3):43-50.

[9] S Anupama Kumar ,"Edifice an Educational Framework using Educational Data Mining and Visual Analytics," International Journal of Education and Management Engineering(IJEME), Vol.6, pp 24-30, March 2016.

[10] Li Xueyuan,"Study on the Strategies of Improving Learning Efficiency in Flipping Classroom Based on Blue Moyun Class",Information and Computer,vol. 45, pp.224-226,July 2017.(in Chinese)

[11] Tian Xia, Zhang Shumin, and Wu Yifeng, "Status Quo and Outlook of the Studies of Entrepreneurship Education in China: Statistics and Analysis Based on Papers Indexed in CSSCI (2004–2013)", Chinese Education & Society, vol.49, pp. 217–227, May–June 2016.

[12] Antti Herala, Antti Knutas, Erno Vanhala, Jussi Kasurinen, "The Proposed Methods to Improve Teaching of Software Engineering," J. Modern Education and Computer Science, no. 7, 2016, pp.13-21.

[13] Wu Hongping, and Yang Sen,"Exploration and Practice of "Flipping Classroom" Teaching Model Based on Micro-Course",Technology vision,vol.140, pp.185,May 2016.(in Chinese)

[14] Ye Shuai,"Construction and Popularization of Information Education in Higher Vocational Sports Classroom in the New Era",School Physical Education,,vol.8, pp.128-129,December 2018.(in Chinese)