
MULTIMEDIA APPLICATION IN PSYCHOLOGY TEACHING IN COLLEGES

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Abstract

The boom of information technology has brought new opportunities and challenges to psychology teaching in colleges. This paper mainly studies the application of the multimedia teaching mode in college psychology teaching. First, the theories, connotations and functional features of multimedia teaching mode were introduced. Then, the multimedia teaching resources were classified. Finally, a questionnaire survey was conducted among undergraduate and postgraduate students of different grades and majors in Beijing University of Science and Technology. The effects of psychology teaching in traditional teaching mode and multimedia teaching mode were compared based on the survey data. The results show that multimedia teaching mode can stimulate the enthusiasm and participation in class of college students, and enhance the interaction and vividness of classroom teaching. The research results demonstrate the positive effect of multimedia teaching mode has a positive effect on college psychology teaching.

Key words: Multimedia, Psychology, Teaching Mode, Questionnaire Survey

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INTRODUCTION

Following the rapid development of information technology and education system, the traditional teaching concepts, methods and thinking of colleges and universities have also changed. The new educational model represented by multimedia technology has become an important way of teaching in major universities, which has almost completely penetrated into each corner of the campus. Its advanced and rich teaching methods have greatly improved the traditional teaching mode so that the teaching content is presented in vivid forms such as text, image, audio, video, etc., forming a unique classroom environment (He & Zhuang, 2016). Under the guidance of the multimedia teaching, students' senses are effectively stimulated in the teaching class, their

enthusiasm of active learning is enhanced, and the classroom interaction between students and teachers is improved, thereby promoting the quality of classroom teaching. Therefore, combined with the modern teaching techniques, the multimedia teaching also provides new teaching methods and ideas for the application practice of college teaching.

In addition to the basic theoretical knowledge, the college teaching of psychology should focus more on enhancing students' ability of emotional control, interpersonal communication, mental health, etc., comprehensively improve their psychological cognition, and cultivate the good psychological quality. Compared with other disciplines, psychology teaching does not have very hard skills and knowledge which requires continuous inoculation and repeated practice as in the traditional teaching mode. Whereas, it lays emphasis on the inner growth of students, and students need more experience in the classroom to stimulate their ideas, in order to achieve the original intention of psychology teaching (Sheng & Sheng, 2018). The multimedia teaching mode can display the teaching content more

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intuitively, and make full use of the characteristics of multimedia technology to create a realistic atmosphere for students, which makes it easier to bring students into the teaching content, resonate from the heart, thoroughly integrate themselves into the classroom with the visual, auditory stimuli etc., and thus enhance students' sense of classroom participation and identity (Hannah & Johnson, 2018).

Therefore, the paper aims to study the application practice of college psychology teaching in the multimedia teaching mode. For this, the multimedia psychology teaching mode was taken as the theoretical research foundation, and its connotation and theoretical basis as the support point of psychology teaching. Then through the application practice of classroom teaching, the classification and application of multimedia teaching resources were summarized. Finally, the effects of psychology teaching in traditional teaching mode and multimedia teaching mode was compared by means of questionnaire survey. Experimental data shows that multimedia teaching mode can stimulate students' enthusiasm and participation in class, and improve the traditional teaching mode, which has a significant role in promoting the classroom teaching of psychology.

MULTIMEDIA TEACHING MODE OF PSYCHOLOGY

Theoretical basis

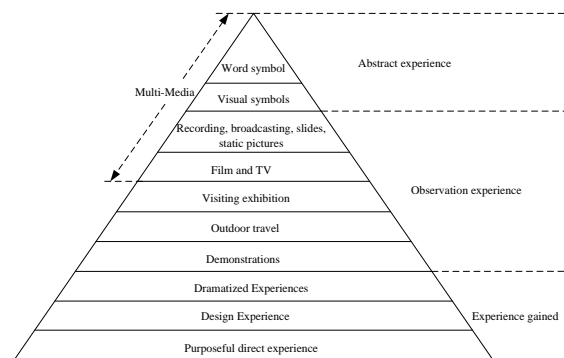
In the literature research on multimedia psychology teaching mode at home and abroad, the mainstream theoretical research is based on constructivism learning theory, cognitive learning theory and the "Cone of Experience" theory proposed by American audio-visual educator Dale. These theoretical studies have made fully interpretation by different levels from the aspects of psychological teaching research environment, personal cognition and experience guidance, which is of great significance for studying the application practice of psychology teaching under the multimedia teaching mode.

The constructivism learning emphasizes the leading role of students in completing the construction of knowledge system. The same knowledge is continuously instilled by different teachers, but without the experience of students

as background, it is impossible to construct a new and balanced knowledge system. The process of learning knowledge is not a single process of input, practice, memory and application. Instead, it combines its own cognitive structure to process the knowledge received actively or passively, and form a dual constructivism learning method (Karel & Tomas, 2015).

The cognitive learning is people-centred, emphasizing the process of their social perception from the initial perception and thinking to the final understanding, acceptance and application. Therefore, in the process of learning, the learning process of new knowledge and old knowledge is the recombination of knowledge after personal cognition (Ferri & Ferri, 2016). Under the scientific background of computer technology, control technology and informatics, it can stimulate individuals' desire to learn and recognize new knowledge through the already stored knowledge, and enhance the enthusiasm and initiative of individual learning. The practical study college psychology teaching based on multimedia teaching mode is the same as the research process and purpose of personal cognitive learning theory, so it is very appropriate to be selected as a theoretical basis.

Figure 1. Dale's "Cone of Experience" Theoretic Map



The "Cone of Experience" theory shown in Figure 2.1 is a classic theory from the *Audiovisual Methods in Teaching*. It categorizes the learning experiences into three modes: the enactive experiences (i.e., learning through direct contact with actual things such as touching, listening, watching, smelling and tasting; then, iconic experience (i.e., learning through observation such as exhibits, study trips, video observations,

etc., to observe the characteristics of things around and how people do; the symbolic experiences (i.e., learning through abstractions to gradually move from learning experience and accumulation to the higher level of experience accumulation with language and visual symbols (Sulaiman, Muhammad, Ganapathy, et al., 2017). The process of psychology teaching also follows the "cone of experience" learning theory, from the most direct sensory cognition to the abstract psychological cognition. This multimedia teaching mode based on observation and abstraction experience can provide students with more vivid, specific and useful learning experience. The "Cone of Experience" theory provides a firm theoretical basis for the college teaching of psychology under the multimedia teaching mode.

Connotation

The multimedia teaching mode isn't the combination of the generalized multimedia concept and the narrowly defined computer carrier. Its connotation mainly includes two aspects.

First, this teaching mode involves not only computer carriers, but also a whole set of various devices such as projectors, loudspeakers, lights, curtains, etc.; besides, the computer integrated technology and multimedia information technology are combined to complete the teaching design and goals, using various abstract elements such as text, images, animations, audio and video etc. to display the content of psychology teaching, thus forming a teaching practice application with multimedia functions (Sui & Kim, 2019).

Second, compared with the traditional artificial teaching mode, the multimedia teaching mode is manifested as a new digital and intelligent teaching product. It uses the most advanced information technology and the most authoritative educational broadcasting theory for the course design, implementation and summarization, and adopts a variety of facilities and classroom software to complete multimedia psychology teaching.

The multimedia teaching mode gives play to the role of modern computer multimedia centre greatly in the classroom teaching of psychology from the two aspects of function and performance, resulting in more abundant forms of psychology teaching, more vivid content, and more satisfactory effect. Therefore, it has far-

reaching significance to the promotion of multimedia psychology teaching mode (Alberts & Stevenson, 2017).

Functional features

As a new teaching mode with unique information-based features, multimedia teaching helps students to participate more actively in the classroom, making full use of the advantages of intelligent systems, and combines the characteristics of traditional teaching methods to complete the teaching objectives. The main functional features include: creating a good spontaneous response teaching environment for students, providing teachers with rich multimedia equipment to improve teaching conditions, and proposing comprehensive teaching ideas for modern education. These three are interdependent and mutually influencing, as shown in Figure 2-2.

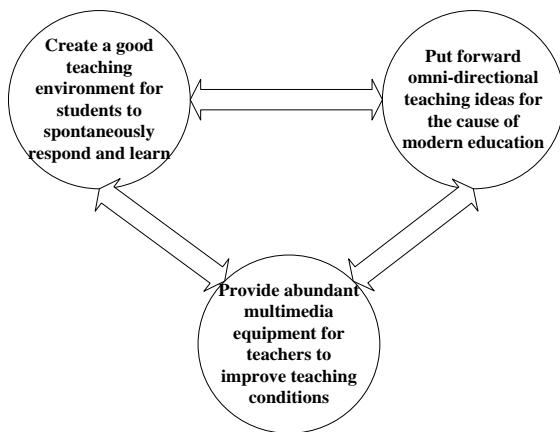
First of all, the multimedia teaching mode creates a good spontaneous response teaching environment for students in the psychology teaching class. Under the multimedia teaching mode, students themselves are treated as the teaching subject, using efficient and convenient database technology to provide students with personalized query services. In the intelligent teaching system supporting the seamless connection of multimedia teaching and database, students can find useful materials according to their own interests and needs, thus weakening the role of teachers in the classroom and better arousing the subjectivity of students (Perikos, Grivokostopoulou, & Hatzilygeroudis, 2017).

Secondly, the multimedia teaching mode provides teachers with rich multimedia equipment to improve teaching conditions in the psychology teaching class. The modern multimedia teaching equipment displays the classroom content directly and vividly by its unique means such as the animation, audio, and video etc., so that teachers have better teaching conditions to maximize their potential, and also bridge the communication between teachers and students. However, all these are far from satisfactory in traditional teaching conditions. Therefore, the combination of multimedia teaching mode and psychology teaching practice can complete the teaching task even better.

Finally, the multimedia teaching mode puts forward omni-directional teaching ideas for modern education in the psychology teaching

class. Not limited by the grade, profession and number of students, the multimedia teaching method has strong applicability, and the use of internet technology can put the teaching classroom in distance education and serve more people. Therefore, its all-round flexibility and expansibility have been widely used in the practice of psychology teaching, bringing new thinking to the modern education model.

Figure 2. Functional Characteristic Diagram of Multimedia Teaching Model



CLASSIFICATION AND APPLICATION OF MULTIMEDIA TEACHING RESOURCES

In light of its rich teaching resources, the multimedia teaching mode adds more colour and fun to the classroom. In the psychology teaching practice, it can guide students to move closer to the theme of the classroom, stimulate their inner feelings and experience, and enhance the organic combination between the classroom knowledge teaching and students' experiences. Specifically, multimedia teaching resources mainly include four types: text pictures, audio, animation and video.

Text and pictures

Most of the knowledge in multimedia courseware is presented to students in the clear and vivid form of texts and pictures, enabling the students to produce the sensory perception. For some key content, it can be highlighted by adjusting the attributes of text such as the font size, font-weight, colour, and background etc.; certain obscure knowledge can be inspired by the form of picture display; the knowledge required to be classified and summarized can be

presented in a table format. All these basic multimedia resources can help to ensure more organized and targeted classroom teaching, and better resolve difficult-to-understand knowledge-based concepts for improving the quality of classroom teaching.

Audio

As an auxiliary type of multimedia resources, audio technology can mainly produce auditory impact on students, and create a variety of atmospheres such as joy, sadness, thinking and affection to the classroom. Especially in the teaching of psychology, it is easier to bring students into the proper environment, and integrate their emotions into the classroom, so that they can completely release the inner self, and gradually understand the connotation of psychology. Only when students can fully devote themselves to the teaching classroom will the psychology teaching time achieve better results. Thus, audio resources are also an indispensable part of the multimedia teaching mode.

Animation

The animation of the multimedia courseware vividly displays the knowledge points and scene settings in a dynamic form. Using the computer information technology, the development process of the things is simulated, which makes the abstract things concrete and clear, reduces the difficulty of classroom learning, increases students' cognitive interests, and deepen the memory and understanding of knowledge, thereby improving students' learning efficiency. Therefore, animation technology plays a catalytic role in multimedia teaching, which can greatly improve the college classroom teaching practice.

Video

In the college classroom teaching practice, short videos, movie and television play can well simulate students' self-perception. According to the teaching objectives and plan, proper selection of high-quality video materials can adjust the rhythm and atmosphere of the classroom. The emotional stories and positive energy events in the video can arouse the students' inner awareness, integrate the theory and practice of psychology teaching quickly, for truly understanding the inner world of students, and simultaneously promote the students' thinking and psychological growth. Therefore,

the multimedia mode of video playback has the most intuitive effect on the practice of psychology teaching, and it is also a necessary link in the classroom teaching of psychology (Long, Yu, Cui et al., 2018).

QUESTIONNAIRE SURVEY AND RESULTS ANALYSIS

Preparation for the survey

The purpose of this questionnaire survey is to compare the recognition, participation and awareness of students in college psychology teaching practice and traditional teaching mode under the multimedia teaching mode. The questionnaires were conducted for undergraduate and postgraduate students of different grades and different majors in Beijing University of Science and Technology. The anonymous investigation was made one-on-one. The whole process was not guided, to ensure the completion of questionnaires in an objective and fair manner (Kohari & Takakura, 2017).

The survey lasted for a total of one month. A 20-minute questionnaire was answered at the Student Activity Centre by means of an advance reservation. A total of 150 questionnaires were issued, and 150 were all successfully completed and returned, at the effective rate of 100%, which was in line with the requirements about questionnaires. Then, the results statistics and analysis were further carried out.

Questionnaire design

In the questionnaire survey, mainly the form of objective single-choice questions was

adopted, and a comprehensive evaluation was made in terms of the forms, contents and effects in the psychology teaching practice under both the traditional teaching mode and multimedia teaching mode, in order to reflect the students' awareness, participation, and recognition in these two modes.

The questionnaire consists of a total of 25 questions, and the options for each question include 4 points, 3 points, 2 points, and 1 point corresponding to different satisfaction degree (i.e., very satisfied, satisfied, dissatisfied, very dissatisfied). According to the statistical score results, the students' participation, awareness and recognition of the class are divided into three levels: excellent (85-100 points), good (65-84 points) and general (less than 65 points).

The questionnaire design strictly follows the principles of objectivity, conciseness and non-guidance, and the same type of questions is processed disorderly. Besides, the psychologists and consultants from Beijing Normal University were invited to guide the design of the questionnaire, to ensure that the content of the questionnaire can meet the design requirements of this study.

Results analysis

The questionnaire survey aims to evaluate the effect of the multimedia teaching mode and the traditional teaching mode on psychology teaching practice, and to analyse the role of the multimedia teaching mode in classroom teaching, and ensure what kind of thinking has been brought about for teaching practice. Table 1 lists the results obtained by statistical analysis for the valid questionnaires.

Table 1. Questionnaire Survey Statistical Result Table

Teaching category	Traditional mode /Multimedia mode (Number and percentage)			
	Very satisfactory	Satisfaction	Dissatisfaction	Very dissatisfied
Form	29(19.33%)	76(50.67%)	32(21.33%)	13(8.67%)
	83(55.33%)	35(23.33%)	26(17.33%)	6(4.00%)
Content	41(27.33%)	30(20.00%)	52(34.67%)	27(18.00%)
	73(48.67%)	55(36.67%)	18(12.00%)	4(2.67%)
Atmosphere	14(9.33%)	28(18.67%)	47(31.33%)	61(40.67%)
	49(32.67%)	53(35.33%)	38(25.33%)	10(6.67%)
Interest	8(5.33%)	17(11.33%)	38(25.33%)	87(58.00%)
	74(49.33%)	52(34.67%)	19(12.67%)	5(3.33%)
Effect	23(15.33%)	25(16.67%)	67(44.67%)	35(23.33%)
	71(47.33%)	51(34.00%)	26(17.33%)	2(1.33%)
Average value	23(15.33%)	35(23.33%)	47(31.33%)	45(30.00%)
	70(46.67%)	49(32.67%)	26(17.33%)	5(3.33%)

Table 2. Awareness, Participation and Recognition Assessment Tables

Type	Awareness	Participation	Recognition
Traditional mode	71(Good)	62(General)	47(General)
Multimedia mode	89(Excellent)	91(Excellent)	86(Excellent)

Table 1 shows that in the multimedia teaching mode, the number and percentage of students who are very satisfied with the students account for about 50%, and plus the number and percentage of students who are satisfied, it reaches almost 80%; in the traditional teaching mode, it's only 15% and 23% correspondingly. This obvious difference reflects the higher satisfaction of students under the new modern multimedia intelligent teaching system.

In order to more specifically compare the two teaching modes, the data in Table 4-1 was processed twice, and measured using the three parameters of student's awareness, participation and recognition. Specifically, in view of the awareness determined by form and atmosphere, participation by content and interest, and recognition by effects, these three parameters were calculated and evaluated in detail according to the scoring options above (1-4 points). The results obtained are shown in Table 2.

Table 2 indicates that in the multimedia teaching mode, the students' awareness, participation and recognition can reach excellent level, while in the traditional teaching mode, only the awareness reaches a good level, and the other two parameters are general. Therefore, it can be seen that students have a strong recognition of the multimedia teaching mode, which can stimulate students' participation enthusiasm and enhance the classroom effect of psychology teaching practice, in line with the original intention of this study.

CONCLUSIONS

With the continuous advancement of science and technology and educational concepts, the multimedia teaching mode has been widely used in the teaching practice of various disciplines in colleges and universities. Especially due to the characteristics of integrating the text, pictures, audio and video, it can be better applied in the practice of psychology teaching. So it is more meaningful to study the practice of college psychology teaching under the multimedia

teaching mode. For this, the paper firstly introduces the theoretical basis, connotation and function of multimedia teaching mode, and analyses the classification and specific application of multimedia psychology teaching resources. Then, the questionnaire survey was conducted to make an objective and fair evaluation of 150 college students. Statistical analysis shows that students' awareness, participation and recognition in classroom teaching are significantly superior to traditional teaching modes, and they have positive effects on improving the teaching methods of psychology and interactive participation in the classroom, thereby improving the overall quality of the teaching classroom. This proves that the multimedia teaching mode has a positive effect on the practice of psychology teaching.

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