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Research Article

The Influence and Analysis of Network Multimedia Teaching Management on College Psychological Teaching Model*

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Abstract

In the context of networked education, the subjective behaviour in the field of education, the interaction between teachers and students, and the educational environment in which the subject is located have a comprehensive impact on the teaching mode of psychology in colleges and universities. The multimedia teaching environment is one of the typical environmental types. This paper investigates the current situation of college psychological teaching mode in the multimedia teaching environment from the quantitative perspective, analyzes the psychological teaching mode and classroom interactive speech behaviour in colleges and universities, and compiles the reliability and validity. The high multimedia teaching environment scale discusses the key factors affecting the teaching mode of psychology in colleges and universities from the perspective of statistics, and then puts forward some suggestions for optimizing the teaching mode of psychology in colleges and universities.

Keywords

Network Multimedia • Teaching Mode • Interaction • ST Analysis

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In the context of networked education, the application of multimedia technology in college psychology begins with multimedia computers entering the field of education. The computer not only has the multimedia presentation function, but also can process text, sound, graphics, images, video, etc., and also has human-computer interaction function, so the computer quickly becomes the popular multimedia teaching equipment and is rapidly popularized. Multimedia teaching can collect, process and disseminate educational information in real time, efficiently and quickly, enrich teaching content, optimize classroom teaching, and fully mobilize students' enthusiasm. However, in the teaching practice, because teachers have different understandings of multimedia teaching, even some of them are wrong, which makes it difficult for multimedia teaching to exert its due advantages and sometimes even play a negative role. In the classroom teaching of psychology teaching in colleges and universities, multimedia teaching has both positive and negative effects on college psychology teaching.

With the subjective teaching thoughts entering the field of vision of the Chinese people, many scholars began to study the classroom teaching mode of college psychology from different angles. Interaction is one of the most basic special pillows of teaching activities. It can reflect the essence of teaching to a certain extent. However, in the information technology environment, due to the introduction of modern educational technology, the nature, characteristics and methods of interaction have changed. Moreover, in the teaching practice, it also reflects many questions such as single interaction form, deep interaction level, and lack of emotional interaction.

Therefore, this paper will reorganize the psychology teaching mode of colleges and universities in multimedia teaching, and on the basis of analyzing the factors of multimedia teaching environment, use empirical methods to demonstrate the influence and influence of various factors on the teaching mode of college psychology. It can be thought of the subjective behaviour in the field of education—the classroom behaviour of teachers and students (ie, interactive behaviour) and the educational environment in which the subject is located. Under the background of network information education, multimedia teaching environment is one of the typical types of environment. In order to optimize the teaching mode of psychological colleges in network multimedia colleges, and to promote the interaction in teaching mode, several strategies and suggestions are proposed.

Related Work

Research status of teaching mode

The history of the foreign classroom environment model can be divided into two stages: the first stage focuses on judging the classroom atmosphere from the perspective of teacher behaviour classification (Tomcho *et al*., 2015; Hanson, Trolian, Paulsen & Pascarella, 2016; Huang, Bo & Ma, 2018). Mainly the method of classroom observation; the second stage is to judge the classroom environment from the students' perception of the classroom environment, using interviews and questionnaires (Imura, Takamura, Okazaki & Tokunaga, 2016; Nowell, 2018). In the recent 30 years of research, a prominent feature is that researchers have compiled a large number of economically valid and widely used questionnaires.

Since the late 1980s, there have been a large number of scales for special classrooms or special teaching properties that are more versatile, simpler in form, and adaptable to different cultural backgrounds. For example, the literature (Hogarty, Hines, Kromrey, Ferron & Mumford, 2016) is used to measure the individualized factors in the classroom loop. SLEI (Hagenauer, Hascher & Volet, 2015) specifically measures the perception of high school psychology students about their experimental classroom environment, and the other is to investigate students' perception of the actual environment. One is to test the ideal experimental environment for students.

Subsequently, the classroom environment research of college psychology teaching mode became more active. The most attractive feature of classroom environment measurement tools in this period was the emergence of a large number of distance education classroom environment measurement tools. With the emergence and widespread application of modern distance education, Western scholars began to use measurement tools to measure what happened in distance education classrooms by measuring the perceptions of teachers and students, so a series of modern distance education classroom environment tools came into being (Nascimento, Gomes, Mota, Aparecida & Melo, 2016). The development of the Remote and Open Learning Environment Scale (Tang, Baker & Peter, 2015) has become a research pioneer in combining classroom environment with distance learning. Focus on technology and interaction, mainly to measure students' perception of the classroom environment. The literature (Dybowski, Sehner & Harendza, 2017) developed the constructivist online learning environment scale according to the structure of the constructivist virtual learning environment scale. The online learning environment scale was developed based on the evaluation of textbooks, interactions, students' perceptions of the environment and student learning content in distance learning. Literature (Kim, Um, Kim & Kim, 2016) contains four indicators: liberation activities, such as cognition, efficiency, autonomy; joint participation activities, ie reaction, interaction, feedback, cooperation; information structure and design activities, such as clear objectives, appropriate content, teaching materials Design and structure: attitudes such as self-confidence, success, and frustration. Focus on the interaction and cooperation between students to develop a distance learning learning environment from the table, and use the tool to study the relationship between students' fast learning and classroom environmental factors. Similarly, (Cela, Sicilia & Sánchez, 2015) developed an online learning environment scale that included eight indicators. Some of the indicators in the network information environment measurement tools are transplanted from the traditional scales, but they also add some indicators specific to information education, such as information design and computer convenience.

Teaching mode in network multimedia environment

In the network multimedia environment, the teaching mode, the interactive characteristics of multimedia teaching, the design and development of interactive multimedia teaching system, and the interactive teaching under computer support, the number of interactive research results is increasing year by year. Interactive multimedia teaching mode, interactive TV system and computer CAI interactive teaching (Dicke, Elling, Schmeck & Leutner, 2015) are based on the theory of interaction (Wang & Liu, 2015), in a short period of time, it has launched a wave of multimedia interactions in the network information environment. But then domestic scholars have paid attention to the application of interactive technology, and people are enthusiastic about

interaction. The application of technology research has reduced the focus on theoretical research. Chinese scholars have once again begun to focus on the theoretical research of interaction in the information environment (Krush, Sohi & Saini, 2015), mainly focusing on the basic construction and scale construction of foot education information. With the improvement of many equipment and institutions, the main focus is on the application research of teaching mode, and the research and theoretical research are changed again, which reflects the appeal of the network multimedia education information practice to the theoretical research of college psychology classroom teaching mode.

Teaching Model Communication Theory

Communication teaching mode

The communicative teaching mode is a teaching theory and strategy that is conducive to the development of students' subjectivity. The basic characteristics are: (1) Emphasis on the self-realization of student personality: (2) The teaching process is a process of communication, which is the interpersonal interaction between teachers and students through various intermediaries, such as cognition, emotion, attitude, and values. The process of interaction: (3) The main form of teaching organization is group discussion and group communication: it changes the spatial form of Putian type in traditional teaching and the time form of teachers' “one word”. It should be followed during implementation. Two basic principles are as follows; (1) the principle of reasonable communication. Establish a correct view of teachers and students, establish a teacher-student relationship that is democratic, harmonious, mutually inclusive and supportive. (2) The principle of mutual dependence. Each study group is learning objectives. Realization, sharing of learning materials, role of group roles, and rewards for learning outcomes must be interdependent. Teachers can take specific classroom interactions, games, operational practices, communication discussions, inquiry and discovery, role transformation, collaborative redaction, and situational experience. And appropriate local update of the textbook. The "communication-interaction" teaching mode is:

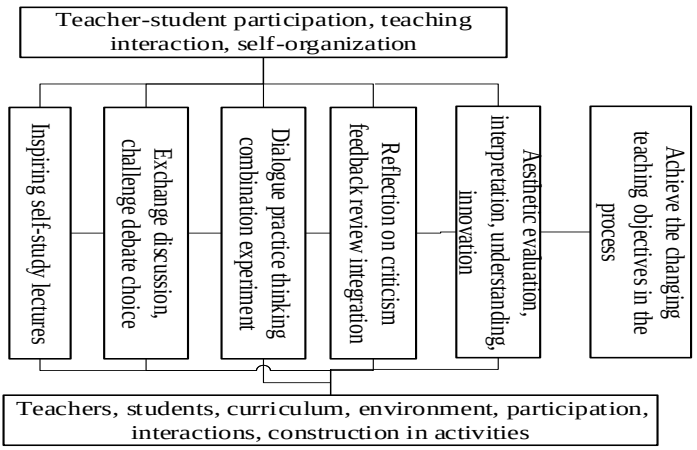

Figure 1. Communication-interactive teaching mode.

Classroom interaction is the main form of teaching mode. It is the teacher's interaction between the students and the body, including the teaching of knowledge content, the comprehension of life connotation, the norm of willing behaviour, and the cultural heritage to teach the cultural heritage to young people. The first generation enables them to freely generate and enlighten their freedom. Teaching is the process of communication, the activity of dialogue, and the process of creating meaning through dialogue and communication in communication and communication activities. The classroom interaction in the psychology teaching mode of colleges and universities in this paper is the behaviour of the subject to use language and symbols as the medium to exchange knowledge, emotions, ideas and information through dialogue to form mutual understanding and consensus. Classroom interaction is different from general interaction because of the particularity of its subject.

The particularity of the purpose of interaction: The purpose of classroom interaction is not only to satisfy students with certain knowledge and skills, but also to open up the minds of both teachers and students, to integrate in collisions and to grow in reflection. The purpose of interaction reflects the long-term realization, the concealment of the process and the unpredictability of the results. First, the long-term realization, the growth of the human mind is gradually accumulating in the invisible, teachers and students can not pursue the quick success, can only understand the quiet and silent realm in the interaction, the realization of the interactive purpose requires a long-term process This requires teachers and students to consistently adhere to the development of the subject's mind and personality in the process of interaction, and second, the concealment of the process. The day of interaction is also invisible, and the growth of the mind seems to be an intention, not a word. Teachers should not expect to achieve the purpose of interaction through teaching and teaching. Third, the results are unpredictable. The original intention and result of the interaction are not necessarily inevitable. That is to say, a good starting point does not necessarily lead to the expected result. Therefore, teachers and students should pay attention to the purpose of the person other than the development of the person, and appropriately use the expected effect to achieve the original. The purpose of the interaction.

The particularity of the interactive subject: The main body of classroom interaction is the person with rich personality and subjective spirit. This determines that the relationship between teachers and students can not stay in the simple upper body, the object, or the relationship dominated by each other. The purpose of classroom interaction is to point to the spiritual construction of both teachers and students. In the process of interaction, the subjectivity of both sides must be extended. The amount of knowledge and life experience is different. Their different "foreseeing" is a prerequisite for interaction, which indicates the possibility of mutual childhood. If you ignore the personality characteristics of the subject, you are forced to look at the problem from the same perspective. It is not necessary to talk about the same voice. Neglecting the personality characteristics of the interactive subject, but all parties should treat each other's understanding equally, should not argue in a kind of self-enclosure, but should collide and merge in the difference.

The particularity of interactive media: In terms of general interaction, tangible substances such as symbols and tools act as media of interaction, and some spiritual ideas act as media of interaction. However, in classroom interaction, spiritual thinking, understanding of the world, and understanding of nature act more as media of interaction. Classroom interaction is an interaction of ideas. In the process of interaction, teachers and students must correctly understand the different roles of tangible media and spiritual intermediaries, and pay attention to the individualized characteristics of spiritual intermediaries. If the interaction crosses the boundary

and pays too much attention to the role of the material media, it is easy to develop the trend of interaction to the transmission of information, rather than the collision and integration of the teacher-student spirit.

Network multimedia teaching mode

The network multimedia teaching mode is carried out around the problem-solving activities, requiring each student to actively participate in the various activities of teaching, which is determined by the "interactivity" of multimedia teaching. On the other hand, class size affects students' opportunities to participate in class activities, while different seating arrangements are suitable for different types of classroom activities. Therefore, it can be considered that "class rules" and "seat layout" have a more important impact on the exploration of college psychology teaching mode.

Learning environment scale based on constructivism Constructivism is one of the theoretical foundations of modern multimedia teaching, and classroom interaction is a teaching process advocated by constructivism. Then the elements of learning environment that constructivism pays attention inevitably have an impact on classroom interaction. Therefore, starting from the four major learning environment elements of constructivism and the constructivist classroom environment scale, the main environmental factors that influence the interactive teaching mode of multimedia teaching classrooms can be constructed.

Table 1
Dimensions and Descriptions, Project Examples

Dimension name	Dimension description	Example
Personally relevant	The connection between science and students' actual life, and the daily life experience of students as the background and foundation for learning scientific knowledge	I can learn the knowledge of the world outside the school, and the new learning begins with the problems in real life.
Undecided science	Students have the opportunity to realize that scientific knowledge arises from theoretical exploration based on people's experience and value.	Science cannot provide a perfect explanation of the problem, science is influenced by human values
Voice of criticism	Students feel that the teacher's teaching plan and teaching methods are reasonable and beneficial.	I can ask the teacher why I want to learn this, I can question my mother's way of learning.
Shared control	Students are invited to share the right to control the learning environment with the teacher	I assisted the teacher in planning my study, and I worked with the teacher to develop my learning goals.
Student consultation	Students have the opportunity to explain and build new perspectives	I have the opportunity to communicate with my classmates. I will discuss how to solve the problem with other students.

"Task situation", "collaboration", "conversation" and "meaning construction" are the core of the constructivist learning environment, and are the four elements in the constructivist learning environment. The "task scenario" is the core of the constructivist learning environment. This kind of mission scenario should be as similar as possible to the actual application scenario in the future, that is, the real mission scenario or the real problem scenario. "Collaboration" and "conversation" are always accompanied, and throughout the teaching

process, it is an important way of interactive teaching mode in the classroom. It is also a remarkable feature of interaction. The construction of "meaning" is the ultimate goal of the whole teaching. Interactive learning, the process of generating your own new knowledge leopard, is the thinking activity in the student's brain. It cannot be measured directly. The scale contains five dimensions, namely, “personal relevance”, “unscientificity of science”, “voice of criticism”, "shared control rights" and "student consultations", as shown in Table 1.

Based on the online learning environment scale With the emergence and wide application of modern distance education, combined with the latest representative distance education classroom environment measurement tool - online learning environment scale, it summarizes the environmental factors directly related to the classroom interactive teaching mode in the multimedia teaching environment. Some factors in the learning environment scale for distance education in the network environment were transplanted from the traditional environmental scale, but also increased by one. Some technical characteristics related to network multimedia distance education are shown in Table 2.

Table 2
Online Learning Environment Scale

Dimension name	Dimension description	Example
Multimedia capability	In the online learning environment, students feel comfortable using multimedia	I can use a range of multimedia technologies freely.
Physical environment	Multimedia hardware and software are sufficient and user friendly	The instructions for using the tools on the website are clear and accurate.
Student collaboration	Students help each other understand, support, be friendly, and learn together	I often communicate with other students.
Teacher support	Teachers provide guidance during the learning process, rational, uninterrupted encouragement support	The teacher gave me feedback to help me understand the problems I didn't understand.
Active learning	Multimedia activities support student learning and provide ongoing feedback	The feedback I got from my learning activities is meaningful.
Psychology course display	Learning materials are clear and appealing, and students are visually willing to accept	The learning materials presented by the teacher are very eye-catching.
Reflection	Encourage reflection	Satisfied by experimenting with multimedia and online learning experiences

The combination of network multimedia environment teaching mode "Computer Capabilities" in the modern multimedia classroom, localize it, can be managed as the information literacy of learners. The learner's own learning adaptability, we define it here as a learning attitude, the initiative of students' learning, and the desire for knowledge will directly affect the students' participation in classroom activities. “Material environment” refers to the availability and ease of use of software and hardware resources in multimedia teaching. “Information design and display port “real task scenario” and “subjectivity” are the contents of multimedia teaching design. Through merger and integration, five main environmental factors are obtained: classroom atmosphere and learning attitude. Information literacy, multi-media teaching resources, multimedia teaching design are as shown in Figure 2.

These five environmental factors are only summed up in theory. To further understand how they affect the psychology classroom model in the multimedia environment, the actual investigation and verification will be carried out.

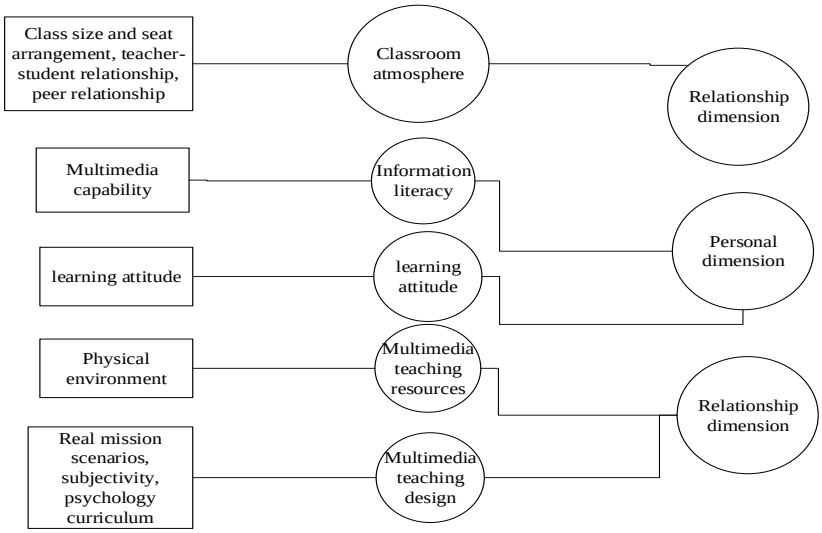

Figure 2. Integration of classroom environment factors.

Teaching Mode Verification Analysis

In view of the observation and analysis of the normal classroom teaching under the multi-media demonstration system, it is not difficult to find that although the multimedia technology has been widely used in the classroom, the teaching process is not like the image we imagined, Jing Mao, students. Positive, the ideal situation for teachers is to manage crowbars. There are still many questions to be solved that need further exploration. Combined with the classroom interaction mode analysis method, the aerodynamic mode and interaction level of the multimedia classroom can be more intuitively reflected.

Preparation of analytical materials

The case study of this study comes from the excellent classroom recording of psychology in a certain grade of colleges and universities in a certain city in 2009. The author selects three mainstream multimedia teaching mode hardware environments in classroom teaching from the multimedia teaching demonstrations of 56 colleges and universities in 40 districts and counties in the city. According to the classification, configuration and characteristics of multimedia teaching environment: multimedia presentation system, multimedia examples There are 12 cases in the classroom recording of interactive classrooms and interactive whiteboards, including 3 liberal arts cases taught by young teachers under 35 years old. There are 3 science cases, 3 middle school teachers (35 years old and above), and 3 science cases. The specific composition is as shown in the following table.

Analysis and verification tools

This paper uses ST analysis method to quantitatively analyse the behaviour of teachers and students in the teaching process, and divides the behaviour in teaching into two categories: student behaviour (S) and teacher behaviour (T). among them. Teachers' visual and auditory information transmission behaviour is defined as T behaviour, and all other behaviour s are defined as S behaviour s, such as teacher's speech, blackboard, explanation, demonstration, use of multimedia for presentation, questioning and naming, evaluation and feedback, etc. Students are speaking, thinking, taking notes, experimenting, silence and confusion. By calculating the T behaviour occupancy rate Rt, S behaviour occupancy rate and teacher-student behaviour conversion rate Ch, the teacher-student interaction behaviour teaching mode is determined. If $Rt<0.3$, it is an practice-based teaching mode: if $Rt>0.7$, it is a teaching type teaching mode. If $0.3<Rt<0.7$, it is a mixed teaching mode: if $Ch>0.4$, it is a dialogue-based teaching mode.

Table 3
Network Multimedia Classroom Example

Environmental type	Multimedia presentation system			
Teacher age	Young teacher		Middle-aged teacher	
Text/Science	Text	Science	Text	Science
Subject	psychology	psychology	psychology	psychology
Serial number	Lesson 1	Lesson 2	Lesson 3	Lesson 4
Environmental type	Multimedia network classroom			
Teacher age	Young teacher		Middle-aged teacher	
Text/Science	Text	Science	Text	Science
Subject	psychology	psychology	psychology	psychology
Serial number	Lesson 5	Lesson 6	Lesson 7	Lesson 8
Environmental type	Interactive whiteboard			
Teacher age	Young teacher		Middle-aged teacher	
Text/Science	Text	Science	Text	Science
Subject	psychology	psychology	psychology	psychology
Serial number	Lesson 9	Lesson 10	Lesson 11	Lesson 12
Total	A total of 12 classes, 10 of which are from a city's basic education resource library, and 2 hands-on network multimedia lessons.			

Analysis and verification

We use the ST analysis method to sample the class record and determine its behaviour category at 10 second intervals, enter the Excel with the corresponding symbol S or T, and record the 1-minute data with a whole line to create the ST data table. Then, ST curve graph and Rt-Ch map are drawn through ST analysis software, which intuitively reflects the teacher-student interaction mode in classroom teaching.

Figure 3 and Figure 4 show the S-T curve and classroom teaching interaction mode of the classroom case in the network multimedia classroom environment. It can be seen that the interactive mode is practice type. Although the class is mainly student activities, the teacher and student behaviour exchange degree is low, 0.2 and 0.21 respectively. At the same time, the S behaviour share is as high as 80%, and the student activity is overemphasized. For the two-time center, Ignore the fact that although the students are the main subjects of learning, their mentality is not mature enough and they need teachers to guide and help at the right time. In class

5, the Ch in the psychology class is 0.19, but the proportion of teacher-student behaviour is relatively balanced. Therefore, the interactive teaching mode of classroom teaching is mixed.

From the S-T graph in the above figure, we can know that in the hardware environment of network multimedia teachers, the curve is biased towards the S-axis. The whole psychology classroom teaching is mainly based on student activities. From the hardware environment, it is mainly due to In the multimedia network classroom, students are one person and one machine. Most teachers use the network to publish teaching materials and information, and set more self-learning time for students. In the multimedia system environment, teachers mostly use the big screen to publish the whole teaching information. Teachers display the teaching content, but it is not conducive to the interactive operation of the learners. In the S-T curve of the psychology course, there is a student activity time of about 20 minutes. During the period, there is almost no teacher's guidance activity. The whole classroom teaching is in a kind. Indulgent self-learning exploration, students' group cooperative learning has not been carried out substantively, because there are no group leaders, no team members' task division, negotiation, competition, etc.

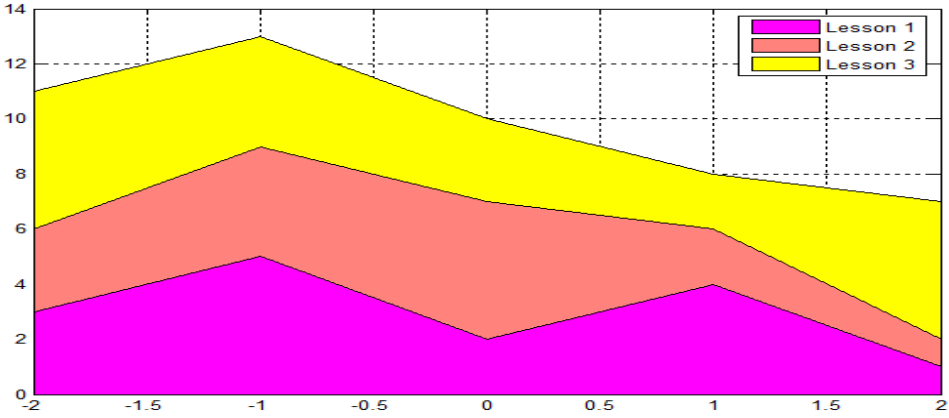

Figure 3. Rt-Ch diagram of the multimedia network psychology teaching classroom case.

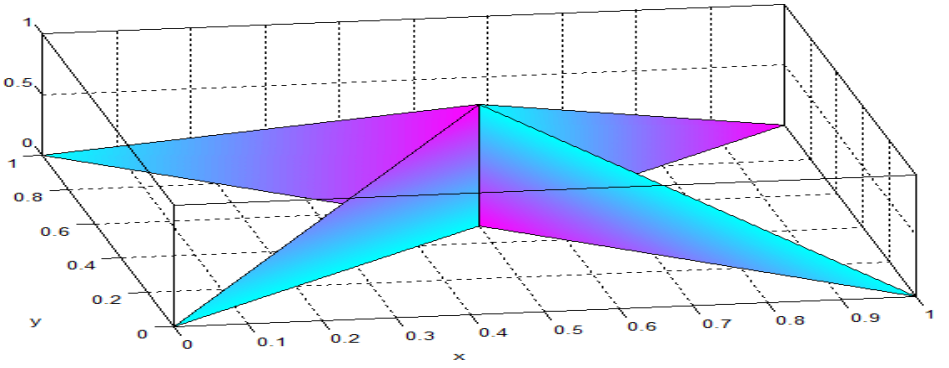

Figure 4. S-T diagram of a psychology classroom case in a multimedia network environment.

In order to further verify the interaction of the psychology classroom mode in the network multimedia environment, we made a histogram of the S behaviour occupancy rate and the teacher-student behaviour conversion rate of the multimedia presentation system, multimedia network classroom and interactive whiteboard. As shown below. The blue bars represent the S and Ch of the classroom in the multimedia presentation system environment. We can see that the S ratio is relatively scattered, the lowest is 10%, the highest is 59%, and the fluctuation range is large. At the same time, the example 3 becomes the sample sample. In the lesson of the behaviour ratio of middle school students, lesson 1 became the highest conversion rate in one lesson. This tells us from one aspect that the level of interaction in a classroom is not directly related to the multimedia environment. Teachers, different teaching methods, and different student groups may affect the frequency and level of interaction.

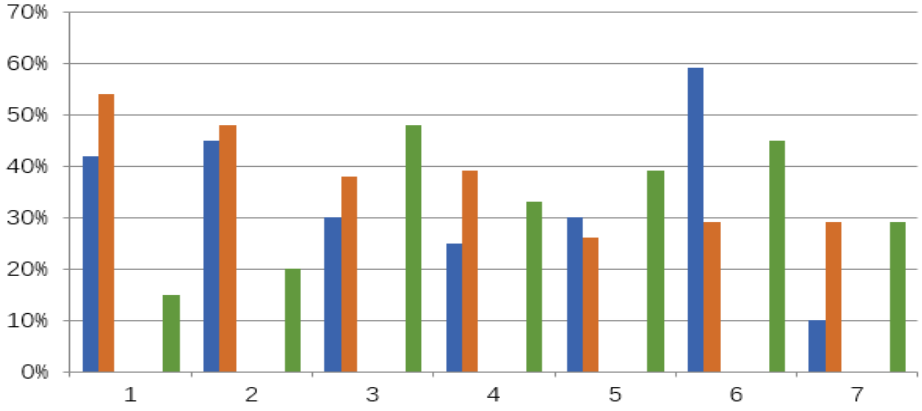

Figure 5. S and Ch histograms in three multimedia hardware environments.

Therefore, the use of modern network multimedia teaching methods must be determined by the text, the use of the use, whether it is used, or interspersed, is used to create a teaching situation, to stimulate students' interest in learning. It is also to help students to strengthen the understanding of poetry; to expand the students' horizons through courseware, to provide students with self-learning materials, or to use color and vivid reading courseware, picture materials to enhance the image of classroom teaching, and so on. It is in the teacher's repeated study of the established textbooks, on the basis of the analysis of the selected text analysis, understanding, and classification, in order to assit in the production of courseware to assist teaching, rather than accompanying the market, arbitrary.

Conclusion

Firstly, for the current situation of the interaction of classroom teaching mode under the network multimedia teaching environment, this study mainly uses the interactive analysis method of ST analysis method to carry on the interactive analysis, although the mode of classroom interaction and the specific classroom speech category are demonstrated from the quantitative perspective. It is weak in qualitative research. In the future, it is necessary to increase the observation. The personnel, the observation group will observe the normal classroom,

and at the same time, interview the classroom teachers and students, combined with the subjective response of the classroom soil, make the conclusion of the empirical analysis more convincing.

Secondly, several factors affecting classroom interaction in the multimedia environment are worthy of further study. Among the many influencing factors listed, the author has only studied a few representative ones, and there are still a large number of factors to be verified. For example, the gender and grade of students have more value in the interaction of psychology classroom teaching mode. The influence of teachers' personality characteristics, classroom teaching content and different multimedia environment on classroom interaction needs to be further explored.

References

Cela, K. L., Sicilia, M. Á., & Sánchez, S. (2015). Social network analysis in e-learning environments: a preliminary systematic review. *Educational Psychology Review*, *27*(1), 219-246. http://dx.doi. org/10.1007/s10648-014-9276-0.

Dicke, T., Elling, J., Schmeck, A., & Leutner, D. (2015). Reducing reality shock: The effects of classroom management skills training on beginning teachers. *Teaching & Teacher Education*, *48*, 1-12. http://dx.doi. org/10.1016/j.tate.2015.01.013.

Dybowski, C., Sehner, S., & Harendza, S. (2017). Influence of motivation, self-efficacy and situational factors on the teaching quality of clinical educators. *BMC Medical Education*, *17*(1), 84-94. http://dx.doi. org/10.1186/s12909-017-0923-2.

Hagenauer, G., Hascher, T., & Volet, S. E. (2015). Teacher emotions in the classroom: associations with students' engagement, classroom discipline and the interpersonal teacher-student relationship. *European Journal of Psychology of Education*, *30*(4), 385-403. http://dx.doi. org/10.1007/s10212-015-0250-0.

Hanson, J. M., Trolian, T. L., Paulsen, M. B., & Pascarella, E. T. (2016). Evaluating the influence of peer learning on psychological well-being. *Teaching in Higher Education*, *21*(2), 191-206. http://dx.doi. org/ 10.1080/13562517.2015.1136274

Hogarty, K. Y., Hines, C. V., Kromrey, J. D., Ferron, J. M., & Mumford, K. R. (2016). The quality of factor solutions in exploratory factor analysis: The influence of sample size, communality, and overdetermination. *Educational & Psychological Measurement*, *65*(2), 202-226. http://dx.doi. org/10.1177/0013164404267287.

Huang, Y., Bo, C., & Ma, X. (2018). Research on the status and problems of psychological teaching in colleges and universities based on Diffie–Hellman key exchange algorithm. *Cluster Computing*, (2), 1-7. http://dx.doi. org/10.1007/s10586-018-2455-x.

Imura, T., Takamura, M., Okazaki, Y., & Tokunaga, S. (2016). Construction of the time management scale and examination of the influence of time management on psychological stress response. *Shinrigaku Kenkyu the Japanese Journal of Psychology*, *87*(4), 374-380. http://dx.doi. org/10.4992/jjpsy.87.15212.

Kim, S. M., Um, K. H., Kim, H. Y., & Kim, Y. H. (2016). Hospital career management systems and their effects on the psychological state and career attitudes of nurses. *Service Business*, *10*(1), 1-26. http://dx.doi. org/10.1007/s11628-014-0257-7.

Krush, M. T., Sohi, R. S., & Saini, A. (2015). Dispersion of marketing capabilities: Impact on marketing's influence and business unit outcomes. *Journal of the Academy of Marketing Science*, *43*(1), 32-51. http://dx.doi. org/10.1007/s11747-014-0420-7.

Nascimento, M. G. B. D., Gomes, S. A., Mota, M. R., Aparecida, R., & Melo, G. F. (2016). Psychological profiles of gender and personality traces of Brazilian professional athletes of futsal, and their influence on physiological parameters. *Psychology Research & Behaviour Management*, *9*, 41-51. http://dx.doi. org/10.2147/PRBM.S77402.

Nowell, C. (2018). The influence of motivational orientation on the satisfaction of university students. *Teaching in Higher Education*, *22*(4), 1-12. http://dx.doi. org/10.1080/13562517.2017.1319811.

Tang, N., Baker, A., Peter, P. C. (2015). Investigating the disconnect between financial knowledge and behaviour: The role of parental influence and psychological characteristics in responsible financial behaviours among young adults. *Journal of Consumer Affairs*, *49*(2):376-406. http://dx.doi. org/10.1111/joca.12069.

Tomcho, T. J., Foels, R., Walter, M. I, Yerkes, K., Brady, B., Erdman, M., Dantoni, L., Venables, M., & Manry, A. (2015). Outside the classroom and beyond psychology: A citation analysis of the scientific influence of teaching activities. *Teaching of Psychology*, *42*(1), 5-13. http://dx.doi. org/10.1177/0098628314562661.

Wang, S. S., Liu, Y. (2015). Impact of professional nursing practice environment and psychological empowerment on nurses' work engagement: test of structural equation modelling. *Journal of Nursing Management*, *23*(3), 287-296. http://dx.doi. org/10.1111/jonm.12124.