



## The Competency of Physical Education Teacher at the University of Guangdong China

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### Abstract

**Background and Aim:** Under the background of the high-quality development of physical education, there is an urgent need for college physical education teachers. Physical education teachers in colleges and universities are a special part of the group of college teachers, and they are the main undertakers of school sports work in colleges and universities. This research objective was to construct the competencies of physical education teachers in the universities of Guangdong, China. This research objective is as follows: To Study the Competencies of Physical Education Teachers in the Universities of Guangdong, China.

**Materials and Methods:** This paper takes universities in Guangdong Province as examples for empirical analysis and applies the research results to the education performance management system of physical education teachers in universities. Use questionnaire sample composition. The questionnaire survey in this paper was distributed to physical education teachers in 10 universities in Guangdong Province by field distribution and E-mail delivery. There were 246 teachers in physical education colleges of 10 universities. All 15 teachers were used for the Interview sample composition. At the same time as the questionnaire survey, the author also designed the interview outline, to have a more in-depth understanding of the problems related to the professional development of physical education teachers in local colleges and universities.

**Result:** The research result found that: The questionnaire analysis found that college physical education teachers have the best performance in professional ability, followed by personal characteristics, and then management characteristics, and the score of innovation ability is relatively low. Moreover, there are significant differences in the competency of college physical education teachers in different types of colleges, professional titles, and genders.

**Conclusion:** There are significant differences in the competency of college physical education teachers in different types of colleges, professional titles, and genders. and the scientific research and innovation capabilities of college physical education teachers with senior professional titles are significantly higher than those with intermediate professional titles. The importance of research and innovation capabilities. There is no significant difference between the scientific research innovation ability of the deputy senior professional title and the scientific research innovation ability of the senior professional title.

**Keywords:** Competency; Physical Education Teacher; University of Guangdong

### Introduction

Under the background of the high-quality development of physical education, there is an urgent need for college physical education teachers. In the final analysis, international competition has evolved into a competition for talent. "Education is the foundation of a century-old plan." Education is an important means of cultivating and reserving talents. Colleges and universities undertake the important task of cultivating high-quality talents and promoting economic and social development. Talent cultivation requires high-quality education, and high-quality education inevitably requires professional teachers. my country's education is changing from pursuing the number of educated people to improving the quality of education and all-round education. Strengthening education must first strengthen teachers, and only a high-level teaching team can have a high-level education quality. The quality, ability, and concept of college teachers are the key factors that determine the development of colleges and universities. Their professional quality and professional development level are not only directly related to what college students learn and earn in the classroom, but also have a great influence on the course content and professional oral content of a college. The reform of classes and school-running direction has a very obvious restrictive effect. Therefore, optimizing the number, structure, professional ability, and educational concepts of college teachers and building a high-level teaching staff are the keys to the country's talent power. (Zhai Yuzhi. 2017)

College physical education teachers are a special part of the college teachers' group and the main undertakers of college physical education work. They are not only engaged in daily teaching and scientific research work like teachers in other disciplines but also undertake a series of tasks in sports training and competition, such as the organization of in-school and off-campus events, team training,



competition guidance, etc. Therefore, the professional development of physical education teachers in colleges and universities is not only related to the improvement of their personal professional quality and professional ability, but also has a direct impact on the improvement and optimization of all aspects of physical education in colleges and universities, such as the quality of physical education classroom teaching, the level of physical research, the physical health of college students, and the performance of sports teams. As college physical education teachers, how can they shoulder the heavy responsibility of social requirements for physical education, it is urgent to strengthen the management of college physical education teachers and make strategic decisions consistent with national fitness in terms of orientation, orientation, talent training, etc. in the new stage of social development. Therefore, the new requirements of modern society for the development of physical education require urgent research on the development strategy of college physical education teachers. (Xing, Q., & Meng, W. (2003)

Physical education teachers in colleges and universities are facing serious challenges in teaching. College teachers are relatively large and complicated. As an important group of college teachers, college physical education teachers have "neglected and neglected problems" in school physical education, and the attention and attention to the professional development of college physical education teachers and other professional development problems of teachers started relatively late, and the requirements are not high. For a long time, the professional development of college physical education teachers has been ignored or become a mere formality. In the practice of physical education, physical education teachers in colleges and universities are outstanding in many problems that need to be solved. The specific problems are as follows. (Xing, Q., & Meng, W. (2003)

First, the thinking about the professional development of college physical education teachers lags far behind the overall level and progress of the research on the professional development of other disciplines. To be specific, so far, although there have been many research results related to the professional development of teachers in the domestic theoretical circle, and most local colleges and universities in China have also issued rules and regulations to promote the professional development of teachers in their schools, there are few studies specifically aimed at the professional development of physical education teachers in local colleges and universities, and the professional development of teachers in colleges and universities is in a relatively marginal position in the whole research field of professional development of teachers. In a word, compared with the "fruitful" general research on teachers' professional development, the research field of physical education teachers' professional development has shown a slow or even backward state. Many new knowledge and theories obtained in the research of teachers at home and abroad have not been applied to the research field of physical education teachers' professional development.

Second, the thinking about the professional development of physical education teachers in colleges and universities is often confined to the level of sports skills. While some studies emphasize that the professional development of physical education teachers should "serve the students' sports skills learning", they weaken the professional status of physical education teachers and the value of educational theory and practice to the professional development of physical education teachers. Specifically, in some studies on the professional development of physical education teachers, the identity boundaries of physical education teachers and coaches are not clear enough. Physical education teachers, like coaches, seem to grow up in the process of "sports training" rather than "teaching and educating". Although it is an important task for PE teachers to impart sports skills and enhance students' ability in sports activities, there are great differences in their responsibilities, professional qualities required, and ways and methods of professional development. Such research with "orientation in sports skills" not only obscures the professionalism of PE teachers as professional practitioners in the field of school education but also runs counter to the overall trend of teacher professionalization.

The above problems easily lead to the psychological imbalance of college physical education teachers and the negative response to physical education with a languid attitude, which seriously restricts the quality of college physical education, fails to meet the demand for high-quality development of sports and health and leads to the shrinking of college physical education function. In the face of the above problems in the research on the professional development of college physical education teachers, it is necessary to carry out the research from the standpoint of cultivating high-level physical education professionals.

The development of physical education teachers in colleges and universities needs to change from basic literacy to competence. The traditional performance evaluation of physical education teachers mainly focuses on the "ability to teach" level, that is, the level of sports skills. In the face of the current demand for high-quality development of physical education in China, a new concept of



teacher evaluation should be introduced to transform this "ability to teach" into "good teaching". Therefore, this paper introduces the concept of "competence".

Competency theory plays a very important role in the field of human resources management and is widely used in the research and practical management of human resources at home and abroad. In recent years, some scholars have gradually applied it to sports research, but the research results are relatively rare. Competency research can closely focus on the needs and objectives of organizational strategic development, focus on the development of individual workability, and is the theory and method of human resource management research with the main purpose of improving work performance and organizational competitiveness. The evaluation method based on the competency model has the characteristics of starting from reality, paying attention to the organizational strategic needs, reaching deeper levels, flexible evaluation indicators, looking at problems with a development perspective, and directly pointing to work performance goals, so it has strong practicability and scientific. At present, the selection and employment of physical education teachers in colleges and universities are mainly based on their academic qualifications, and there has not been too much change in the performance evaluation level. Especially in non-sports colleges and universities, the physical education discipline is relatively weak, and the evaluation policies and job requirements for physical education teachers have not been paid attention to in time, which has greatly restricted the improvement of the overall quality of physical education teachers in colleges and universities and cannot meet the requirements of the society and students themselves for this discipline and teachers. The ability of physical education teachers in colleges and universities is uneven, and there is a large gap between the accumulation and precipitation of physical education teachers in different types of colleges and universities, which greatly affects the effectiveness and pertinence of physical education teaching in colleges and universities, thus making it difficult to achieve the goal of high-quality physical education teaching in colleges and universities. To this end, the concept of "post-competence of college physical education teachers in the new era" is used to study the competence of college physical education teachers. Taking colleges and universities in Guangdong Province as an example, empirical analysis is carried out, and the research results are applied to the education performance management system of college physical education teachers. The performance evaluation and assessment of college physical education teachers are carried out according to competency. (McClelland (1973)

For this reason, this paper takes the physical education teachers in colleges and universities in Guangdong Province as an example to explore what key factors constitute the competence of physical education teachers in colleges and universities in Guangdong Province, and what kind of structural style it presents. What is the current situation of the competence of college PE teachers in Guangdong Province, and what are the key influencing factors? What are the dimensions of differences? How to improve the competence of college PE teachers in Guangdong Province? First, the Delphi method is used to construct the competency model of college physical education teachers in Guangdong Province and determine its key factors. Second, the questionnaire survey method is used to analyze the influencing factors of the competency model of college physical education teachers in Guangdong Province. Third, the empirical analysis method is used to determine the reliability and validity of the competency questionnaire of college physical education teachers and analyze the differences in the key factors affecting the competency of different types of physical education teachers.

## Objectives

To Study the Competencies of Physical Education Teachers in the Universities of Guangdong, China.

## Literature Review

In the 1950s, the United States widely applied "competence characteristics" to practice. At that time, the U.S. government believed that the effect of selecting diplomats based solely on intelligence tests was not ideal. Many people with high IQs perform poorly in actual diplomatic work (United Nations Industrial Development Organization. 2002). Under such circumstances, Dr. McClelland, a famous American economist, designed a new method of selecting diplomats. Among them, some key theories and techniques used have laid the foundation for the research method of competency characteristics. Based on this research, Dr. McClelland published an article titled "Testing for Competency Rather Than Intelligence" in 1973. Through many empirical studies, he believed that: "It is unreasonable to judge and predict a person's ability only by intelligence tests. It is incomplete and unscientific and further explains that some factors such as personality, intelligence, and values that



people subjectively believe can determine work performance have not achieved the expected results, and even larger differences will appear at certain times. deviation". Therefore, he believes that the selection of talents should start from the actual situation, abandon the previous wrong assumptions and subjective judgments, take the improvement of work performance as direct guidance, and explore the behavioral performance and internal quality that can have a positive impact on work performance. Only in this way to achieve the matching of job requirements and talent selection. Dr. McClelland called these personal conditions and behavioral characteristics that directly affect job performance Competency. The publication of this article also marks the first formal introduction to the concept of competency. At the same time, the American scholar Boyatzis (Boyatzis) extracted and summarized the competency characteristics of excellent managers through empirical research on large samples and combined them with cases in his research to conduct detailed analysis and elaboration on the competency characteristics. One study put the concept of competency into practice, which made the theory popular and applied rapidly. With time, people's research on the theory of "competence" continues to deepen, around the "competency model", "organizational competency", "The development and application of competency characteristics", "competency characteristics and performance management" and many other aspects of theoretical construction have achieved fruitful results, and have become an important part of the field of human resource management, applied to government agencies, organization associations, social enterprises. Good results have been achieved in personnel management, recruitment, training, and other aspects. (McClelland (1973)

Selvarajan, T.T., & Cardy, R.L. (2006) believe that the promotion of an organization's overall competency depends on the competency of each employee in the organization, and identifying employee competency helps an organization to gain core competitiveness in the constantly changing market environment. Based on the static environment framework of traditional organizations, they determine a variety of employee competency frameworks. These include two interactive frameworks in a dynamic environment. An employee competency model is helpful for the identification of employee competency at the individual level, and employees may acquire these identified competencies, to further improve the overall organizational competency.

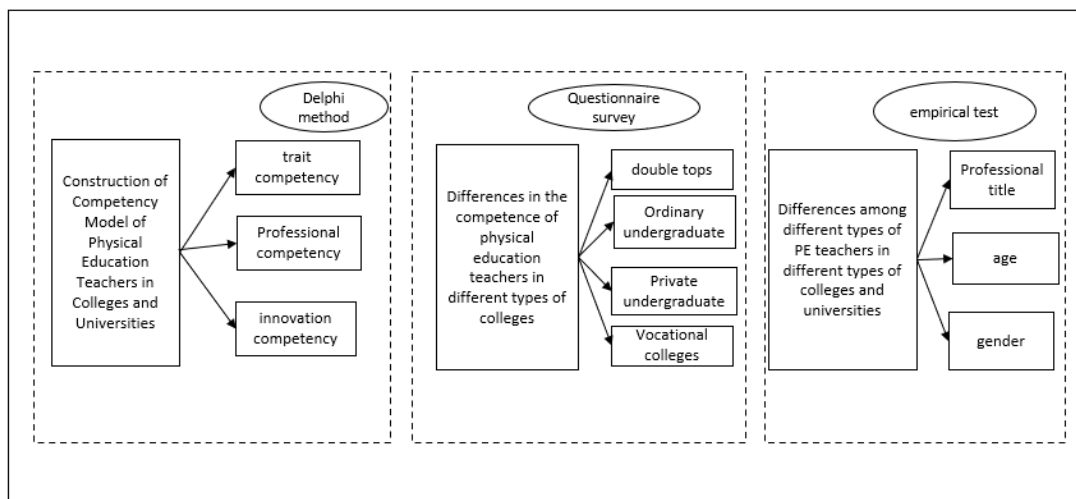
Definition of the connotation of domestic scholars. As early as the end of the 20th century, China launched the introduction and exploration of teacher competence. Yan-Min (2011), when introducing the new trend of teacher training in the UK, mentioned the specific requirements of teacher training in the UK on the competence of normal students to meet the needs of primary and secondary school teaching. Subsequently, Professor Cai, Y., & Lin, C. (2001) of Beijing Normal University divided the evaluation of teachers in China according to the way of collecting information and proposed that there are three different types of teacher evaluation in China, including teacher competency evaluation. The representative achievement of the earlier systematic research on teacher competency is the paper "Future Teacher Competency Evaluation: principles and Technologies" published by Xing, Q., & Meng, W. (2003). This paper systematically analyzes the theoretical and technical problems in the evaluation of teachers' competency in China's colleges and universities, analyzes the current situation of the evaluation of teachers' competency in China's colleges and universities, and puts forward the ways and methods of the evaluation of teachers' competency under the support of modern educational technology, which has reference significance for improving the evaluation of teachers' competency in China's colleges and universities. Since then, the research on teacher competency in China's academic circles has increased significantly. By 2021, about 600 papers and dozens of related works have been published. The research questions mainly include the concept of teacher competence, model construction, and application. The research on teacher competency has also shifted from the initial theoretical exploration to empirical research, from the construction of a general competency model to the research on the specific post-competency of teachers.

### Conceptual Framework

From the above elements as statement and significance of the problem, research objectives, research problems, scope and limitations of the study, and definition of terms, the conceptual framework can be defined as follows:







## Methodology

This research was divided into 7 Steps as follows:

### *Step 1 Review literature and research.*

In 2012, professors Chen Xiaoping, Xu Shuying, Fan Jingli, and others (Chen, X., Xu, S., & Fan, J. 2012) from the Foster School of Business of Washington University proposed four procedures of scientific research in the Empirical Methods of Organization and Management Research: one is to raise a research question; Second, literature review; The third is to find the theoretical basis and form the theoretical hypothesis; Fourth, design and implement empirical research. According to this guiding ideology, this research adopts a mixed research method that combines normative research of "literature reading - theoretical deduction and hypothesis", empirical research of "questionnaire design - sampling survey and mathematical statistics analysis" and anthropological research of "qualitative research - in-depth interview cases". Focusing on the definition, operational definition, measurement, and structural dimension analysis of core concepts such as competency and performance evaluation of physical education teachers in colleges and universities, the construction of competency model of physical education teachers in colleges and universities, and the theme of key influencing factors are discussed.

### *Step 2 Gathering ideas and consulting data to formulate a conceptual frame.*

Ask the research question. In the field of human resource management in higher education, the competence of college teachers has always been the subject of common concern of practical managers and theoretical explorers. Focusing on the special group of college physical education teachers is a new perspective to study the construction of their competency model and its key influencing factors. College physical education teachers are different from other teachers, and they have the attributes of coaches. At the same time, it also has the attributes of college teachers. How to determine the competency model reasonably and the key influencing factors have an important impact on promoting the development of college physical education.

### *Step 3 Formulating conceptual frameworks.*

Design the analysis framework. After determining the research questions, this study first clarified the achievements and shortcomings of the existing relevant research through a literature review to lay a foundation for the formation of specific research questions. Secondly, this study clarified the research boundary and basis through a theoretical explanation of the connotation, model, structure, and evaluation core concept of college teachers' competence. Thirdly, through the research questions, the main research content and theoretical hypothesis are further proposed, and based on this, the conceptual framework of this research is constructed. Fourthly, specific research methods such as the literature research method, questionnaire survey method, and case interview method are determined according to the research object, research question, and theoretical hypothesis to ensure the reliability and validity of this research. Finally, the key and difficult research issues of this study are briefly explained.

### *Step 4 Constructing research instrument.*

Implement the research plan. In the specific research process, this study first constructed the structural dimension of college teachers' competence; Then, according to the principles and steps of questionnaire design and a small range of interviews and discussions, the measurement and analysis of the questionnaire were predicted, and the existing competence scale of college teachers was revised and improved to form the questionnaire, to provide a perfect and appropriate research measurement tool for



this research as far as possible. Finally, 10 undergraduate universities in Guangdong Province were selected as research objects for data collection. On this basis, the empirical research of "questionnaire design - sampling survey and mathematical statistics analysis" and the anthropological research of "qualitative research - in-depth case interview" was carried out to analyze, test and "deeply describe" the structural dimension, correlation, causality, and path relationship of each research variable. This paper systematically analyzes the research questions, main research contents, and theoretical hypotheses.

#### *Step 5 Collecting data.*

According to the different content and methods of data acquisition, the samples in this paper can be divided into two categories: one is the questionnaire survey sample, which obtained relevant data through the "College Physical Education Teacher Competency Survey Questionnaire" designed by the author; Second, interview samples. The author selected a certain number of teachers from physical education majors in five universities to conduct in-depth interviews. The following is a brief introduction to the basic information of these samples.

#### *Step 6 Analyzing and interpreting data.*

In this paper, commonly used data processing software EXCEL, SPSS, Amos, and NVivo in the professional field were used for data statistics and analysis. The main analysis contents include descriptive statistical analysis, factor analysis, correlation analysis, regression analysis, variance analysis, and independent sample T-test.

#### *Step 7 Concluding and writing the final report.*

Form research conclusions. This study attempts to explore the structural dimensions and key influencing factors of the competency of physical education teachers in colleges and universities. According to the analysis results, relevant research conclusions can be obtained, and countermeasures and suggestions can be put forward accordingly. The research results play a certain guiding role in the practice and theory of human resource management in higher education and further enrich the theory of human resource management and teacher development. This research is innovative to some extent, but there are some limitations and deficiencies in the research process. Therefore, this study also points out the next research direction.

## **Results**

The Basic Situation of the Questionnaire Survey on Competency Characteristics of Physical Education Teachers in Colleges and Universities

### **1. Preparation, distribution, and collection of questionnaires**

Based on the competency evaluation scale, the Competency Questionnaire for Physical Education Teachers in Colleges and Universities in my country is compiled, specifically in Table 1. To ensure the validity of the questionnaire survey results as much as possible, all questionnaire surveys were distributed and filled in person and returned in time. In addition to the explanation and explanation at the beginning of the questionnaire, the questionnaire also includes two parts: the first part, is the collection of coaching information of the respondents in this questionnaire; the second part, uses the 5-level Likert scale to ask the subjects The performance in the process is self-evaluated against the degree of compliance with the measurement items. The questionnaire survey in this paper is distributed to physical education teachers in 10 colleges and universities in Guangdong Province. It adopts the method of on-site distribution and email delivery. A total of 246 teachers from the physical education colleges of the 10 colleges and universities were selected. 180 copies were distributed in the field and 66 copies were delivered by e-mail. A total of 158 questionnaires were recovered, including 109 questionnaires distributed on-site and 49 questionnaires delivered by email. The overall recovery rate was 64.23%, the recovery rate of questionnaires distributed on-site was 60.56%, and the recovery rate of questionnaires sent by e-mail was 74.24%. Since the questionnaires were sent by e-mail, relevant personnel of the college where the interviewed teachers belonged would be notified in advance to remind them to fill in This questionnaire, therefore, in the recycling process, the recovery rate will be relatively high. Among the returned questionnaires, excluding unqualified questionnaires (a large number of missing questionnaires, or questionnaires that do not meet the appropriate cognition), there are a total of 136 valid questionnaires, with an effective rate of 86.08%. Among the valid questionnaires, the questionnaires from ten universities A~J accounted for 8.82%, 18.38%, 8.09%, 11.03%, 8.82%, 7.35%, 6.62%, 8.82%, 4.41%, and 17.65%, respectively. The questionnaires from University A account for the highest proportion of physical education teachers in this school,



because University A is the author's study unit, and the data collection here has certain advantages (the questionnaire distribution and recovery rate are higher, and the efficiency of answering is more efficient. high). Although the proportion is high, it is not extreme. It can be considered that the overall situation of sampling is relatively reasonable and can be used for data analysis in this paper. The reason for the high proportion of J University is that J University is a sports college with a relatively high sample size.

**Table 1** Measurement Items of Competency Characteristics of Physical Education Teachers in Colleges and Universities

Variable	Dimension	Number	Item
personal traits	Professional ethics	TZ1	Love college physical education teaching and research work
	language expression skills	TZ2	Able to clearly express their own needs and opinions in teaching work
	optimism	TZ3	Be optimistic about teaching and scientific research
	achievement motivation	TZ4	Becoming a Physical Education Teacher in Colleges and Universities Can Realize Your Own Life Value
	competitive	TZ5	Strong competitiveness in teaching, scientific research, and educating people
	emotional control	TZ6	In the face of teaching pressure, social temptations such as paid schools and other unhealthy temptations, as well as various other resistances, as well as hostility and irritation, you can manage your actions and restrain your negative emotions
	respect others	TZ7	Be able to better respect students in the teaching process
	theoretical training	TZ8	Be able to master the relevant theories about sports disciplines
professional competency	Comprehensive knowledge of physical education	ZY1	Possess sports professional knowledge and related subject knowledge, such as referee-related knowledge, etc.
	Physical Education Professional Skills	ZY2	Proficiency in a certain professional sports skill, such as various skills in the table tennis course
	Physical Education Teaching Ability	ZY3	Observation ability to understand students' learning situation and personality characteristics, thinking ability to predict students' development dynamics, etc.
	instructional design	ZY4	Be able to scientifically and rationally design the classroom outline design
	teaching implementation	ZY5	able to complete the teaching process well
	first aid skills	ZY6	Familiar with the operating procedures and standards of common first aid skills such as cardiopulmonary resuscitation and trauma management
	Teaching Evaluation	ZY7	Have scientific and reasonable teaching evaluation indicators
Innovation Competence	research ability	CX1	Can use known teaching knowledge and theories, with scientific thinking and appropriate methods, to conduct scientific research and exploration on how to better achieve teaching goals, sum up teaching



Variable	Dimension	Number	Item
management traits	Curriculum Development Capabilities	CX2	experience, discover teaching rules, and discover or propose novel and unique New things and new ideas that have teaching value or personal value Curriculum development is innovative
	thinking ability	CX3	Be innovative in thinking about relevant course-building processes
	Risk awareness	CX4	Be able to think ahead about the risks involved in the course implementation process
	management ability	GL1	Can be keenly aware of the gap between teaching practice and teaching goals, and realize the management and guidance of classroom music teaching and after-school guidance, training, and other teaching activities
	Human Relations and Communication	GL2	Maintain good interpersonal relationships with students and colleagues
	Coaching Reflective Ability	GL3	Frequently reflect on the problems existing in the teaching process, and formulate corresponding optimization measures in light of specific situations
	Make a training plan	GL4	Be able to reasonably formulate goals and plans for each course
	motivate	GL5	Be able to choose effective incentives to motivate students to be passionate about class
	Coping ability	GL6	Have the corresponding coping ability in the face of emergencies in the course
	Unity and cooperation	GL7	Be able to properly handle the relationship with superiors, colleagues, and student's parents, gain more understanding, support, and cooperation, form good interpersonal interaction and mutual assistance, and promote each other

In the key event technology, the interview design often follows the procedure of the STAR interview outline, that is, from the four angles of S (situation), T (task), A (action), R (result), design interview tools, and reproduce through detailed interviews The original appearance of the incident, its cause and effect, as well as the roles and corresponding behaviors of the interviewees during the entire incident, to ensure that important information related to this research can be obtained from the subjects. The interview outline is as follows: Table 2 Shown:

Table 2 Key event method interview outline.

(S) situation	(T) task	(A) action	(R) result
Please describe the specific situation during the course or scientific research. At that time...?		How did you react to the situation? What specific actions did you take? What are the steps of action?	What was the outcome of the incident?





(S) situation	(T) task	(A) action	(R) result
Why do you want to do this?		What was your role in the whole thing at that time?	What kind of experience did you get from the practice?
What was the main task you were facing at the time?			What do you think is the most critical throughout action?

Organize the content of the conversation. Not all interview content has research value, and the text should be screened before formal analysis of interview content. Screening criteria for interview materials: ① The subjects can clearly express their thoughts and behaviors when dealing with key events; ②The described key event behaviors are related to the work content of college physical education teachers.

Competency feature extraction. Commonly used tools for competency feature extraction include content analysis, competency feature dictionary, and so on. Based on the final interview materials, the content analysis method was used to extract key event themes. The topics mainly include: the subjects' analysis and understanding of the situation, focus, thinking of the characters, motivation, emotion, behavior, event outcome, and many other aspects. At present, there is no authoritative dictionary of competency characteristics for college physical education teachers at home and abroad, and it cannot be directly used as a reference tool for competency feature extraction. This paper takes the general competency dictionary designed by Spencer, Boyatzis, and other researchers as the theoretical basis, and combines the analysis and summary of the research results of the competency characteristics of college physical education teachers in the previous article as a reference to carry out further extraction and screening of the competency characteristics of college physical education teachers. Work, classify, code, and name the texts that represent the identification of competencies in key events, record their positions in the interview texts, and mark the corresponding texts. The following table is an example of the interview material coding process:

I teach elective courses in public sports and table tennis at colleges and universities. The goal of this course is to enable students to master the basic theoretical knowledge and basic skills of table tennis and to cultivate students' life-long sports awareness and life-long physical exercise ability. The teaching of table tennis theoretical knowledge (01), integrating table tennis knowledge into classroom teaching, and giving full play to the guiding role of theory to practice (02), only imparting the principles of table tennis skills to students, so that students know what they are and why they are, Students are also required to understand the rules of the table tennis game and be familiar with the entire process of the game. On this basis, At the same time, the basic methods and skills of sports and fitness are added to the classroom to encourage students to master scientific physical exercise methods, and to cultivate a certain ability to appreciate sports culture during the period (03), and to sublimate from a theoretical level (04). Second, the overall course of the current table tennis class is a bit boring. Some small table tennis games that are conducive to improving students' learning enthusiasm are appropriately interspersed in the teaching process, or some motivational language is used in the student's practice process, and it can also be used during the student's break. Play some table tennis teaching or game videos to stimulate students' learning enthusiasm to a certain extent and achieve the effect of activating the classroom atmosphere (05). Of course, in the process of designing the game, it should be noted that the game is aimed at college students, the design content should not be too naive and simple, and various methods should be adopted to allow students to integrate into it. In addition, I also need to actively participate in it and become a part of the game participants, so that the students can fully relax and enjoy the fun brought by the table tennis class.

The questionnaire analysis found that college physical education teachers have the best performance in professional ability, followed by personal characteristics, and then management characteristics, and the score of innovation ability is relatively low. Moreover, there are significant differences in the competency of college physical education teachers in different types of colleges,



professional titles, and genders. The scientific research and innovation capabilities of college physical education teachers with senior professional titles are significantly higher than those with intermediate professional titles, which also shows the current professional title promotion mechanism. The importance of research and innovation capabilities. There is no significant difference between the scientific research innovation ability of the deputy senior professional title and the scientific research innovation ability of the senior professional title. It shows that when the professional title is promoted to deputy senior or above, there is no significant change in scientific research and innovation ability, which shows that the scientific research and innovation level of college physical education teachers has reached a stable level.

## Discussion

The concept of international teacher competency and its connotation has transformed the emphasis on basic teaching skills and teaching behavior in the 1950s and 1960s to the comprehensive competency concept integrating knowledge, emotional attitudes, and values in the 1970s and 1980s. Whether it is influenced by behaviorism theory, which restores teacher competency to all kinds of basic professional skills and behaviors, or is criticized by humanism and turns to a more comprehensive and comprehensive perspective of teacher competency. Teacher competence cannot be simply reduced to isolated skills and behaviors, nor is it a mechanical superposition and integration of emotional attitudes, values, knowledge, and skills. In the late 1990s, Key competencies (Key competencies, also known as “core literacy,” in China) were a complementary and alternative capability concept proposed in addition to the traditional concept of competency. The operational definition of the competency of physical education teachers in colleges and universities in this study is the key abilities, core concepts, and necessary qualities that physical education teachers in colleges and universities need to possess when engaging in physical education teaching.

## Recommendation

1. Improve the selection system of physical education teachers in colleges and universities based on competency characteristics.
2. Pay attention to professional ability and promote the improvement of innovation ability.
3. Career planning of physical education teachers in colleges and universities based on competency characteristics.

## References

- Cai, Y., & Lin, C. (2001). Status of Performance Appraisal Research and its Reflection. *Journal of Beijing Normal University (Humanities and Social Sciences)*, 4, 119-126.
- Chen, X., Xu, S., & Fan, J. (2012). *Empirical method of organization and management*. 2<sup>nd</sup> Edition. Beijing: Peking University Press.
- Selvarajan, T. T., & Cardy, R. L. (2006). Competencies: Alternative frameworks for competitive advantage. *Business Horizon*, 49, 235-245.
- McClelland, D.C. (1973). Testing for Competence Rather than for “Intelligence”. *American Psychologist*, 28, 1-14. Doi: <http://dx.doi.org/10.1037/h0034092>
- United Nations Industrial Development Organization. (2002). *UNIDO competencies: Strengthening organizational core values and managerial capabilities*. Vienna, Austria: UNIDO.
- Xing, Q., & Meng, W. (2004). Evaluation On Teachers’ Future Competencies. *Open Education Research*, 4, 39-42.
- Yan-Min, P., Zhi-Ping, G., & Zheng-Zhong, L.I. (2011). *Commentary on studies of teacher competency*. Journal of Hubei Normal University (Natural Science).
- Zhai, Y. (2017). *Research on the competence of physical education teachers in colleges and universities in Zhejiang Province*. Collections,

