



---

## The Current Status of Core Competencies in Physical Education among Students majoring in Physical Education Teacher Education

Dayong Qiu

School of Physical and Health Education, Nanjing Normal University Taizhou College, No. 96, Jichuan East Road, Hailing District, Taizhou 225300, P.R. China

---

**Abstract** The employment direction of sports majors is mostly teaching and training. Many sports majors enter primary and secondary schools after graduation to engage in sports teaching and training work. In recent years, with the deepening of education reform and the deepening of the concept of quality education, the term "core literacy" has attracted more and more attention from scholars and cultivating students' core literacy has gradually become a consensus. In terms of physical education, cultivating and researching core competencies in physical education is in line with the current trend of educational reform and development. This article starts from the perspective of pre service education and regards the core competencies of physical education as an important knowledge and theoretical foundation for the pre service training of future physical education teachers. It guides and develops the core competencies of physical education teachers to help physical education majors cultivate the core competencies of primary and secondary school students in a more professional manner after taking up their positions.

**Keywords** Core Competencies, Physical Education, Teacher Education

---

### 1. Introduction

Core literacy "was proposed by the Organization for Economic Cooperation and Development in the early 21st century, and in 2005, it published the " Definition and Selection of Core Literacy: Action Plan ", which uses " core literacy "in the field of education. The organization<sup>1</sup> believes that: Core literacy, as a literacy that everyone needs to possess, permeates various fields and has high practical value. EU<sup>2</sup> defines core competencies as the qualities and abilities that individuals possess to meet their own, societal, and even national needs, with a focus on their abilities in eight areas. In 2014, the Chinese Ministry of Education issued the "Opinions on Fully Deepening Curriculum Reform and Implementing the Fundamental Task of Moral Education", which clearly stated that we should accelerate the integration of the core literacy system into actual teaching. Subsequently, various disciplines conducted research based on the core competencies of their respective disciplines. In 2016, the Chinese Core Literacy Research Group<sup>4</sup> published "Core Literacy Development for Chinese Students", which pointed out that the development of core literacy for students mainly refers to the essential qualities and key abilities that students should possess to adapt to lifelong development and social development needs. As an important component of school education, physical education plays a positive role in developing students' core sports literacy, promoting their physical and mental health, and overall development. Yu's<sup>5</sup>research suggests that the core competencies of physical education are students' learning of physical education courses, establishing a lifelong concept of physical exercise, promoting comprehensive physical and mental health development, and acquiring sports emotions and character, sports abilities and habits, health knowledge and behavior. Shang<sup>6</sup> believes that the core competencies of physical education include several primary indicators: sports skills and



habits, health knowledge and behavior, and sports ethics and emotions. There are also six secondary indicators: sports skills, sports habits, health knowledge, health behavior, sports ethics, and sports emotions. The latest "Physical Education and Health Curriculum Standards" for primary and secondary schools in China focus on the development of students' physical abilities, health knowledge and behavior, and core competencies in sports ethics. The physical education major, as the main force of future physical education teachers, carries out research on the core competencies of physical education based on future physical education teachers, which has a positive significance for improving the employment ability of future physical education teachers and promoting students' physical and mental health.

## 2. Research Objects and Methods

### Research Object

This study focuses on the core competencies of students majoring in physical education and investigates students majoring in physical education from the School of Physical Education and Health Education, Taizhou College, Nanjing Normal University.

### Research Methods

#### Literature review method

Search for literature on core competencies in physical education, core competencies, and core competencies of physical education teacher trainees through CNKI and PubMed databases as the theoretical basis for this study.

#### Questionnaire survey method

According to the needs of this study, a survey questionnaire on the core competencies of physical education majors was developed. A total of 310 questionnaires were distributed and 310 were collected, including 300 valid questionnaires, 232 valid questionnaires for male students, and 68 valid questionnaires for female students. The Alpha ( $\alpha$ ) coefficient of questionnaire reliability is 0.813, and the KMO coefficient of validity is 0.872.

#### Mathematical and Statistical Methods

This study used SPSS 26.0 to conduct statistical analysis on the data, providing data support for this research.

## 3. Results and Analysis

### Analysis of the Cognitive Status of Core Competencies in Physical Education among Students majoring in Physical Education

#### Analysis of the awareness of core competencies and definitions of physical education among students majoring in sports

As the most fundamental building unit in the human thinking system, concepts must be understood in order to elevate theoretical knowledge from intuitive to rational understanding. Only by systematically and rationally understanding the core competencies of physical education can the accuracy and pertinence of cultivating core competencies be ensured. According to a survey on the awareness of sports core literacy and its concepts among students of different grades, 21.3% of students have a good understanding of it; 24.7% of students have a good understanding of the situation, while 20.7% and 33.3% are generally aware and not aware, respectively. Among different grades, the proportion of senior students with a good understanding of core competencies and concepts is the highest, reaching 18.3%, while 12% of first-year students majoring in physical education do not understand the core competencies and concepts of physical education.

**Table 1:** Awareness of Core Competencies and Their Definitions in Physical Education among Students majoring in Physical Education

Grade	Know most	Percentage	Know more	Percentage	Generally known	Percentage	Unknow	Percentage
Grade 1	10	3.3%	13	4.3%	15	5.0%	36	12.0%
Grade 2	11	3.7%	16	5.3%	14	4.7%	32	10.7%
Grade 3	15	5.0%	18	6.0%	20	6.7%	24	8.0%
Grade 4	28	9.3%	27	9.0%	13	4.3%	8	2.7%
Total	64	21.3%	74	24.7%	62	20.7%	100	33.3%



### *Analysis of the Cognitive Status of Physical Education Majors on the Importance of Core Competencies in Physical Education*

According to a survey on the importance of core competencies in physical education among students majoring in physical education (Table 2), 24.8% of physical education students believe that core competencies in physical education are important, 36.6% of physical education students believe that core competencies in physical education are relatively important, 21.3% of physical education students are unclear about the importance of core competencies in physical education, and 17.3% of physical education students believe that core competencies in physical education are not important. 61.4% of the total sample were selected as important or relatively important, indicating that the majority of students majoring in physical education believe that core competencies in physical education are important and can lay a good foundation for the development of curriculum based on core competencies in physical education.

**Table 2:** Recognition of the Importance of Physical Education Core Competencies among Students majoring in Physical Education

Degree	Frequency	percentage
Most important	74	24.8%
More important	110	36.6%
Not sure	64	21.3%
Unimportant	52	17.3%

### **Analysis of the Core Competencies and Sports Spirit Dimensions of Physical Education Majors in Physical Education**

According to the Curriculum Standards for Physical Education and Health, the spiritual dimension of core competencies in physical education includes two aspects: sports emotions and sports character.

#### *Analysis of Sports Emotions among Students majoring in Physical Education*

The love for sports and the level of interest in one's major are the foundation of the core competencies of sports majors. The cultivation of core competencies in sports should first be based on the love for sports and one's major, which has a profound impact on students' enthusiasm and initiative in sports. Therefore, the level of love for sports and one's major directly affects the cultivation of core competencies in sports majors.

**Table 3:** Attention to Sports Events by Students majoring in Physical Education

Degree	Frequency	Percentage
Most attention	51	17.0%
More attention	123	41.0%
General attention	68	22.7%
Occasionally attention	31	10.3%
No attention at all	27	9.0%

Table 3 shows that students majoring in physical education generally have a high level of attention to sports events, reaching 58%; The proportion of occasional attention and no attention at all is only 19.3%. This indicates that students majoring in physical education have a good level of attention to sports events. Their attention to sports events can help students understand the rules of related events to a certain extent and guide them to form a sense of compliance with the rules.

**Table 4:** The level of preference of students majoring in physical education for their major

Degree	Frequency	Percentage
Most interest	105	35.0%
More interest	142	47.3%
General interest	30	10.0%
Little interest	17	5.7%
No interest	6	2.0%



Table 4 shows that students majoring in physical education generally have a high level of interest in their major, with 82.3% of students enjoying their major; The proportion of those who do not like it very much or do not like it at all is relatively low, only 7.7%. Students who love their major can lay a foundation for their future work related to their profession and the formation of good professional ethics.

#### *Analysis of Sports Character of Students majoring in Physical Education*

Table 5 shows the physical character of students majoring in physical education. The results show that students majoring in physical education have good rule awareness, willpower, and teamwork awareness. 68% of students have strong rule awareness, 67.3% of students have strong willpower, and 55.3% of students have teamwork awareness.

**Table 5: Physical Education Students' Physical Character Status**

Degree	Follow the rules		Strong willpower and quality		Have a sense of teamwork	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Completely consistent	78	26.0%	66	22.0%	64	21.3%
Relatively consistent	126	42.0%	136	45.3%	102	34.0%
Generally consistent	76	25.3%	65	21.7%	113	37.7%
Not very consistent	15	5.0%	23	7.7%	12	4.0%
Completely inconsistent	5	1.7%	10	3.3%	9	3.0%

#### **Analysis of the Dimensions of Core Competencies and Sports Practice Abilities in Physical Education for Students majoring in Physical Education**

The sports practice ability of students majoring in physical education is an important component of the core literacy of physical education teachers. Students majoring in physical education must possess strong sports practice ability, which is a prerequisite for future physical education teaching and guidance, and also one of the core tools for cultivating sports education professionals. Sports practice ability includes mastering sports skills, having exercise habits, and teaching guidance ability.

**Table 6: Sports Practice Ability of Students majoring in Physical Education**

Degree	Master one and/or more sports skills		Have exercise habits		Ability to provide teaching guidance	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Completely consistent	154	51.3%	102	34.0%	78	26.0%
Relatively consistent	123	41.0%	103	34.3%	88	29.3%
Generally consistent	12	4.0%	79	26.3%	111	37.0%
Not very consistent	10	3.3%	10	3.3%	14	4.7%
Completely inconsistent	1	0.3%	6	2.0%	9	3.0%

Table 6 shows that 92.3% of students majoring in physical education have mastered one or more sports skills. Professional skills are necessary for future teaching and training of students majoring in physical education, and are also an important part of talent cultivation. However, 3.6% of students majoring in physical education still have insufficient mastery of sports skills.

Exercise habits are a conscious behavior and an important way for students majoring in physical education to consolidate their learned sports skills. Survey results show that 68.3% of students have good exercise habits, while 5.3% of students have insufficient cultivation of exercise habits.

Teaching guidance ability is the ultimate goal of professional practice and application for students majoring in physical education. Students majoring in physical education must possess the ability to use the relevant sports skills they have mastered as the main teaching content, and through reasonable teaching methods, impart and guide students to carry out sports skill learning. The survey results show that 55.3% of students majoring in physical education have good teaching guidance abilities, 37% of students have certain teaching guidance abilities, and 7.7% of students have insufficient teaching guidance abilities.



### Analysis of the Health Promotion Dimensions of Physical Education Core Competencies for Students majoring in Physical Education

The health promotion dimension in the core literacy of physical education for students majoring in physical education mainly includes health knowledge and health behavior.

#### Health Knowledge

Mastering basic health knowledge is the foundation for improving the overall health literacy of the population and an important prerequisite for achieving health promotion. The improvement of health literacy and the realization of health promotion cannot be achieved without the popularization of health knowledge. Physical education teachers not only need to impart sports skills to students, but also need to popularize basic health knowledge in order to fully implement the guiding ideology of "health first".

**Table 7:** Health Knowledge Mastery of Physical Education Majors

Degree	Master the knowledge of injury prevention and treatment		Master physiological and health knowledge		Understand healthy lifestyle	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Completely consistent	94	31.3%	96	32.0%	67	22.3%
Relatively consistent	99	33.0%	95	31.7%	104	34.7%
Generally consistent	78	26.0%	90	30.0%	108	36.0%
Not very consistent	21	7.0%	16	5.3%	17	5.7%
Completely inconsistent	8	2.7%	3	1.0%	4	1.3%

According to the survey results in Table 7, 64.3% and 63.7% of students majoring in physical education respectively have a good grasp of injury prevention and treatment knowledge and physiological health knowledge, and 57% of students have a good understanding of healthy lifestyles; However, 9.7%, 6.3%, and 7.0% of students majoring in physical education lack necessary knowledge of injury prevention and treatment, physiological health care, and do not understand healthy lifestyles.

#### Health Behavior

Promoting healthy behavior is a group of behaviors exhibited by individuals or groups that are beneficial to their own or others' health.

**Table 8:** Promotion of Healthy Behavior among Students majoring in Physical Education

Degree	Promoting healthy behavior (actively participating in physical exercise/reasonable diet/sufficient sleep, etc.)	
	Frequency	Percentage
Completely consistent	87	29.0%
Relatively consistent	96	32.0%
Generally consistent	100	33.3%
Not very consistent	11	3.7%
Completely inconsistent	6	2.0%

According to the survey on promoting health behaviors among students majoring in physical education (Table 8), 61% of students have formed good promoting health behaviors, while 5.7% of students have not formed good promoting health behaviors.

## 4. Strategies for Developing Core Competencies in Physical Education for Students majoring in Physical Education

### Develop talent cultivation plans guided by the core competencies of sports disciplines

The talent cultivation plan is an important blueprint for cultivating the talents needed by society. Therefore, in order for students majoring in physical education to possess core competencies in the field of physical education, it is necessary to adhere to the guidance of core competencies in physical education in setting training objectives, professional curriculum, teacher teaching processes, and talent evaluation systems.



**Guide students to pay attention to the cultivation of core literacy awareness in physical education subjects**

The pre service training of core competencies in physical education for students majoring in physical education is mainly aimed at better integrating these competencies into the classroom after employment, and cultivating their awareness and importance of core competencies in physical education has become one of the important contents. Guiding students majoring in physical education to deepen their learning and understanding of the core competencies of the physical education discipline is necessary to cultivate their awareness of the core competencies of the physical education discipline. Firstly, it is necessary to strengthen the learning of core competencies related to physical education among students majoring in sports, actively consult relevant materials, and increase their knowledge reserves. Mastering knowledge is the foundation. Secondly, if there are any problems, it is necessary to communicate with teachers and experts in a timely manner, solve them in a timely manner, and improve the understanding of the core competencies of physical education. Thirdly, one must have a certain degree of self-discipline, strictly demand oneself, and improve one's core competencies in physical education. Only in this way can one better be competent for future physical education teacher positions and cultivate the core competencies of primary and secondary school students in physical education in the future.

**Funding**

This study was supported by Jiangsu Philosophy and Social Sciences Project [grant no. 2019SJA2217].

**References**

- [1]. OECD. The Definition and Selection of Key-Competences [EB/OL]. <http://www.oecd.org>, 2005.
- [2]. The European Parliament and the Council of the European Union[J]. Official Journal of the European Union,2009(8).
- [3]. Opinions of the Ministry of Education of the People's Republic of China on Comprehensively Deepening Curriculum Reform and Implementing the Fundamental Task of Moral Education and Talent Cultivation [EB/OL]. <http://old.moe.gov.cn//publicfiles/business/htmlfiles/moe/s7054/201404/167226.html>.
- [4]. Core Literacy Research Group Chinese students develop core competencies Chinese Journal of Education, 2016 (10): 1-3.
- [5]. Yu S M. Construction of the Core Competency Framework System for Chinese Students in Physical Education [J] Sports Journal, 2017, 24 (04): 5-9.
- [6]. Shang L P, Chen C Y. Core literacy, sports core literacy, and sports discipline core literacy: concepts, components, and relationships Sports Culture Guide, 2017 (10): 130-134.

