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## Research of physical education main course setup based on PE teachers' knowledge and ability

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### ABSTRACT

The educational philosophy in 21st century is a comprehensive education, which cannot be separated from an overall curriculum. And curriculum has become a core element of the educational reform under the current circumstances. Therefore school physical education curriculum is also extremely important, and occupies a very important position. It is a complete system composed of course objectives, content, implementation and the final evaluation. This is also the main way to achieve teaching objectives. This study analyzes the basic elements and nature of the current physical education courses in schools, through literature reference, mathematical statistics, and surveys, this study forms the opinion that current physical education main courses setup need to follow closely with the pace of social development, and the content of courses should start with PE teachers' knowledge and ability. Only with extremely solid basic ability, excellent professional skills and strong practical abilities, can they become better talents of physical education. This study regards that PE teachers are the core force in physical education as well as support for the national talent strategy. Therefore in the PE course setup, this is to combined with the development planning and educational reform. In the end, the study proposes a few suggestions on the development of physical education course setup.

### KEYWORDS

Educational philosophy; Physical education; Main course; Knowledge and ability.



**INTRODUCTION**

Reform of physical education curriculum has gone through eight key reforms in the sixty years since the establishment of New China in 1949. And the latest reform started from 2001, with a main objective which is to transform the old paternalistic idea of education into roles as friend and confidant of students escorting their growth. And this reform overturns the traditional roles of teachers in imparting knowledge and the “teacher-centered” philosophy, makes PE teachers the policy makers and executives in physical classes. In the new trend of teaching reform, there is an increasing requirement for teachers’ knowledge and ability, and the original phenomena of teachers teaching class all depending on a whistle is gone for good. The current era needs physical education teachers to be more professionalized. And professional physical education teachers needed to be cultivated by higher physical education major, which cannot separated with the curriculum setup. Therefore, physical education course setup must be scheduled based on the reasonable research of the current social environment for a curriculum meeting the era’s characteristics and needs. In 2007, Ministry of Education of People’s Republic of China proposed a forecast mechanism for major setting, enacted a standard educational system, providing a great guide for the optimization of curriculum and adjustment of talents training in colleges and universities. This study mainly studies on the main course setup based on the knowledge and ability of physical teachers<sup>[1]</sup>.

**TABLE 1 : Research range of these and dissertations on PE course setup**

Range	Colleges & Universities	PE Majors	Vocational Schools	Postgraduates	Middle Schools	Secondary Schools	Primary Schools	Comprehensive	Total
Number	177	174	8	8	100	23	14	66	570
Percentage	31.05	30.53	1.40	1.40	17.54	4.04	2.46	11.58	100
Total			64.38			24.04		11.58	100

**TABLE 2 : Content distribution of PE course**

Type	Current Situation of Curriculum Development	Current Situation of Teaching	Current Situation of Curriculum Reform	Current Situation of Setup	Curriculum Design	Teaching Method	Curriculum Setup	Teaching Contents	Teaching Quality	Others	Total	Percentage
Colleges & Universities	24	12	5	5	1	1		1		3	52	54.44
Secondary and Primary Schools	6	8	7							4	25	18.89
PE Majors	16	7	2	4			2		1	2	34	26.67
Vocational Schools	2										3	
Postgraduates	1			1			1				3	
Total	49	27	15	10	1	1	3	1	1	9	117	
Percentage	41.88	23.08	12.82	8.55			5.98			7.69		100

**CURRENT STATUS OF PHYSICAL EDUCATION CURRICULUM**

In 2011, MOE in China proposed professional teaching standards, raising the professional teaching standards to a national level. This tells that the curriculum of physical education will change with the state policy to ensure the teachers cultivated can meet with the needs of society. Foreign developed countries, such as America and Japan, have all established and improved a set of specialized courses of physical education curriculum standards according to their own factual situation.

In 1987, America carried out the related reform by establishing national professional teaching standards institute, including the teaching standards of knowledge and ability of PE teachers in kindergartens, primary and secondary schools<sup>[2]</sup>. Russia proposed temporary national teaching standards of PE curriculum, focusing on the basic skills standards of PE teachers<sup>[3]</sup>. And Australia proposed related teaching standards in 2002, and started the pilot projects for better proof, then finding problems with the standards and revising them<sup>[4]</sup>.

Therefore, research on the basic skills standards on the knowledge and ability of PE teachers has been a major aim among all countries around the world. And this is also a urgent need for reform in PE teachers<sup>[5]</sup>. TABLE 1 shows the analysis of current research these and dissertations on the PE curriculum setup, and TABLE 2 shows the content distribution of current PE course.

At present study abroad mainly characterized by the United States, Japan and Russia with distinct features. The guide principle of America is to cultivate universal genius. By making the higher physical education curriculum, a whole knowledge structure of overall physical education with coherence and similarity will be promoted. Meanwhile America opens plenty of theory courses, with an occupation of 60%, and combines with lots of Community research in holidays to develop knowledge and ability of physical education teachers, which has laid a good foundation for the future<sup>[7]</sup>.

Japan started its research in “instructors with comprehensive knowledge” after the World War II, designing all aspects of school sports, hoping to cultivate multidirectional and universal talents. Besides, in Japan, the training on physical education teacher's knowledge and competency is prescribed by law with a mandatory effect. By now the courses in technical subjects in Japan is three to five times of courses in China<sup>[8]</sup>.

In United Kingdom, the talent training mode of higher physical education is through intervened cultivation of academic and professional training. The curriculum is characterized with miniaturization and hierarchy. In the curriculum of three-year college, there are courses like Human Physiology, Athletic Physiology and so on. And courses start with research type in content, and the whole third school year is used for graduated design. In addition, the content of courses is refined, without public class, content related closely with the learned major. The physical education curriculum opened in UK reflects the characteristics of Westerners, namely good manipulative ability. Besides, discussions, presentations are combined with teaching methods in the classroom, so there is no cramming education.

Russia has a very clear direction in major courses of physical education. PE talents are divided into primary and secondary school PE teachers, sports school and club coaches, sports instructors and sports rehabilitation agency personnel. Russia offers major courses accounting for around 40%, keen on the master of techniques and combination of skills. In addition, the ability of self-study is highly valued, usually with specific arrangements for self-study hours, even occupying up to 43% of course time<sup>[9]</sup>.

China is now more mature in the construction of the concept of all-round development education. Especially in colleges and universities, quality-oriented education has started to implement fully, for the great pressure they are facing from reform in basic education. The statistics of current physical education major in the biggest 7 administrative area is displayed in TABLE 3, from which the curriculum setup status can be told.

**TABLE 3 : Survey of the PE Major in China's Colleges and Universities**

<b>Geographical Zone</b>	<b>Number of Colleges with PE Major</b>	<b>Number of Colleges of 211 Project with PE Major</b>	<b>Number of Colleges of 985 Project with PE Major</b>	<b>Number of Sports Colleges with PE Major</b>
North China	34	4	2	4
Northeast China	24	3	1	3
East China	71	6	2	3
Central China	42	3	0	1
South China	25	2	0	1
Southwest China	52	6	2	1
Northwest China	26	3	0	1
Total	274	27	7	14

### MAIN COURSE SETUP IN PE MAJOR

#### Research objects and methods

The object of research is the curriculum of main courses colleges have set up for students majoring in Physical Education.

The research methods applied are documentary study, survey method, mathematical statistics and logical analysis.

By documentary study, related documents since the establishment of New China have been studied. Searching in CNKI, there are 158,022 academic papers with the keyword of “course”, and 8,554 academic papers with keyword of “physical education”. These documents provide a solid theoretical basis for this research in course setup.

By survey method, this study interviews with experts engaged in research on physical education teaching theory and teachers from both at home and abroad. The interviews include two aspects: one is the research content, thinking and solutions; the other one is the evolution law of physical curriculum, the existing problems at present and the investigation research of implementation and theory. Through the survey, the research thinking and methods in curriculum will be clear, and this is helpful in mastering how to solve practical problems and broaden the research perspectives.

By questionnaire, first, design the questionnaire, and then test it, then distribute and reclaim. This questionnaire chooses colleges from seven provinces and cities in mainland China, with 143 copies distributed. There are 385 colleges investigated. The detail information on the investigation can be seen from TABLE 4.

**TABLE 4 : Statistics of the Questionnaire**

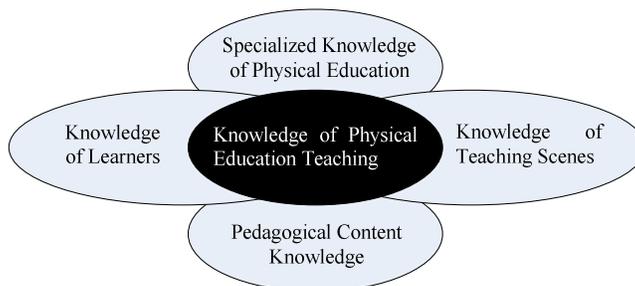
School Type	Estimated Number	Actual Number	Reclaimed Number	Valid Number	Effective Rate
Colleges	525	525	519	512	97.52
Senior High Schools	420	420	415	404	96.19
Junior High Schools	420	245	240	232	94.69
Primary Schools	420	245	232	222	90.61
Total	1785	1430	1406	1370	95.80

Mathematical statistics refers to use statistical software to analyze the relevant statistical data, including contents such as frequency, percentage, mean and so on, from which the basic conditions of major courses of physical education in schools are presented, so as to lay a good foundation for research.

Analysis mainly includes systematic analysis and logical analysis methods. Systematic analysis studies the PE curriculum system through the systematic theories, analyzing the curriculum system wholly from its elements, structure and functions, to explain the curriculum setup in a systematic way. Logical analysis analyzes and arguments on the PE curriculum by induction and deduction, comparison and analogy.

**The Nature and characteristics of curriculum**

Physical education courses in colleges and universities is a “skilled” integrated course, is also an important part of quality education, and an important factor for the promotion of China's education reform, and also plays a very important role in improving the overall development of education. Figure 1 is a framework of knowledge and ability the PE teachers need to be equipped with.



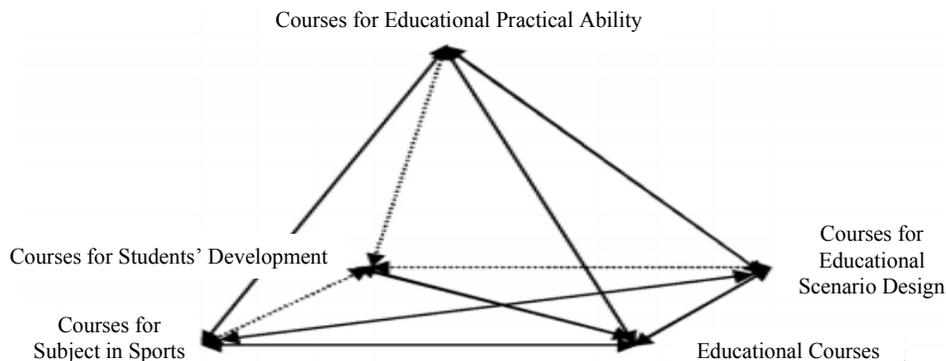
**Figure 1 : Framework of Knowledge and Ability of PE Teachers**

The nature of physical education courses is core issue of theoretical construction and practice research of colleges’ sports curriculum. It embodies the basic orientation of physical education curriculum, playing a guiding role in course setup. In addition, it plays a decisive role on the ideas, objectives, content and so on for physical education curriculum in colleges and universities. Therefore, the intension and extension of the courses determine the nature of physical education courses in colleges and universities.

Currently there are two forms of physical education curriculum, one is for sports specialized schools, and the other is for general college education. There is essential difference between them. Sports specialized schools’ goal is to train professional talents of physical education, it has a complete curriculum and extremely professional. While college education one is established in order to promote students’ comprehensive exhibitions, chartered with popularity.

**Main course setup in physical education major**

The aim of reset of curriculum of physical education major is to enable PE teachers to acquire knowledge and ability, and the essence is to optimize the curriculum. So the reset of curriculum has a strong practical orientation, transforming practical knowledge into practical ability by teaching. Based on this, there designs a stereostructure for physical education curriculum, which is shown in Figure 2.



**Figure 2 : Stereostucture of physical education main courses**

The courses for students' development are designed to enable PE teachers' clear understanding of two issues, that is, "to teach whom" and "what kind of person is taught"<sup>[10]</sup>. Therefore, physical education major curriculum should be reset based on students' physical, mental, and learning features.

Physical education course aims to resolve the issue of "what knowledge students should learn". It teaches students knowledge in a professional way, and this knowledge is unique. What a PE teacher teaches the students are the operational sports skills, which other disciplines is lack of. Therefore, the sports skills courses are the core of the main course in physical education. At present, there are two categories, one is academic course and the other one is technique course. Both of these two has changed. Generally, the academic course class hour increases and accordingly the technique course class hour decreases. However, many experts think that this will influence the degree of PE students' mastery in sports skills. And the solution is to increase the class hour of academic course into an equal level with technique course.

Educational course addresses the issue of "how to teach", but for now there is not enough sufficient attention to this issue. Therefore, in the future, educational course must be strengthened. Usually this course consists of two main categories: general teaching course and PE teaching course. These courses not only help PE teachers grasp the basic knowledge of education, also help them grasp teaching methods according to their own characteristics.

Educational scenario design course is an independent main course, closely related with the competitive contents in the practice of physical education. The usual practice is to transform skills in competitive sports directly into the teaching content, making the teaching content with competitive characteristics. To improve this situation, scenario and live content should be integrated in the teaching process, and adds educational meaning in techniques. Through this course study, PE teachers can understand the principle of teaching students in accordance with their aptitude better and design the teaching content better.

Education practical course is designed to improve students' teaching ability by practicing. This course is for physical education teachers to transform their expertise knowledge, teaching knowledge and others to educational ability by way of practicing. This is a vital way to equip students with the teaching ability. Academic course puts more attention to the students' mastery of skills, while teaching courses is to confirm whether the student has basic knowledge in teaching. But there is no course on how students make use of knowledge and ability, namely the combination of technique course and academic course. Education practical course is meant to compensate for this lack, through forms of combination of decentralization and centralization, internships, simulations and other forms, which fully guarantee PE teachers gain multilayered and multifaceted practice before graduation.

## CONCLUSION

Along with the recent main course curriculum reform in physical education in China, the direction for PE teachers' training becomes clearer. To cultivate specialized sports physical education teachers can be said to be the purpose of PE main course. PE course attaches more importance on the PE teachers' full mastery of professional knowledge and ability. This is not only a necessity for current main course of physical education major, also a practical operating path. Besides, this study also explains the structure of course setup, and classifies the courses.

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