IMPLEMENTATION OF COMPETENCY-BASED APPROACH IN GENERAL EDUCATION CURRICULUM STANDARDS IN CHINA

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The article examines the main directions for improving the curricula of comprehensive schools in China; provides an overview of Chinese studies devoted to the transition to a competency-based approach in the construction of general education curricula in China; a study of curriculum standards for identifying key competencies was conducted; the features of their improvement in practice are highlighted.

Keywords: curriculum, curriculum standard, competence, general education, China.

Today, education in all developed countries is undergoing significant changes. The new paradigm of the educational process is based on the key idea of a new personality, which should be formed by educational institutions of all stages, and the comprehensive development of the student. Knowledge, skills and abilities are now considered not as the goals of education, but as its most important means, which ensure the achievement of the main educational goal – the development of a well-rounded individual. This revision of the goals of education is explained by its social conditioning.

Let us consider the practice of modern school education in China, namely the teachers' approach to teaching. Researcher Yang Xiangdong notes that Chinese general education teachers widely use Bloom's simplified taxonomy of educational goals [13, p. 37-38]. It is used to determine the level of knowledge acquired by students in all disciplines, and has also become the theoretical basis for developing examinations at the general education level.

As Yang Xiangdong notes, Bloom's taxonomy is not suitable for formulating the content of education in curriculum standards, especially specific goals for students' mastery of cognitive processes and key knowledge, since the requirements for mastery are directive requirements and do not take into account the complexity, variability and continuity of interactions between subjects of the educational process [13, p. 37-38].

From the perspective of standards development, this has led to a misalignment in the educational goals of China's general education system. The system of disciplinary knowledge has become the most important guideline of the curriculum. At the same time, the requirements for individual development and social adaptation of students have faded into the background. The logic of the discipline's knowledge system became the main criterion in determining the sequence of studying the material. In terms of educational practice, this has led to the development of a teaching model oriented towards disciplinary knowledge. Teachers break down key subject area knowledge and skills into small chunks for teaching until students master them. This method of teaching results in students spending a lot of time learning fragmented knowledge. There is a lack of holistic knowledge and analysis of objects and phenomena, there is a lack of consistency and complexity of knowledge, and the value of comprehensive education is ignored. Knowledge and action become disconnected during the learning process. Based on Bloom's ideas about the levels of knowledge in learning a discipline, students spend most of their time memorizing and understanding the concepts and principles of the discipline, but in practice they cannot solve problems. This is the key reason for the current situation where students have "excellent grades but low ability".

According to Yang Xiangdong, the modern subjects taught in primary and secondary schools in China, the education and assessment model, and the management mechanism were largely inherited from Western education in the mid-19th century during the Industrial Revolution [13, p. 41-42]. This type of education is characterized by the division of subjects, focus on knowledge, and the predominance of lectures. These features were reinforced after the introduction of the Unified National Examination. Mental education took first place, grades began to play a primary role, and a model

of education was formed that was focused exclusively on passing exams. This led to the modern division of subjects, dogmatism of knowledge, formalism and other shortcomings. The curriculum focuses primarily on the transmission of knowledge, in accordance with the logic of the academic discipline. When constructing a general education model based on key competencies, it is necessary to take these circumstances into account.

Planning the development of education is impossible without taking into account the shortcomings of the existing education system. Therefore, it is necessary to note the main problems of education that require solutions at the present time.

In examining the shortcomings of China's general education system, Su Wang refers to the paper "Opinions on Boosting the Comprehensive Evaluation and Reform of the Education Quality in Primary and Secondary Schools", published in 2013. This document identified the problems of contemporary education in China: too much emphasis was placed on testing, while comprehensive quality, students' personal development and their ability to evaluate information were ignored; too much emphasis was placed on final results, while the assessment process and methods used by schools were ignored; great importance was attached to the selection of students, and the analysis and improvement of assessment was ignored. All these have a great influence on the all-round development and healthy growth of students at all levels of education and have hindered the development of individual abilities, a sense of social responsibility, creative spirit and practical abilities [9, p. 412].

Also, the problems of the primary education curriculum standards in China of the previous generation include inflexibility, difficulties in implementation in small towns and rural areas due to the shortage of qualified teachers; underestimation of students' interests and parents' opinions; the application of the Western approach of "distributed management" of educational programs; the demand for significant results and rapid pace of change. The main focus was on the study of foreign languages, mathematics and the native language, with insufficient attention to physical education and fine arts.

Insufficient qualifications of teachers resulted in difficulties in implementing research-based learning, complex practical activities, etc. The problem of excessive academic workload, caused by high examination requirements and parents' expectations of their children's academic performance, was emphasized [6].

Summarizing the existing problems, Yang Xiangdong concludes that students are directly presented with the principles and methods of science in their pure form, abstract conclusions, and there is a lack of unity in students' subject knowledge and experience [13, p. 43].

In addition to educational activities, much attention is paid to extracurricular activities. In January 2014, the Beijing Municipal Education Commission issued the "Announcement on the Implementation of the Plan for Extracurricular Activities of Primary and Middle School Students at the Compulsory Education Level". The document regulated the organization of various social events for students in Beijing's primary and secondary schools related to sports, art, science and technology.

Other cities in China have also begun to hold similar events, strengthening the integration of formal and informal education. Social educational resources available to schools include museums, planetariums, botanical gardens, laboratories, etc. Students can engage in experiential and hands-on learning using these resources.

On September 13, 2016, the Ministry of Education of the People's Republic of China officially declared the goal of developing basic literacy among Chinese students. This means the comprehensive development of students and is defined in three tasks: cultural foundation, self-development and social participation. The new standards for senior secondary school curricula have been developed in accordance with the idea of developing students' basic literacy. The new curriculum standards are aimed at developing individuality and emphasize selectivity.

To determine the directions of development of modern school education in China, it is necessary to refer to current documents. Huang Zhongjing and colleagues note that the priorities for education development are set out in the "Plan for Realizing Continuous Development in China to 2030", published in 2016.

Significant changes to the current state of affairs were caused by the UN conference “Change our world: 2030 sustainable development” held in 2015. The conference particularly emphasized the guarantee of quality education and equal educational opportunities, comprehensiveness and continuity of education [4, p. 140].

Research centers also work on developing directions for the development of school education. The leaders of the China Education Development Research Center point out that in order to modernize the curriculum, it is necessary to review the essence of education in a timely manner, take into account external conditions, deeply understand the essence and laws of education, pay more attention to human growth, and focus on the healthy development of students [2].

As for the content of education, in their opinion, it needs to be detailed on the basis of educational standards that reflect the degree of mastery of the laws of education. Standards across disciplines require a certain logical connection.

Curriculum standards include subject content, objectives, methods and other requirements. At present, Chinese researchers formulate three tasks for the modernization of curriculum standards: first, to establish the connection between curricula; second, to link the curriculum and other educational activities; third, to determine the cognitive facts included in the curriculum [2].

Thus, the shortcomings of the existing education include memorization, insufficient attention to the development of analytical skills, inconsistency of knowledge, and lack of connection between learning and the interests and experience of students. In order to overcome these shortcomings, the following principles of education reform have been formulated: focus on individual development, stimulation of social activity, creativity, practical skills, guaranteeing the quality of education and equal educational opportunities, and continuity of education. The need to change the approach to testing the level of students’ knowledge requires a revision of assessment and teaching methods and the content of education. As for the reform of educational programs, tasks are set to develop interdisciplinary connections, as well as the unification of educational and extracurricular activities.

Before considering the transition from a knowledge-based approach to a competence-based approach in school education in China, it is necessary to clarify the interpretation of the concept of “competence” in Chinese pedagogy.

According to the definition of the Organization for Economic Cooperation and Development, “competence is not only knowledge and skill. In certain situations, it includes a variety of mental and social resources that the individual mobilizes and uses to satisfy complex needs” [13, p. 40-42]. According to this understanding, competence indicates the consistency of subject and general knowledge and skills, thinking, relationship and value system. General qualities are revealed in the process of solving complex real problems.

Researcher Xu Lan notes that “key competencies for student development” express the knowledge economy’s requirements for learning [12, p. 14]. Because “key competencies” is a concept that emerged in the era of information technology. This concept denotes the most important abilities and competencies that are above the general abilities and competencies that a person possesses. Since the end of the 20th – beginning of the 21st century, some international organizations and developed countries, such as the Economic Cooperation Organization, the European Union, the United States of America, based on theory and practice, have established a framework of key competencies. This had far-reaching consequences and was done in response to the challenges of the information age.

The research conducted under the leadership of Lin Chongde allows us to consistently define what “core competencies” are and also judge their main characteristics [12, p. 14]. Students master key competencies during the corresponding period of study. Gradually, the necessary qualities and key skills are developed, dictated by individual development throughout life and the requirements of social development. Based on this, key competencies can be described as the ability of an individual to analyze, discover, pose, and solve problems in complex, uncertain situations in real life and in the professional sphere, and to demonstrate general qualities in the process of communication.

The following main features of key competencies are highlighted: 1) they are of the most general nature; 2) key competencies are knowledge, skills, attitudes and other manifestations of abilities; 3) key competencies are formed and developed in the learning process; 4) the development of key competencies is continuous and stage-by-stage; 5) key competencies combine individual and social significance, key competencies play an integrating role in the learning process [12, p. 14].

The China Institute for Educational Innovation Research and the World Summit on Education Innovation jointly published the paper "Towards the Future: International Experiences in 21st Century Competence-Oriented Education". This document identifies seven key competences: communication and collaboration; creativity and problem solving; information competence; self-knowledge and self-control; critical thinking; learning to learn and lifelong learning; civic responsibility and social participation.

Subject key competencies have a general nature, among them we can highlight knowledge and skills, methods, emotions, relationships, values. After mastering subject knowledge, the student will be able to solve problems in real situations, demonstrating key skills and qualities.

For example, key competencies in history are an important part of humanities competencies. In the process of learning history, students develop specific thinking qualities and key abilities [12, p. 15].

Key competencies are knowledge, skills, thinking, attitude, and value systems that are applied together to solve complex, uncertain problems in real life. Students' key competencies are formed gradually in the process of learning activities, which influences the direction and nature of their experience.

Speaking about the development of an individual's key competencies, Yang Xiangdong notes that it is necessary for an individual to learn through real actions while in everyday culture. This includes solving real-life problems, participating in social practice, collaborating, and interacting with members of the local community and other communities [13, p. 42].

From defining key competencies and describing their characteristics, it is necessary to move on to how competencies change the approach to teaching and curriculum development.

Focusing on the development of key competencies, according to Jiang Yu and his colleagues, requires a transformation of the curriculum model so that the development of students' key competencies becomes the main axis of education, which in turn requires solving the problem of systematizing disciplines and increasing the degree and depth of interdisciplinarity of curricula [5, p. 30].

This group of researchers believes that the development of students' key competencies is an important component of educational reform at present [5, p. 30]. Key competencies will form the basis of curriculum standards, for which it is necessary to put in order the framework of curriculum standards, put in order the interdependence of key and subject competencies, and create standards for the quality of mastery of key competencies.

Students' problem-solving ability, innovative spirit, sense of social responsibility and other qualities that need to be cultivated are not only related to any subject, but interdisciplinarity, multiple intelligences, and multicompetence need to be applied [5, p. 30]. Education reform aimed at developing key competencies of students involves strengthening interdisciplinary links between academic disciplines and general comprehensive development.

The development of key competencies requires a systematic nature of interdisciplinarity and consistency of curricula across different disciplines. Currently, China has curriculum standards that mainly determine the content of education. In order to create quality standards for education based on key competencies, it is necessary to organically merge the requirements for the content and quality of education and improve existing standards of educational programs.

First of all, the change in approach should be reflected in the standards. Hu Jin and colleagues note the need to generalize the standards of curriculum content in

accordance with the period of study, and to detail the requirements for the level of mastery of the material in accordance with the year of study [3, p. 46].

Currently, China is actively working to transition curriculum standards to a competency-based approach. Based on the “Development of Key Competencies of Chinese Students”, discipline priorities are defined, which should be detailed in the discipline mastering standards. Accordingly, the developer must provide a definition of the key competency and its characteristics in the curriculum.

At present, China pays great attention to improving the quality of curriculum standards, but as Chen Baosheng points out, it is still necessary to revise the foundations of curriculum standards, gradually establish student-centeredness, all-round development of students, and healthy development as the starting point and ultimate goal of the education system [1].

Thus, competencies should be understood as a person’s ability to act in a complex, uncertain situation. Key competencies include knowledge, skills, thinking, attitude, and value system. A list of the most important key competencies has been defined. The acquisition of competencies in the learning process is continuous and stage-by-stage.

From the point of view of the transition to a competency-based approach, studies on the examination of curriculum standards published in previous years are of interest.

Xiao Leifeng and Liu Jian examined the Chinese language curriculum and curriculum standards in 1978, 1986, 1992, 2001 and 2011 in their study. This study found that the number of references to key competencies in curricula and curriculum standards has gradually increased from 1992 to 2011. Key competencies related to communication and collaboration are the most frequently mentioned in all editions of the standards. Learning to “learn how to learn” and lifelong learning are mentioned quite often. Information competencies were mentioned very little in the 1992 curriculum; however, the 2001 standard saw a qualitative leap in their description [11, p. 58].

In the 1992 curriculum, competencies in self-knowledge and self-control were not presented, and critical thinking was rarely mentioned. The 2001 and 2011 curriculum standards show a trend towards increasing references to these competencies. This is

explained by the reform of curriculum standards, program documents describing the student's metacognition and the development of more specific requirements for the implementation of the learning process. However, among the seven most important key competencies, the listed competencies are used relatively rarely [11, p. 58].

Xiao Leifeng and Liu Jian believe that it is likely that the lack of mention of critical thinking development in the 2011 curriculum standard is due to the fact that it requires an appropriate level of students' cognitive development. In the 1992 curriculum and the 2001 and 2011 curriculum standards, references to the seven major core competencies gradually began to appear and became more frequent year by year [11, p. 59].

Another approach was taken by a group of researchers led by Huang Zhongjing, who compared the goals of curriculum standards with the educational goals proposed by UNESCO.

Education aimed at lifelong development highlights the following goals for developing in students: cognitive skills, critical and systemic thinking, attitude, value system and character. The objectives of Chinese curriculum standards are similar to UNESCO's Education for Sustainable Development.

Based on the analysis of the objectives and main sections of the disciplines, Huang Zhongjing and colleagues examined the 2011 compulsory education standards in Chinese, English, mathematics, natural science, and moral education [4, p. 141].

After reviewing the objectives of the disciplines, Huang Zhongjing and colleagues emphasize that the standards emphasize the development of innovative and critical thinking, a sense of national identity, everyday skills, the ability to collaborate, and other key competencies [4, p. 143].

Huang Zhongjing and colleagues identified key competencies in several areas in the curriculum standards [4, p. 143]. Cognitive skills include critical and systemic thinking, and the development of innovative and critical thinking. From the point of view of the value system, the curriculum standards attach great importance to national identity. Curriculum standards contain statements about patriotism and national spirit.

Behavior - Curriculum standards emphasize the development of everyday skills, collaboration, communication, and problem solving. Practicality and individuality denote the “life orientation” of the standard.

Having reviewed the existing research on the competencies contained in Chinese curriculum standards, we believe it is necessary to make a number of clarifications.

Our analysis of the Chinese curriculum standards for Chinese and English (2011 edition) showed that the requirements for students’ learning outcomes are included in the requirements for the content of the academic discipline.

It should be noted that modern studies highlighting competencies in Chinese standards and programs of 2011 and earlier editions are based on the competency-based approach and follow the document “Development of Key Competencies of Chinese Students”.

In the 2011 standards, the direct requirements for the results of mastering the academic discipline by students are formulated in the form of: skills, abilities, knowledge, emotions and positions, and a system of values.

In Table 1, we have identified the value concepts and skills that, in our opinion, most closely correspond to the definition of key competencies.

Table 1.

REQUIREMENTS OF THE CURRICULUM STANDARD (2011)
CORRESPONDING TO KEY COMPETENCIES

Chinese Language Curriculum Standard	**English Language Curriculum Standard**
Value guidelines	
patriotism collectivism socialist values innovation creativity aesthetic taste	tolerance patriotism innovation social responsibility
Communication guidelines	
cooperation interpersonal communication, social interaction respect for cultural diversity	collaboration mutual assistance intercultural interaction empathy

Willpower qualities	
self-confidence	activity independence initiative
Practical skills	
the ability to select and process information	ability to plan and organize, ability to solve problems
Study skills	
research-based learning	motivation to learn, ability to self-assess learning outcomes

The identified competencies have the most general (interdisciplinary) character. Other competencies are not included in this list, as they have a narrow subject character and are not applicable in everyday life situations.

Thus, the standards of the curriculum were edited, and requirements for the development of various aspects of the student's personality gradually appeared. These requirements were supplemented and detailed over time. Communicative skills, collaborative work skills and lifelong learning skills play a key role in current standards. Information competencies are less widely represented. The priority direction is defined as the development of students' cognitive skills, critical thinking, and value system. There are various studies that highlight key competencies in the curriculum standards of previous editions. Having conducted our own analysis of the standards, we identified the following groups of key competencies: value and communication guidelines, volitional qualities, educational and practical skills. In our opinion, they most accurately represent the competencies included in the curriculum standard.

Updating curriculum standards and transitioning to a competency-based approach has its own specifics in different academic disciplines. Let us consider this specificity in more detail.

Modern standards of compulsory education curriculum should meet the requirements of the times and social development, and aim to develop quality education in China and develop students' core competencies. This is consistent with the international concept of education for sustainable development.

In 2010, the Chinese government published the National Long-Term Plan for Education Reform and Development (2010-2020). This plan emphasizes the importance of improving the quality of compulsory education.

Strict adherence to national curriculum standards and teacher training standards was also noted. The continuation of the reform of curricula and teaching methodology was approved. Homework for primary and secondary school students should be reduced. The content of the textbooks has been adjusted. The corresponding levels of complexity of the curricula have been developed. The current curriculum reform aims to change the perception of academic subjects, modernize teaching and learning methods, and assessment.

In November 2014, the Ministry of Education of the People's Republic of China issued a revised "Senior Secondary School Curriculum". The central concept became "basic literacy", which corresponds to the international trend of curriculum reform [7, p. 5321].

The curriculum reform at the beginning of the 21st century changed the purpose, content of the curriculum, teaching methods, textbooks, and assessment methods.

In 2010, the Ministry of Education of the People's Republic of China established a special committee for the development of primary education curricula and textbooks. The development and implementation of curriculum standards required the involvement of experts with professional knowledge.

Wang Lidong estimates that student and school evaluation systems will be revised in the future. Students will have more time for leisure and more opportunities to develop critical thinking skills, solve real world problems and practice practical skills [7, p. 5323]. Teachers will need to improve their teaching skills to improve the effectiveness of classroom teaching, reduce the number of assignments and exams, and strictly follow the curriculum. Schools will support students in the process of mastering courses in various disciplines. Student development guidance systems will be established to provide moral, psychological and academic support.

In 2013, the Ministry of Education of China began to revise the curricula of regular senior secondary schools.

In April 2014, work began on revising the standards of senior secondary school curricula in four subjects: native language, mathematics, physics and history. In December 2014, a comprehensive revision of the senior secondary school curriculum standards began, and groups were officially formed to edit the curriculum standards for individual subjects.

For example, the topic “algorithms”, which is mandatory for the modern senior secondary school mathematics curriculum, forms the basis of computer science and expresses the main ideas of the development of digital technologies [8, p. 12]. This ensures that mathematics is connected with other subjects in the learning process.

The process of revising the standards involved development, consultation with experts and editing at the same time. In 2015, the first conference on the new mathematics curriculum standards was held at Northeast Normal University [8, p. 12]. Many relevant specialists were invited to the event. The main content of the curriculum was discussed. More than 20 similar events were held. The principles of scientificity and rationality that form the basis of the 2017 standards were defined, while the main ideas of the standard were popularized and the foundation for supporting and implementing standards in the future was laid.

Three sections have been added to the structure of the 2017 Mathematics Curriculum Standard for Senior Secondary Schools: basic mathematical literacy, curriculum structure, and teaching quality. The standards also provide teachers with recommendations on how best to implement the concept of basic literacy and teaching assessment in practice [10, p. 667].

The curriculum includes compulsory courses and electives, taking into account the various needs of students, creating conditions for sustainable student development and lifelong learning.

The main principle of the standard is the focus on the development of the student. The new standard emphasizes that teachers need to develop basic competencies,

developing independent thinking and learning, and collaborative learning. In the teaching process, the new curriculum standards pay attention to the assessment process in order to improve the level of mathematical basic literacy at different stages of education [10, p. 667].

The new standard assumes that students should learn the basic knowledge, skills, main ideas, and experience the main activities necessary for their further education and future development in the senior secondary school mathematics curriculum, so that they can discover problems and formulate problems, analyze and solve problems from the perspective of mathematics [10, p. 667].

The curriculum goals were changed from developing mathematical ability to developing mathematical literacy [10, p. 667]. In the process of learning mathematics, students develop basic mathematical skills.

Thus, in senior secondary school, it is stated that it is necessary to develop basic literacy in students. The content of education in this case consists of basic knowledge, cognitive and practical skills, and experience of activity. An important task is to create a system of pedagogical support for students on the basis of senior secondary schools. Revision of senior secondary school curriculum standards requires changes not only in the standards themselves, but also changes in approaches to teacher training, teaching methods and assessment.

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ВНЕДРЕНИЕ КОМПЕТЕНТНОСТНОГО ПОДХОДА В СТАНДАРТЫ УЧЕБНЫХ ПРОГРАММ ОБЩЕГО ОБРАЗОВАНИЯ В КИТАЕ

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В статье рассматриваются основные направления совершенствования учебных программ общеобразовательных школ Китая; дается обзор китаеведческих исследований, посвященных переходу к компетентностному подходу при построении учебных программ общего образования в Китае; было проведено исследование стандартов учебных программ для выявления ключевых компетенций; рассмотрены особенности их совершенствования в Китае. практика выделена особо.

Ключевые слова: учебный план, стандарт учебного плана, компетентность, общее образование, Китай.