

The Realistic Bottleneck in the Construction of the Bridging Curriculum System in Middle and Higher Vocational Education and Its Solution Path

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Abstract: The connection of middle and higher vocational education has established an “overpass” for students to diversify their choices and become a useful person via multiple paths, but many bottlenecks exist in the specific practice process. Taking curriculum system construction as a breakthrough, this paper analyzes problems from the three levels of government, inter-school and school. Based on one’s own practical management experience, the author proposes serialized solutions from four aspects: construction principles, construction ideas, construction strategies and implementation guarantees, aiming to improve the practical effectiveness in the connection of middle and higher vocational education.

1. Introduction

The domestic research paper on the connection of middle and higher vocational education was first found in the "Communication of Vocational Education" in 1998. It really aroused the concern of scholars after the State Council published document in 2002 and it was not until 2012 that the number of research papers increased substantially. The number grew slowly in the four years thereafter and began to gradually fall after rise in 2017 (Figure 1). Through more than 2 decades of continuous exploration and practice, an integrated operating system has been basically established, but deeper problems remain to be urgently solved. To this end, the author conducts research based on one’s own management practices, trying to provide some reference for solving the practical problems in the connection of middle and higher vocational education.

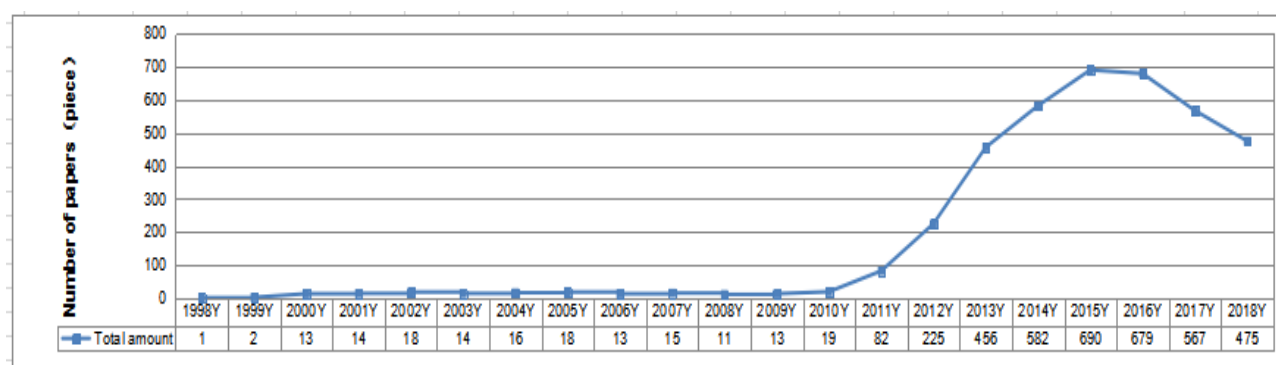


Figure 1 Research quantity trend before 2018 based on China Knowledge Network (CNKI)

2. Realistic Bottleneck in the Construction of Bridging Curriculum System in Middle and Higher Vocational Education

The connection of middle and higher vocational education is roughly advanced by three levels: government, inter-school and school. The government acts as policy guide, inter-school considers subject crossing, while school executes effective convergence. The three mutually servers as the premise of other's existence, mutually promoting and complementing each other, thus constituting a complete work chain that promotes the continuous deepening of the connection between middle and higher vocational education. So far, good practical results have been achieved, but there are still some development bottlenecks.

2.1. Government level

According to incomplete search, 14 documents of the national government departments have talked about the connection of middle and higher vocational education since 1985, which have attracted increasing attention and have now risen to the height of constructing a modern vocational education system. Education management departments at provincial levels also make great efforts to actively explore new policies with regional characteristics for the connection of middle and higher vocational education. However, it seems that the acting point for promoting effective connection of middle and higher vocational education still waits to be found, and it is still difficult to cross the actual barriers formed by different subjects in specific practice. Abundant cooperation is still merely a simple superposition of secondary vocational education and higher vocational education, especially lacking convergence in training objectives, professional connotation, teaching conditions, etc.

2.2. Inter-school level

At the level of overall management, middle and higher vocational education is subject to unified management by Vocational Education and Adult Education Department in Ministry of Education. However, in the actual process of school running, there are dual subjects of education, and differences exist in the management of middle and higher vocational education. Mutual running-in is needed in daily overall management, so there is still a lack of comprehensive management mechanism and communication mechanism is still weak. At the actual operational level, usually a higher vocational school connects with several majors of a number of secondary vocational schools. Therefore, higher vocational schools need spend much time and energy on a lot of process coordination. Moreover, the connection between majors is only limited to collaboration, while the two school-running subjects have different management philosophy and campus culture. If a

contradiction arises in the process of communication and coordination, policy time lag often exists in consultation with the higher management departments.

2.3. School level

In the choice of cooperative schools and enrollment, although higher education management departments pose certain principle requirements for the selection of secondary vocational schools, they are obviously above the objectively possible enrollment. In the context of continuous enrollment scale expansion, it is especially difficult to completely hold this bottom line. Schools then seek a larger source of students at the cost of reducing cooperation requirements, leading to uneven enrollment quality, and sometimes there are some professional mismatches, which are bound to bring great challenges for follow-up management and teaching of higher vocational education.

In terms of design of talent training program, on the one hand, there is a lack of research on the law of vocational education and the law of professional growth. Some shortcomings exist in the talent training positioning in middle and higher vocational education. The training objectives and professional ability training standards are not sufficiently clear. On the other hand, there is still insufficient sectional control of knowledge, ability and quality, and there is a phenomenon of repeated teaching or disjointed teaching, which in turn affects the overall improvement of talent training quality.

In the overall construction of the curriculum system, the first problem is the lack of research on the relevance between curriculum system and talent cultivation, especially the lack of effective refinement of core curriculum and core links, which makes curriculum system unable to support the training requirements of the corresponding talent standard. The second problem is the lack of systematic construction of curriculum system, not only lacking organic integration of middle and higher vocational education in staged implementation, but also showing the phenomenon of misplacement of prerequisite course and follow-up course. Third, the implementation links of professional ability cultivation lack consistent systematic design from easy to difficult, from simple to complex, which leads to the lack of core professional ability. Fourth, documentary evidence integration between diploma and skill rating certificate is not established, and hierarchical design is particularly inadequate in vocational qualification certificates for middle and higher vocational education stages.

In specific implementation of teaching, on the one hand, the enrollment scale expansion will inevitably lead to a relative decline in enrollment quality. In addition, there may be professional spans for the students recruited and actual teaching differences exist between the secondary vocational schools, which will increase teaching difficulty in higher vocational education stage. On the other hand, systematically designed courses often have differences in actual teaching contents and implementation results due to the lack of uniform curriculum standards and evaluation standards, which thus also brings difficulty to the opening of follow-up courses and specific teaching of courses in higher vocational education.

In the process management of teaching, first, the specific teaching of middle and higher vocational education stages belong to two different teaching subjects, and even belong to different regions and different competent departments, which ultimately lead to difficulties for both partners to reach complete consensus in management appeals, making it not easy to design a unified management plan. Even if a unified management plan is formulated, complete implementation in management is difficult due to the different teaching conditions of secondary vocational schools. Second, higher vocational schools often cooperate with secondary vocational schools in a “one-to-many” manner, and cooperative schools are relatively dispersed in geographical distribution, so it is not only difficult to effectively integrate training resources and teacher

resources between schools, but also higher vocational schools will have difficulties in effectively monitoring the teaching process due to much distraction of energy. Third, the high admission rate in the connection process of middle and higher vocational education and the low sampling rate in process management can easily lead to a decline in learning status of secondary vocational education, which in turn makes secondary vocational education students have deteriorating learning habits and unstable learning foundation, thereby increasing the difficulty of practical teaching in higher vocational education stage. In this way, even a perfect integration plan is likely to have limited effect in actual implementation.

3. The Innovative Path for Effective Construction of Bridging Curriculum System in Middle and Higher Vocational Education

Through analysis, it is found that different levels of bottlenecks exist both at the government level and inter-school, school levels. The power of a school cannot completely solve all problems, but curriculum system as the most important link in the connection of middle and higher vocational education can make a difference under the guidance of higher vocational schools. Hence, curriculum system is selected as a breakthrough for system construction to drive the solution of other related problems.

3.1. New principles for the construction of the curriculum system

The connection of middle and higher vocational education represents an educational process that is continuously fulfilled by different subjects of education. It is not only necessary to achieve the improvement of educational level, but also we need ensure the continuous improvement of the educational connotation. The author hereby concludes four principles for construction based on research and practice.

3.1.1. Principle of development suitability

Determine talent training objective according to social needs, enrollment characteristics and educational resources, and then decide the talent standard, build the curriculum system and formulate teaching plans in a manner that demonstrates continuous improvement of students' knowledge, ability and accomplishment in the whole education process.

3.1.2. The principle of resource integration optimization

The overall revitalization of teacher resources and teaching resources between the cooperative school-running subjects not only involves matters in and out of school, but also should give consideration to in-class and extra-curricular matters. It is not only necessary to optimize real resources and exploit potential resources, but also maximization of resource utilization efficiency and optimization of utilization effect is required by exchange of needed resources, thereby providing implementation guarantee for the overall construction of bridging curriculum system in middle and higher vocational education.

3.1.3. Professional ability-oriented principle

Vocational education cultivates “quasi-professionals”. Therefore, the whole process of training must pay attention to the cultivation of students' ability to find problems, analyze and solve problems. This requires that the selection and integration of courses and the setting of practice links must focus on the principal line of professional ability improvement, and proceed with integrated

design based on cognitive rules and skills training rules, thus running vocational skills training throughout the entire process of personnel training.

3.1.4. The principle of unity of consistency and staged characteristic

The connection of middle and higher vocational education is implemented in two different subjects of education. Therefore, higher vocational school must cooperate with secondary vocational school to design the unified training program in advance. In the specific design, full considerations must be given to teaching requirements at different education stages, students' needs and educational conditions. Moreover, goals of different stages should be set step by step in the framework of the overall training objectives, not only guaranteeing relevance of teaching contents and consistency of teaching requirements throughout the training process, but also ensuring specific implementation according to respective training requirements of the two different education stages.

3.2 New ideas for the construction of curriculum system

The overall construction of bridging curriculum system in middle and higher vocational education requires sufficient preliminary research before accurate positioning of the talent training objectives, so that corresponding talent standards can be determined and talent training needs can be finally met through overall construction of the curriculum system (Figure 2).

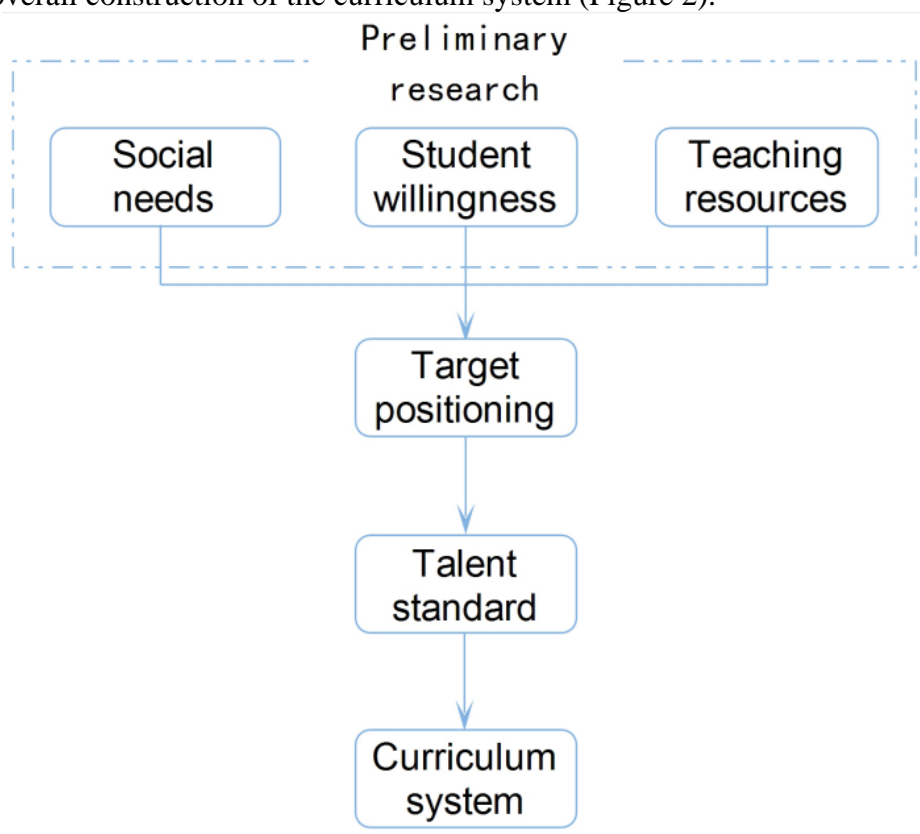


Figure 2 New ideas for the construction of curriculum system

3.2.1. Preliminary research. It is mainly divided into three levels.

The first is social needs research, which not only requires investigation of the explicit demand for talents in the industry and enterprise, but also demands analysis of potential changes of talent

demand according to the national policy orientation. The second is follow-up surveys of graduates to analyze students' learning and employment willingness. The third is teaching resource analysis, mainly involving teachers, on-campus training facilities and off-campus practice conditions, which should not only consider explicit needs, but also explore potential resources that can be built and integrated.

3.2.2. Target positioning.

On the basis of full and effective research in the early stage, conduct comprehensive analysis on social needs, student willingness and teaching resources, fully take into account students' realistic foundation and development possibilities, and then determine position and level positioning in talent training objectives.

3.2.3. Determine standard.

According to the position and level positioning in talent training objectives, determine the training standards for various talents, and clarify the prerequisite knowledge structure, ability structure and professional quality requirements.

3.2.4. Build a system.

According to the overall construction idea of "post-ability-course", combining the law of vocational education and the law of professional growth, construct a curriculum system supporting organic integration of the two different stages of secondary vocational education and higher vocational education, combine academic certificate with vocational skill rating certificate, combine skills training with professional atmosphere cultivation, combine on campus and off campus, in-class and extracurricular items.

3.3. New strategies for the construction of the curriculum system

By analyzing the core factors in enterprise production process and educational process of middle and higher vocational schools, bond is established based on internal relevance and external performance, thereby completing overall construction of bridging curriculum system in middle and higher vocational education (Figure 3).

- i. Make subdivisions based on enterprise production tasks, determine the corresponding professional positions (groups), and then decide the typical positions (groups) by screening and induction.

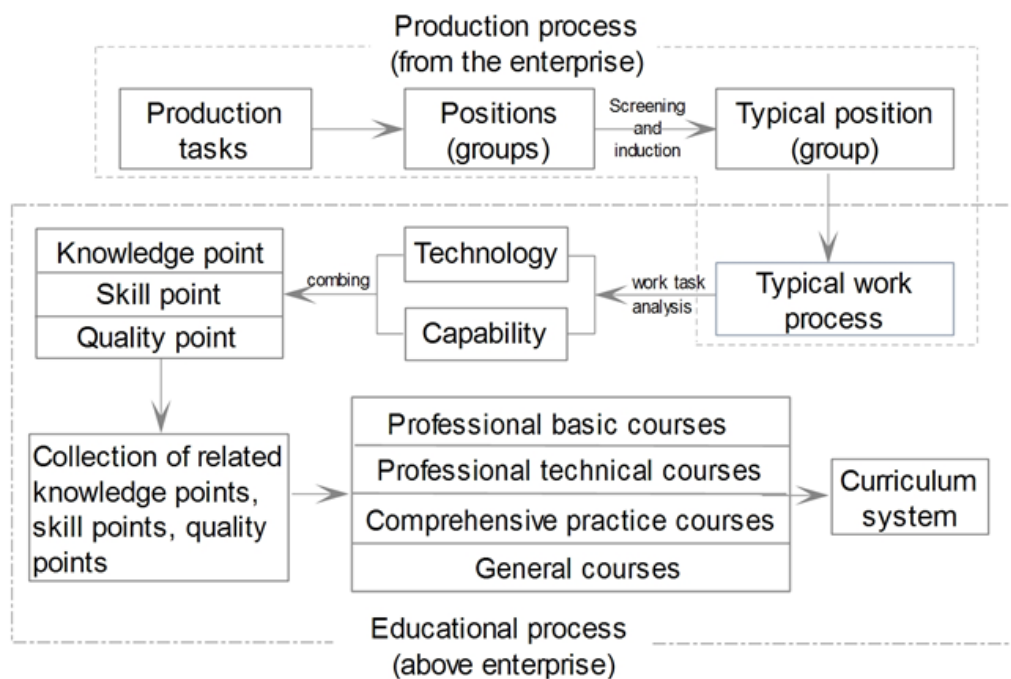


Figure 3 New process for the construction of curriculum system

ii. Select a typical work process for a typical position (group), analyze the necessary job skills and capabilities according to the work tasks, and sort out the corresponding knowledge points, skill points and quality points.

ii. Integrate and optimize the corresponding knowledge points, skill points and quality points before curriculum setting, and build a curriculum system integrating professional basic courses, professional technical courses, comprehensive practice courses and general courses as a whole.

iv. Make practical reflection on the practice effectiveness of the curriculum system, find out unreasonable part of the connection process, and pay special attention to the comprehensive consideration of the degree of curriculum system achievement in talent training and achievable degree in the actual teaching, thereby accumulating materials for the follow-up improvement of the curriculum system.

3.4. New guarantees for the implementation of the curriculum system

The establishment of the middle and higher vocational curriculum system only provides a basic blueprint for the implementation of teaching at two different stages, but the actual implementation must be guaranteed by corresponding practice.

3.4.1. Establish a community of shared interests in cooperative education.

Adhere to the "dual-subject" concept in middle and higher vocational education, and reorient the value orientation of cooperation between middle and higher vocational education. On the basis of respecting interest appeals of both parties, learn from experience of developed countries, build a new cooperative relationship characterized by joint discussion, joint construction and sharing by building a "community of shared interests between middle and higher vocational education". It is not only necessary to give play to the leading role of higher vocational schools, but also we should stimulate the participation enthusiasm of secondary vocational schools, thus promoting the further deepening of cooperation between middle and higher vocational schools.

3.4.2. Build an integrated curriculum system.

Higher vocational schools should cooperate with secondary vocational schools to do a good job in integration design of bridging curriculum of middle and higher vocational education, fully consider the educational demands and career demands of students at different stages, fully consider adaptability, fitness and foresight in talent training, constantly optimize the curriculum setting and teaching contents, and set quantifiable phased teaching goals.

3.4.3. Establish relatively uniform teaching standards.

On the basis of overall construction of bridging curriculum system in middle and higher vocational education, it is necessary to integrate teacher resources between cooperation schools in middle and higher vocational education, jointly establish relatively uniform curriculum standard, professional qualification requirements and teaching management standard to ensure that work of each stage runs in order. At the same time, it is also necessary to establish a teacher collaborative research and training mechanism for integrated talent training in middle and higher vocational education. It should have joint participation of higher vocational schools, middle vocational schools and cooperative enterprises, thereby providing practical guarantee for the effective implementation of teaching standards.

3.4.4. Establish a teaching resource sharing mechanism.

Due to the differences in the development level of higher vocational education and its target student groups, as well as different teaching resources, under the overall framework of bridging curriculum system of middle and higher vocational education, it is necessary to establish teaching resource sharing mechanism and risk sharing mechanism, so that the distance between schools in cooperative education is closer, thereby making it possible to maximize and optimize utilization of teaching resources such as teachers, training equipment and off-campus training bases.

3.4.5. Establish a teaching quality monitoring system.

In order to protect the smooth progress in the connection of middle and higher vocational education, a teaching quality monitoring team led by higher vocational schools with joint participation of secondary vocational schools should be established to take charge of daily monitoring and work coordination in the entire teaching operation process, so that relevant information is timely informed, necessary teaching early warning and management early warning are given. The monitoring results should be used as the basis for deciding whether to carry out follow-up cooperation or not. At the same time, it should be incorporated into the assessment system of each school as the assessment basis for teachers and teaching and research sections, thereby providing process guarantee for the effective implementation of bridging curriculum system in middle and higher vocational education.

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