

How to Solve the Problem of 'Shortage of Traditional Students - Senior Technicians' under the Background of the Development of Vocational Education-Basing on the Perspective of Value-Tool Rationality

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Abstract

Since 2014, the State Council of China has issued a series of important policies to promote the rapid development of vocational education. However, it has not changed the dilemma of 'shortage of traditional students - senior technicians' in the labor market. Previous studies have analyzed the above difficulties from three aspects: vocational schools, third party cooperation, and policy guidance, but they have not overcome the practical dilemma well. Basing on the perspective of Weber's theory of value rationality-tool rationality, the paper believes that the main reason for the dilemma lies in the orthodox consensus circle of 'ordinary high school-college entrance examination-university-work' formed by labor market, parents/students, and school. It is the continuous generation of this highly structured consensus circle that has put great pressure on students, forcing them to dare not select, and disidentify themselves, resulting in not only insufficient enrollment, but also students 'low-quality' in vocational schools. However, the series of current policies are unable to hedge this consensus circle, the paper gives four targeted suggestions.

Keywords

Vocational Education; Senior Technicians; Orthodox; Value Rationality.

1. The Origin of Questions

With the rise of the new scientific and technological revolution, and human beings entering into the era of intelligent manufacturing, the transformation from a common manufacturing country to a strong manufacturing country is being of particular significance to China's rapid economic development and international influence. In order to achieve the objective, the central government has successively issued a series of policies such as '*the Decision of the State Council of China on Accelerating the Development of Modern Vocational Education*', '*the Plan for the Construction of Modern Vocational Education (2014-2020)*', '*the Reforming and Implementing Project of National Vocational Education*', and '*the Opinions about Implementing Chinese Characteristics High-level Vocational Schools and Professional Construction Plan*' to promote the high-quality development of vocational education, especially '*the implementation of policy of expanding million high vocational students in 2019*' has greatly increased the total number of social students.

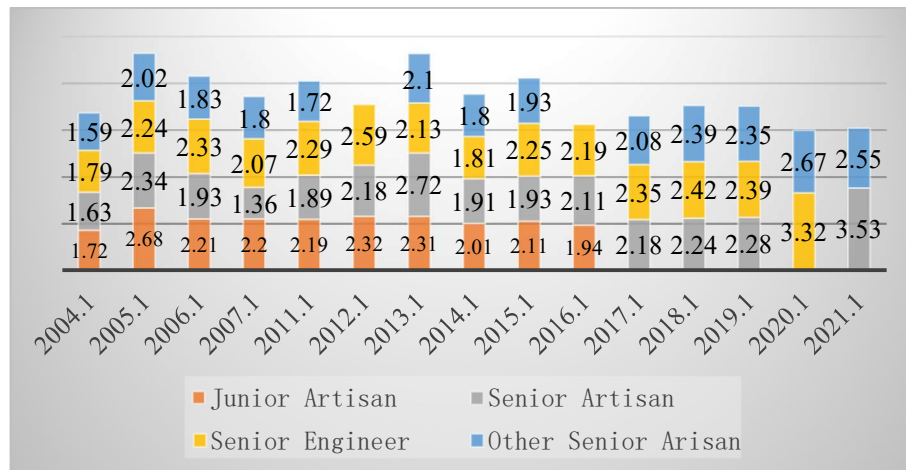


Figure 1. the ratio of demand and supply to technician in market (2004-2021)

Note: The data comes from the data analysis section of portal website of Ministry of Human Resources and Social Security of China.

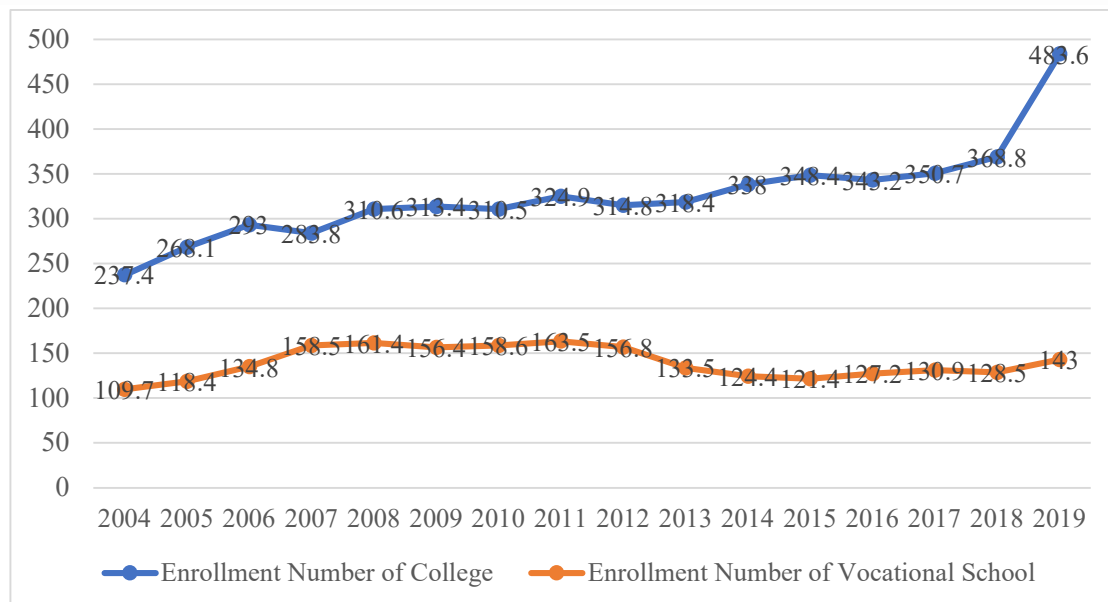


Figure 2. enrollment number of junior colleges and vocational school(10,000 person)

Note: The data comes from Part VII and Part XI of Education Section of CNKI 2021 China Statistical Year-book

However, as we can see from Figure 1, although skilled labors were in short supply for 14 consecutive years, and the demand-supply ratio of technicians increased from 1.63 in 2004 to 3.53 in 2021, which means one technical person corresponds to 3.53 positions. However, from Figure 2, we can see that the enrollment number of vocational schools has been declining since 2011, except for a small increase from 2004 to 2011, and a small increase of 31.25% in 2019. Therefore, compared with the huge demand for professional and technicians from market, there is still a great gap.

So, we can find an important problem: on one hand, the government is greatly advocating the development of vocational education and has issued a series of guiding documents, at the same time, the market has also demonstrated the strong demand for high-skilled talents, and many enterprises have offered high wages for fresh graduates of vocational schools^[1]. However, on the other hand, vocational colleges have a serious shortage of traditional students (the main source of million-enrollment expansion policy are people graduated for many years rather than

fresh graduates). For example, the minimum score for admission to the special plan for higher vocational colleges in Shandong Province in 2018 (spring and summer college entrance examinations) is just 170, but there are still many schools being not applied for [2].

2. Literature Review

Previous studies mainly concentrated in three aspects to respond the above questions. First, it emphasizes the improvement of the quality of vocational education by giving play to the role of the main body of vocational schools, that is, by enhancing the quality of vocational schools themselves or optimizing the management system of vocational education to achieve the upgrading of vocational education. For example, some researchers have proposed that in order to adapt to the macro background of manufacturing transformation and upgrading, vocational education should enhance itself from three dimensions: systematic and comprehensive practical teaching basing on vocational tasks and project-driven, collaborative training of professional capabilities and key capabilities basing on the whole industry chain, and vertical serialization and horizontal clustering professional arrangement basing on market demand [3]. Another scholar believes that after the rapid expanding of vocational education in China, there are many new problems restricting the sustainable development of vocational education, such as poor management system, so the author advocates to reform the vocational education management system and establish a scientific education evaluation index system [4].

Second, it proposes to improve the quality of vocational education by the third parties. For example, the central research group of the Jiu-san Society of China believes that the healthy development of vocational education can only be promoted by innovating the school-enterprise cooperation model and changing the 'somewhat faceless' situation of the skills competition [5]. There are also studies that advocate to expand China's industrial opportunities by learning from Germany's dual system vocational education, and improving the quality of China's vocational education by encouraging cooperation between industries and vocational schools [6]. However, when relying on school-enterprise cooperation to improve the quality of education, there is a great risk that is whether the enterprises have such sustainability momentum. Studies have shown that not all enterprises are willing to provide corporate training opportunities. Facing the signals sent by the labor market, the regulation of vocational education institutions is often lagging, therefore, the author advocates to promote the high-quality development of vocational education by enhancing the coupling of market regulation and government intervention [7].

Third, it advocates to promote the high-quality development of vocational education by using policies leverage. This type of research can be roughly divided into two categories. The first focuses on the study of typical texts in order to reveal the influence of policy. For example, some scholars have analyzed the important role of the *Draft Revision of the Vocational Education Law of the People's Republic of China* in promoting the modernization of the vocational education governing system and governing capacity [8]. Another scholar specifically analyzed the policy leading role of the 'the Decision of the Central Committee of the Communist Party of China on the Reform of the Education System' in restoring and developing secondary education in 1985, the 'Decision of the State Council of China on Accelerating the Development of Modern Vocational Education' and the 'Plan for the Construction of Modern Vocational Education System (2014-2020)' in constructing a modern vocational education system [9]. For example, some scholars took 166 pieces of vocational education policy texts issued by the central government from 2000 to 2019 as the research object, and used Nvivo and other softwares to analyze the problems of policy tools' overflow or insufficient use in different periods, and then proposed that the collaboration among different vocational education policy promulgators should be strengthened and the structure of the use of coordinated policy tools should be optimized [10].

Although the above research analyzes the current dilemma of vocational education in China that fails to meet market demand from different perspectives, and puts forward relevant suggestions. However, the analyses take a grand narrative strategy, and fails to incorporate candidates' personal subjective thinking into the vision, which is unable to respond to the shortage of traditional students-senior technicians in the background of vocational education development. Some scholars have actually paid attention to the problem of personal choice, and emphasized that the preference for high socioeconomic status has led people to more expect to choose general education rather than vocational education, which affects the development of vocational education, so the author proposes to achieve high-quality development of vocational education by enhancing the role of vocational education in promoting class mobility ^[11]. However, the analysis still fails to respond to the dilemma of 'skill shortage' faced by the current labor market because it fails to jump out of one-way dimension of instrumental rationality ^[12]. Basing on shortfalls mentioned above, this paper will absorb the couple perspective of tool rationality and value rationality as an alternative analytical method, and put forward specific suggestions accordingly.

3. The Rationality of Value: Unconditional Pursuit of 'Orthodoxy': 'Ordinary High School - College Entrance Examination - University - Work'

Weber once distinguished between instrumental rationality and value rationality in *'Economy and Society'*, and argued: *'Whoever orients his actions according to aims, tools, and collateral consequences, and at the same time makes a rational weighing between tools and aims, aims and collateral consequences, and finally compares all possible aims, which is instrumental rational behavior.'* The behavior of instrumental rationality is therefore characterized by rationality and weighing. Weber goes on to say that *'value is always irrational when it is rational, and the more it raises the value to which it is oriented to its actions to absolute values, the more irrational it becomes, because the more it unconditionally considers just the inherent value of the action (pure ideology, beauty, absolute goodness, absolute obligation), the more it disregards the consequences of its actions'*.^[13] Value rationality, therefore, expresses a pure belief in unconditional inherent value, regardless of economic achievement.

The study about general education was taken as 'orthodox' can be traced back to a paper finished by Yan-pei Huang in 1917. In the paper, he discussed the status and role of vocational education, he mentioned that *'the status of vocational education in the school education system should be consistent, complete and orthodox'*, where 'orthodoxy' means that the traditional belief of general education to prepare for further education and vocational education to prepare for employment^[14]. This concept, except for a brief change from 1960s to 1980s, has been influential to this day. Today, the belief has gradually evolved into a new form, namely the selective path of *'ordinary high school-college entrance examination-university-job'* ^[15]. Interviewee C, a first-year high school student currently studying at a vocational senior high school in L City, mentioned the troubles he encountered when attending a vocational school in an interview.

Interviewer: In fact, our country pays great importance to high-skilled talents, and enterprises also need high-skilled talents. Besides, the employment rate of vocational students is high and the salary is also high, so will this be attractive to junior high school students?

Interviewee C: I think it's unlikely.

Interviewer: Why?

Interviewee C: When people especially referring to relatives ask you which school you are studying in, as soon as they know you are a vocational student, you will be ridiculed.

Interviewer: Why are you ridiculed by the people and how are you ridiculed?

Interviewee C: Because the older generation think that if they have enough abilities to read books, they of course choose general high schools rather than vocational high schools. Even you have enough self-confidence and interest that help you select vocational high school and relevant major, but when you celebrate Spring Festival with the old generation, and as soon as they ask your major and school, you will suffer great setbacks caused by their negative evaluation to vocational education.

Interviewer: Could you tell us who are the old generations specifically?

Interviewee C: Mainly grandpa and grandma. When they discuss their grandchildren, they will refer to the subject.

Interviewer: Why do they think general education is good?

Interviewee C: Because enrollment score of general high school is higher than that of vocational high school. So, they take the former as good for granted.

Interviewer: In addition to enrollment score, are there other else reasons?

Interviewee C: Anyway, I was instilled into read books by parents.

Interviewer: But you also can read books in vocational high school?

Interviewee C: they think there is an only way to acquire knowledge that is to ordinary high school following junior high school, and then to university, and that is the good student just they think.

Another interviewee L, the mother of a junior high school student, who is currently a lecturer at a university in L City, comments on the status of vocational schools:

‘The middle high school entrance examination itself, in my opinion, is a kind of stratification. Students with good grades will be enrolled by the general high school, while students with poor grades will only be enrolled by vocational school. What is the most important is that students learning hard will be ridiculed in the vocational high school, so there is a quite poor learning atmosphere, and therefore, you have almost no possibility of entering into a college once going to vocational high school.

In fact, there is the stratification in junior high school stage, and then after passing this selective thing that is the middle school entrance examination, basically if the child can be enrolled by a general high school, few parents would send their children to a vocational high school. Then what is the situation after the stratification, that is, the poor student, I don't mean to deny him whose mark is only not very good or the naughty child, in fact, some of them are very smart, and then they are enrolled by vocational high school. After enrolled by the vocational high school, it will appear what I said above. In fact, the vocational high school also has some good teachers.

The two interviewees expressed the view that entering a vocational school will be ridiculed and cannot expect a good future. The reason is that the path of their acquire knowledge is deviated from the right track (‘orthodox’). In fact, in today's labor market, whether it is the human resources department of the enterprise or other departments, it is generally believed that those who accept the orthodox path that is ‘ordinary high school-college entrance examination-university-job’ are qualified candidates ^[16].

In the whole society, once the consensus that only ‘general high school-college entrance examination-university-work’ is the orthodoxy have been reached, this concept will soon spread to all groups, including not only those who have entered into the labor market, but also junior high school students and college students who have not entered into the labor market. So that students in school would unconsciously internalize it, just as interviewee C mentioned, some junior high school teachers often preach only ‘bad kids’ to go to secondary vocational school in the classroom, which in turn reconstructs and strengthens this ‘orthodoxy’, which

forms an 'orthodox' circle of agreement. Once formed, the circle of agreement is exceptionally stable and constantly constructed over generations. And it is the unbreakable circle formed by market consensus, teachers, parents and children's pursuit to 'orthodoxy' that makes it difficult for all current reforms to be effective.

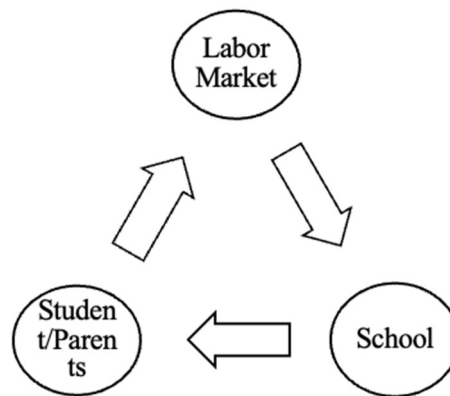


Figure 3. the reproduction process of the 'orthodox' circle

4. The Results of Unconditionally Searching for 'Orthodoxy': All Reforms Basing on Instrumental Rationality are Hardly Effective

Unlike hardware, ideas are very difficult to change once formed. In fact, since November 2005, when the State Council of China issued *'the Decision on Vigorously Developing Vocational Education'*, the state has successively issued various documents such as *'the 20 Vocational Education Rules'*, *'Double High Plan'* and *'China's Education Modernization 2025'*, but we have not seen a substantial change in the dilemma of enroll traditional students of vocational education system, nor have we seen an effective alleviation of the shortage of high-skilled talents in the labor market. The root cause of this dilemma, the paper argues, is that these reforms adopted by the state have not broken the market-teachers -parents/student circle of agreement.

Of course, another important reason is that parents-students have alternative options, such as after failing the senior high school entrance examination, they can be as a return student in order to enter into ordinary high schools rather than being forced to enter vocational high schools. However, after the State Council issued *'the National Vocational Education Reform Implementation Plan in 2019'* and the General Office of the Ministry of Education issued *'the Notice on Doing a Good Job in the Enrollment of Secondary Vocational Schools in 2021'*, the policy about roughly equivalent ratio of vocational and general education will be thoroughly implemented, which means that the alternative choices for parents-students who fail in the high school entrance examination is greatly compressed, and many students who fail the high school entrance examination can only enter into vocational secondary schools rather than as a return student. But can the reform really drive the quality of vocational education? In the interview, Interviewee C, a first-year vocational high school student, talked about his learning experience and the motivation of other students choosing a vocational high school.

Interviewer: How did you feel when you entered into this vocational school?

Interviewee C: I feel that some teachers are very perfunctory.

Interviewer: Do you love the major?

Interview C: I don't like it.

Interviewer: So, are there any classmates around you who apply for vocational high schools purely basing on their own wishes?

Interviewee C: There are some, and they think vocational high school is more fun, so they choose it.

Interviewer: How do you understand this 'fun'?

Interviewee C: Because study in vocational senior high school is a little easier, while study in general senior high school is a little more difficult, but in fact, learning in former is more difficult.

Interviewer: Why is it a little more difficult for vocational school, and how do you understand it?

Interviewee C: Because people in vocational high schools are too 'social', then teachers are more perfunctory, and interpersonal relationships are difficult to deal with.

Therefore, under the strong education classification policy, most of people choosing vocational secondary school are forced, not basing on loving a certain technology or being interested in mastering a certain professional skill, so they lack a persistent pursuit of craftsmanship. Even after entering into vocational schools, as they are affected by the unfavorable learning atmosphere, they give up their previous academic dreams. Therefore, this is still far from the goal of building a large country of craftsmen advocated by the central government.

5. Suggestions: Reform Should Be Guided by the Coupling of Value Rationality and Tool Rationality

Then, how to overcome the current dilemma of vocational education development, we believe that the core solution is the problem of 'identity', which depends on the coupling of value rationality and tool rationality, that is, all reforms cannot ignore breaking the 'orthodox' circle of agreement formed by market-parent/student-school, otherwise, it is difficult for us to cultivate craftsmen, but only to cultivate people just for bread. Specific recommendations are as follows:

First, the government should cultivate an atmosphere of 'occupation as vocation or a sacred sense to occupation. This vocation view can help people overcome narrow secular interests. The paper does not deny that the establishment of this view of vocation has a long way to go, but the core is that it cannot be avoided. The paper believes that establishing a sense of professional honor is the core of developing China's vocational education system and improving the quality of vocational education. The sense of professional honor here is especially reflected in taking pride in the occupation itself than just taking it as a tool for making a living. In terms of specific implementation, it can be carried out simultaneously from multiple dimensions such as classroom teaching, rewards, public opinion orientation, and improvement of the education system.

Second, establish specialized second-level colleges, that is higher technical colleges, in some famous or key universities. This measure may be the most effective measure to enhance the prestige of vocational education in a short period of time. In fact, it is the clear division between vocational schools and universities that greatly reduces the status of vocational schools and makes vocational schools fall into the 'lemon dilemma'. Our view is that the establishment of higher technical colleges in key universities does not reduce the quality of teaching and researching, because it exists as a relatively independent form of secondary colleges. Relying on the reforming mentioned above, on the one hand, it can provide a more favorable learning platform for students interesting in vocational education, and on the other hand, it will help change people's concept of vocational education.

Third, encourage the simultaneous development of school teaching, apprenticeship and family inheritance. For ideological reasons, During the Cultural Revolution, the inheritance of

traditional crafts or apprentices were eliminated as feudal remnants^[17]. In fact, the family or apprentice inheritance of traditional crafts often made future generations feel prouder, and the technology became more exquisite through the accumulation of multiple generations. In the worldwide, the development of industrialization has not completely smoothed out handmade products, and the two are not binary opposites. Classic examples are Swiss watches and handmade leather shoes^[18]. Therefore, we need to encourage a diverse approach to skilled talent development, which is equally effective as long as it is recognized by industry associations.

Fourth, allow some enterprises to pilot the establishment of a lifetime employment system and a seniority system. Although the state has been encouraging school-enterprise cooperation, many enterprises are reluctant to invest a lot of money in training vocational students, considering that the employees they recruit may flow to other enterprises in the future^[19]. However, by establishing a lifetime employment system and a seniority system, companies can greatly reduce this concern. Of course, the lifelong system is not a selling system, and employees still enjoy the protection of laws such as the Labor Law.

References

- [1] Xinping Li: The Demand for Skilled Talents is Vigorous[N]. People's Daily. March 19, 2021 Version 19.
- [2] Why Vocational Colleges Have Fallen into the 'Enrollment Quagmire' that Good Employment but difficult to Recruit[N]. China Shandong Net. 2021-07-26.
- [3] Rong Liu, Lei Sang: Conceptual Transformation and Path Analysis of Vocational Education Development under the Background of Manufacturing Transformation and Upgrading[J]. Education and Career, 2019(16): 32-35.
- [4] Tongyu Luo: Research on the Status and Development Countermeasures to Vocational Education in China[J]. Chinese Adult Education. 2012(07): 91-94.
- [5] Central Research Group of Jiusan Society. Thoughts on Further Promoting the Development of Vocational Education in China[J]. Education & Careers. 2018(14): 52-53.
- [6] Yangqun Zhang: The Analysis on the Role of NGOs in Promoting the Development of Vocational Education[J]. China Vocational and Technical Education. 2010(21): 5-7.
- [7] Xin Zhan: Market Regulation and Government Intervention in the Development of Vocational Education[J]. China Vocational and Technical Education. 2005(11): 39-40.
- [8] Haisheng Pan, Xin Cheng: The Analysis of National Vocational Education Governance Ideas from the Revised Draft of the Vocational Education Law of the People's Republic of China[J]. China Vocational and Technical Education, 2020(10): 14-19.
- [9] Daokai Ge: Improve the Modern Vocational Education System and Highlight the Characteristics of Vocational Education Types[J]. China Vocational and Technical Education. 2019(07): 19-23.
- [10] Xinyi Qiao, Ling Zhang: Research on China's Vocational Education Policy since the 21st Century: Policy Text Analysis Based on Nvivo[J]. Vocational Education Research. 2021(02): 11-16.
- [11] Xizhen Zhuang: Educational Preference and Development of Vocational Education[J]. Educational Sciences. 2006(02):69-72.
- [12] Xinping Li. Skilled Personnel Need to Be Strong [N]. People's Daily. March 19, 2021 Version 19.
- [13] Marx Weber, Translated by Rongyuan L: Economy and Society (Volume I)[M]. Beijing: Commercial Press Press.

- [14] Peiqing Sun: History of education in China[M]. Shanghai: East China Normal University Press, 2003: 460.
- [15] Jingjing Zheng, Zhenglu Wang: The Analysis of the reasons and countermeasures of Enrollment Difficulties in Secondary Vocational Schools[J]. Journal of Henan University of Science and Technology. 2014(12): 48-54.
- [16] Jingjing Zheng, Zhenglu Wang: Analysis of the Reasons and Countermeasures of Enrollment Difficulties in Secondary Vocational Schools[J]. Journal of Henan University of Science and Technology. 2014(12): 48-54.
- [17] Bingzhong Gao: Safeguarding of China's Intangible Cultural Heritage and the End of Cultural Revolution[J]. Open Era, 2013(5): 143-152.
- [18] Christopher Dick Anna Cochmont, Jing Jin: Handmade luxury[J]. Foreign Science Abstracts, 2006(4): 12-14.
- [19] Xin Zhan. Market Regulation and Government Intervention in the Development of Vocational Education[J]. China Vocational and Technical Education. 2005(11): 39-40.