

The research on the development of degree apprenticeship in the construction of application-oriented university in China

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ABSTRACT

Faced with the contradiction between labor quality and market demand, China's higher education reform has also ushered in new challenges. Under the background that many countries in the world are trying to introduce degree apprenticeship to cultivate high-quality and high skilled talents, this paper believes that China's higher education must also make corresponding changes, and introduce degree apprenticeship to improve the existing predicament. After analyzing the relevant data of the change of the number of graduates and the decline of the employment rate of college students, this paper discusses the necessity and feasibility of building an application-oriented university in China.

Keywords: *High education, Degree apprenticeship, Application-oriented University*

1. INTRODUCTION

China's economy is changing from high-speed development to high-quality development, which inevitably requires high-quality labor supply. However, the current labor supply market is unable to realize the value of labor force. On the one hand, labor education is generally not high, even if there are highly educated labor, but they cannot master the required skills, leading to the "labor shortage" and "shortage of skilled workers" in many enterprises. The progress of science and technology has brought impact on the labor market, resulting in the contradiction of structural employment, which makes the unemployment gap of labor force constantly expanding. On the other hand, China's higher education has developed rapidly. Since 2019, more than 10 million people have applied for the college entrance examination. In 2020, the enrollment of master's degree candidates will be increased by 189000, and the enrollment of college students will be increased by 322000. This change also reflects the tendency of China's higher education to improve the quality of labor force and solve the above-mentioned structural employment contradiction. However, the current higher education, especially the construction of application-oriented universities, still has the problem of emphasize theory over practice, which leads to the failure to accurately match the market demand to provide high-quality labor force for the market.

The degree apprenticeship system has been implemented in the UK since March 2015. It is a kind of Apprenticeship at the master's level. Apprentices can obtain the same bachelor's degree or master's degree as full-time university graduates. Degree apprenticeship courses and teaching plans are jointly designed by enterprises and universities.

The demand of enterprises for degree apprenticeship is increasing. Comprehensive universities and research universities have become the main institutions of higher education to implement degree apprenticeship.

Since May 15, 2019, the general office of the Ministry of Education issued the notice on comprehensively promoting modern apprenticeship, which broadly promotes the modern apprenticeship with Chinese characteristics under the guidance of the government, industry participation, social support, enterprises and vocational schools. Vocational colleges are the main institutions to implement modern apprenticeship. This modern apprenticeship is equivalent to the 4-5 level higher apprenticeship system of the British apprenticeship system. Students can obtain higher education certificate or basic degree. Therefore, in order to improve the applicability of degree education and the practical ability of students, it is necessary to improve the existing modern apprenticeship and introduce degree apprenticeship in the construction of Applied Universities in China.

2. LITERATURE REVIEW

2.1. The Connotation of Apprenticeship

The theory of apprenticeship originated in western countries. It developed from traditional apprenticeship and craft to apprenticeship in general. Compared with tutoring and mentoring, apprenticeship has its unique core and essential characteristics, although it is quite close to both. First of all, teaching and mentoring are mainly used as an auxiliary means of centralized teaching or professional system[1], and they are not as direct as apprenticeship in considering

teaching and learning as a whole [2]. Apprenticeship is to solve education problems from the whole and it is a major pedagogy interaction means[3]. Secondly, apprenticeship strengthens face-to-face, one-to-one interpersonal interaction in the process of education, thus forming a close bond between masters and apprentices, which is especially reflected in the traditional technical apprenticeship. In the modern education system, the traditional role of "teacher" has become the combination of all university basic courses, systematic training and work experience. The traditional one-to-one apprenticeship relationship has transformed into sharing among many groups, institutions and systems, but its essence has not changed[4]. The current training of lawyers, doctors and other professionals is in fact the continuation of this apprenticeship. The research on Apprenticeship in China is later than that in western countries.

The development of modern industrial society inevitably requires the matching of education and learning system. At present, the complete Apprenticeship at all levels in European countries represented by Britain is inseparable from the soaring demand for high-level technical talents in the process of elevated-level industrial development. However, the theoretical depth of China's apprenticeship research still needs to be deepened, and a perfect apprenticeship system should be constructed in combination with the historical and cultural background with Chinese characteristics. However, the current research on modern apprenticeship is still focused on the development of apprenticeship in vocational schools, which is lack of inheritance and improvement of traditional apprenticeship, furthermore, it does not reflect the change of current social demand for talents. In terms of process, it lags the development level of China's social industry.

2.2. Research on the Promotion Path of Apprenticeship

2.2.1. Operation mechanism and object

From the current research situation of our country, most scholars think that "marketization" can be adopted to promote, such as "market economic system regulated by the state, and the formation of a unified market system and market operation mechanism"[5], the market economy system was replaced by the dual track transitional system [6]. Some scholars also believe that based on the "stakeholder" theory, modern apprenticeship can adopt the mode of government guidance, industry participation and school enterprise dual owner sports person, combining property rights organization and contract organization to form stakeholder organization [7]. Modern apprenticeship should be carried out by balancing and satisfying the interests of all parties. However, there is no research on the high-level technical talents urgently needed by the development of China's labor market.

2.2.2. The specific path of promoting modern apprenticeship

Some scholars believe that the government should play an administrative role and solve the worries of enterprises participating in modern apprenticeship by formulating relevant tax and enterprise training subsidy system [8]. And through legislation to clarify the rights and responsibilities of each subject, to build a modern apprenticeship legal liability system with "administrative responsibility as the main body, criminal and civil liability as the supplement" [9].

In general, the existing research focuses on how to carry out the modern apprenticeship in the pilot units in practice and promote the modern apprenticeship as soon as possible by clarifying the responsibilities of each subject. However, the existing theoretical research is mostly based on the perspective of pedagogy, lacking the strong support of multi angle and multi-disciplinary theory. In addition, modern apprenticeship is influenced by foreign apprenticeship to a certain extent, but it also has Chinese characteristics and is affected by the local situation. Therefore, the implementation of modern apprenticeship in China should be changed according to China's cognitive environment and institutional environment, with different development paths in China.

Based on the above problems, this paper believes that it is imperative to study the improvement and development of apprenticeship in the local context and introduce degree apprenticeship to help the cultivation of high-level technical talents in China. However, it is necessary to conduct in-depth discussion on the implementation of this system from the multi-disciplinary background, such as the discussion of the institutional and non-institutional nature of modern apprenticeship, and the legal marginal participants. The interactive relationship between the practice of community activities and the relationship between the school's personnel training and the enterprise's strategic talent management system need to be further explored.

3. CONTEXT OF CONSTRUCTING DEGREE APPRENTICESHIP

China's construction of application-oriented universities is similar to that of European and American countries, that is, to solve the problem of mismatch between talent training and economic and social development needs. With the expansion of enrollment, China's higher education has achieved a great leap forward development in a short period of time, but also brought about the employment problem of graduates. But at the same time, the human resources market shows that many enterprises cannot find the talents they need. The root cause of this contradiction is that the talents cultivated by universities do not meet the needs of the industry, and there is a structural imbalance in talent training, that is, the surplus of academic talents and the serious lack of applied talents. As the table 1 shows, number of university graduates increased quickly in recent 6 years.

While along with the graduates' number increased, the employment rate has not kept pace with the growth of the number of graduates, which is as figure1 shows.

Table1 number of university graduates (2014-2019)

Year	2019	2018	2017	2016	2015	2014
Number of ordinary colleges and universities graduates(10000)	758.5298	753.3087	735.8	704.2	680.9	659.4
Number of graduate students (10000)	63.9666	60.4368	57.8045	56.3938	55.1522	53.5863
Total	822.4964	813.7455	793.6045	760.5938	736.0522	712.9863
Growth rate	1.075385	2.537914	4.340122	3.33422	3.235111	3.321974

Source: national bureau of statistics websites

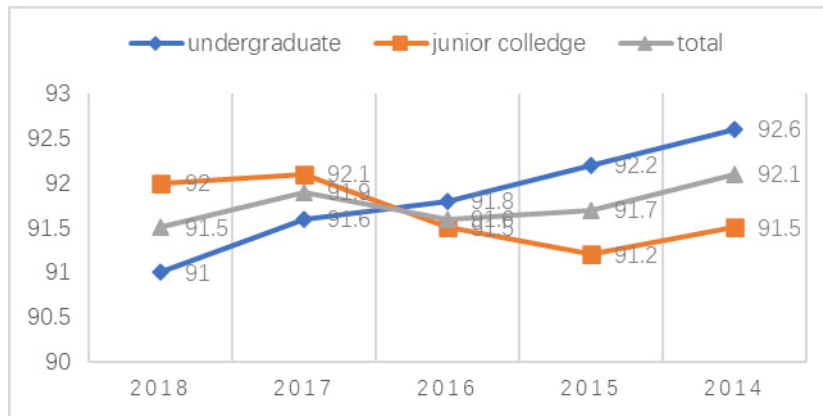


Figure1 Employment rate of College Students(2014-2018)

Source: Employment report of Chinese college students in 2019[10]

The employment rate of undergraduates has been declining slowly, while the employment rate of higher vocational colleges has been rising steadily. As the figure 1 shows, employment rate of College Students changed gradually, the tendency of employment is decreasing in whole from year 2014 to 2018. The employment rate of university graduates in 2018 was 91.5%. Among them, the employment rate of undergraduate graduates (91.0%) continued to decline slowly, 1.6 percentage points lower than that of 2014 (92.6%); the employment rate of higher vocational college graduates was 92.0%, which was 0.5 percentage points higher than that of 2014 (91.5%). The employment rate of graduates in the last two years is higher than that of the same year. Therefore, the construction of Application-oriented Universities in China needs to transform some ordinary undergraduate colleges and universities to trigger the organizational restructuring of all colleges and universities, so as to strengthen the awareness and ability of training applied talents.

4. CONCLUSION

According to the "opinions on the establishment of institutions of higher learning during the 13th five year plan" issued by the Ministry of education in 2017, the application-oriented university is clearly defined as a kind

of University including research universities, vocational and technical colleges. This is a great progress in the construction of higher education classification system in China, but the positioning, development goals and evaluation criteria of application-oriented universities are not clear. Taking the setting standards of colleges and universities as an example, the "Interim Provisions on the establishment of ordinary undergraduate schools" provides basic construction standards for ordinary undergraduate colleges and universities, including those in transition. However, these standards are basically academic oriented. Under the framework of these standards, the relevant transitional institutions will continue to develop along the track of academic institutions. Without the basic technical standards, the construction of application-oriented universities has no specific goals, and the transformation and development of related colleges and universities has no basis. In general, the development of degree apprenticeship is of great practical significance for the development of undergraduate colleges and universities in the transition period and the improvement of the overall quality of China's higher education.

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