

Analysis of the Current Situation of Vocational Teacher Education Based on The New Teacher Training and Strategy Research

Junde Wang¹, Qingsong Zhou¹, Yongqiang Yang¹

¹Pu'er College, Yunnan, China

*Corresponding author: 1914700137@qq.com

Abstract

In view of the gradual shrinkage of vocational teacher education, the lack of social recognition, the uneven distribution of vocational teacher education in China, the unsoundness of disciplines, the lack of new teacher education characteristics, the multiple positioning of training objectives, the curriculum system does not highlight the characteristics of vocational teacher education, and the detachment from the needs of teachers of various disciplines in regional vocational education. This paper takes the basic idea of accelerating the construction of a high-quality "two-teacher" teacher team and deepening the new teacher education, and takes the current situation of vocational teacher education as the object of research, through data collection, collation and research methods. The study explores the current situation of vocational teacher education and combines it with the standards of vocational teacher education certification. The development of vocational and technical teacher training schools, vocational teacher education, and training objectives are used to establish a new mechanism that meets the national vocational teacher certification standards, i.e. the needs of regional vocational education teacher training team construction.

Keywords

New teacher training; current situation of vocational teacher training; promoting teacher training certification; new mechanism of vocational teacher training education.

1. Introduction

In order to implement the spirit of the Fifth Plenary Session of the 19th CPC Central Committee and the decision to implement the Opinions of the CPC Central Committee and the State Council on Comprehensively Deepening the Reform of Teacher Training in the New Era [1], and to promote the implementation plan of deepening the reform of "dual-teacher" teacher training in vocational education in the new era [2], the construction of high quality The "two-teacher" teacher team. The construction of vocational education teachers is the basic of "dual-teacher" teachers, and it also provides a strong talent guarantee and intellectual support for the construction of "dual-teacher" teachers.

The basic design process of this paper is based on the data collection and collation of vocational and technical teacher training colleges, the current situation of vocational and technical teacher training construction, the transformation boom, the characteristics of the new teacher training, training objectives, teacher training certification, combined with theoretical analysis and research methods, to address the bottlenecks that restrict the reform and development of vocational teacher training education.

The aim of this paper is to analyse the current situation of vocational teacher education and absorb the achievements of the "new engineering", "new teacher training" and "new double-creation" and other innovations of higher education personnel training models in the new era [10]. In accordance with the Standards for Professional Accreditation of Vocational and

Technical Teacher Education, this paper actively promotes a new mechanism for the development of vocational teacher education, and provides a guarantee of talents for the construction of vocational education teachers.

2. History of the Development of Vocational and Technical Teacher Training Schools and The Construction of Vocational and Technical Teacher Training

With the deepening of reform and opening up, the market created a huge demand for skilled personnel, which provided a solid foundation for the development of vocational education. 11 vocational and technical teacher training colleges were established in China during the 1980s, and this period was the peak of vocational teacher training education. It provided an important support for the rapid development of secondary education teachers and secondary vocational education at that time. However, with the adjustment of vocational and technical teacher training to dilute the function of vocational teacher education from 1994 to 2002, Shanghai Technical Teachers' College, Zhejiang Rural Technical Teachers' College, Hebei Vocational and Technical Teachers' College, Shanxi Vocational and Technical Teachers' College and Ningbo Agricultural School in Zhejiang Province were adjusted one after another, resulting in a significant reduction in the power to train vocational education teachers, creating a dilemma that could not cover the whole country, resulting in the predicament of a serious imbalance in the training force of vocational education teachers in various regions [4].

According to statistics, as of May 2022, there were 1270 undergraduate colleges and universities nationwide [6]; after data screening of public undergraduate colleges and universities from the Ministry of Education's national list of general higher education schools as of 31 May 2022, 849 public undergraduate colleges and universities were consulted for their official websites and major settings [5]. Among them, only Tianjin Vocational and Technical Teachers' University, Jilin Engineering and Technology Teachers' College, Hebei University of Science and Technology Teachers' College, Jiangxi University of Science and Technology Teachers' College, Guangdong University of Technology Teachers' College, Guangxi Institute of Science and Technology Teachers' College, Henan Institute of Science and Technology, Guangxi Vocational Teachers' College and Fujian Institute of Technology Teachers' College.

Through the collection and collation of information, there are 28 vocational and technical teacher education majors in Tianjin Vocational and Technical Teachers' University; 20 vocational and technical teacher education majors in Jilin Engineering and Technology Teachers' College; 11 vocational and technical teacher education majors in Hebei Science and Technology Teachers' College, 19 vocational and technical teacher education majors in Jiangxi Science and Technology Teachers' University; 29 vocational and technical teacher education majors in Guangdong Technical Teachers' University, Guangxi Science and Technology Normal College has 2 vocational-technical teacher training majors; Henan Institute of Science and Technology has 23 vocational-technical teacher training majors; Guangxi Vocational Teacher Training College has 8 vocational-technical teacher training majors; Fujian Technical Teacher Training College has 12 vocational-technical teacher training majors as shown in Table 1.

Table 1. Table of nine vocational and technical teacher training colleges offering vocational and technical teacher training courses

School	Undergraduate programmes offered	Vocational and Technical Teacher Training	Percentage of
Tianjin Vocational and Technical Teachers' University	52	28	53.85%
Jilin Engineering and Technology Teacher Training College	52	20	38.46%
Hebei Science and Technology Teachers' College	75	11	14.67%
Jiangxi Normal University of Science and Technology	65	19	29.23%
Guangdong Technical Teachers' University	74	29	39.19%
Guangxi Normal University of Science and Technology	31	2	6.45%
Henan Institute of Science and Technology	70	23	32.86%
Guangxi Vocational Teacher Training College	21	8	38.1%
Fujian Technical Teachers College	35	12	34.29%

3. Reasons Hindering The Professional Development of Vocational Teacher Training

3.1. The traditional university transformation boom

In the late 1990s, with the national strategic adjustment, the change from unitary schooling to diversified development brought unprecedented competitive pressure on local higher teacher training colleges, and in order to survive and develop and to effectively reconcile the limited teacher education job market, many local traditional teacher training colleges embarked on the path of integrated schooling from traditional teacher training [5]. This integration is highlighted by: expanding the range of specialisations to increase the visibility and social impact of the school, and promoting the construction of non-teaching disciplines in the school. According to data, it is found that 64% of local teacher training colleges are keen to de-teaching after upgrading, making many traditional teacher training majors with strong teacher qualifications transform to non-teaching, and even some local colleges cut out teacher training majors in the name of transformation and development after upgrading. This has led to the dilution and development of basic teacher education and vocational teacher education, hindering the construction of teacher training disciplines, teacher training teams and teacher education research. According to statistics, since 2000, local teacher training colleges and universities in China have been upgraded or merged one after another, and by 2016, a total of 114 local teacher training colleges and universities were upgraded to undergraduate programmes, of which 55 were merged and newly built, 59 were newly built on the basis of the original ones, 74 institutions were transformed into comprehensive universities after being upgraded to

undergraduate programmes, and 40 continued to retain teacher training as a feature, as shown in Table 2.

Table 2. Promoted local teacher training colleges, 2000-2016

Year	Merger or incorporation	New construction	Retention of teacher training
2000	22	4	18
2001	7	1	4
2002	7	7	4
2003	11	2	0
2004	2	14	0
2005	2	0	1
2006	1	9	1
2007	2	5	0
2009	0	5	4
2010	0	2	2
2012	0	2	0
2013	0	1	0
2014	1	1	1
2015	0	3	3
2016	0	3	2

3.2. Lack of clarity in the positioning of disciplinary training objectives

The new teacher education [9] is the theme of teacher education in the 21st century, an upgraded model of traditional teacher education adapted to teacher education in the new era, and a feature of the transformation of teacher education in the new era of socialism with Chinese characteristics. The construction of vocational teacher education should be adapted to national strategies, to the standards of the teaching profession in the new era, and to the requirements of the "artisan teacher".

Firstly, basic teacher education mainly trains teachers for early childhood, primary and secondary schools to ensure the quality of China's basic education teaching force. Vocational teacher education is mainly for secondary vocational education, vocational technical schools and technical schools to train teachers, and is the education for China to train "artisan teachers", which is the basic force for building a high-quality "dual-teacher" vocational education teaching force in China. Secondly, there is a fundamental difference between the two. The objective of vocational teacher training is to integrate into the strategic needs of regional vocational education reform and development and industrial transformation and upgrading, while the objective of primary and secondary school teacher training is oriented towards regional basic education reform and development.

After collecting and collating the talent training programmes of these nine vocational and technical teacher training institutions, the following four main problems were found to exist. One of them is the lack of vocational teacher training characteristics, new teacher training characteristics and inaccurate positioning of subject training objectives. The formulation of talent training objectives does not reflect the integration with the development characteristics of vocational education in the region. Secondly, some schools have multiple training objectives for teacher training majors, without refining the training objectives and auxiliary objectives, such as the training objectives of the Chinese language and literature teacher training majors

for both primary and secondary schools and vocational education. Thirdly, the training objectives of vocational teacher training majors offered by some institutions are not combined with the needs of vocational education in the region for in-depth study, and the personnel training programmes formulated do not meet the standards of teacher training for vocational education majors in the region, and do not highlight the characteristics of vocational teacher training in the region, and do not highlight the "dual-teacher" type in the personnel training objectives. The training objectives do not highlight the "dual-teacher" standard. Fourthly, resources are wasted and teachers are scattered, with one major being offered by two second-level colleges at the same time.

4. Accreditation Status of Vocational Teacher Training Programs

Since the implementation of the document "Implementation Measures for Teacher Education Accreditation in General Higher Education Institutions (Provisional)" (Teacher [2017] No. 13) in October 2017, the author has conducted statistics on the achievements of teacher education accreditation in the past three years since the work was carried out and the situation of teacher education majors eligible to pass accreditation in each province, as shown in Tables 4 and 5.

Table 3. National Teacher Certification Adoption Statistics 2019-2021

Annual	Pre-school education	Primary Education	Secondary Education	Special Education	Vocational and Technical Teacher Education
2019	5	11	46	0	0
2020	18	21	120	0	0
2021	17	27	215	1	2

Table 4. Conditional accreditation of teacher education programmes by (province/autonomous region/municipality directly under the Central Government), 2019-2021

Distribution	Beijing	Tianjin	Shanghai	Chongqing	Hebei	Shanxi	Liaoning	Jilin	Heilongjiang	Jiangsu	Zhejiang
2019	4	0	1	4	0	0	0	6	0	27	5
2020	8	2	8	14	10	0	5	5	0	14	16
2021	3	4	12	14	12	1	11	18	5	25	22
Distribution	Anhui	Fujian	Jiangxi	Shandong	Hubei	Hunan	Guangdong	Hainan	Sichuan	Guizhou	Yunnan
2019	0	3	0	0	3	0	0	0	0	0	0
2020	5	12	0	14	9	5	11	0	5	5	1
2021	11	12	5	19	9	0	8	2	10	10	5
Distribution	Shaanxi	Gansu	Qinghai	Henan	Inner Mongolia	Guangxi	Xizang	Ningxia	Xinjiang		
2019	4	0	0	0	0	5	0	0	0		
2020	4	0	0	5	0	0	1	0	0		
2021	4	1	5	11	4	11	5	2	1		

5. Analysis of Results and Its New Mechanisms

First of all, looking at the institutions that train vocational and technical teachers at present, they cannot meet the requirements of building a good vocational education system with Chinese characteristics and speeding up the construction of a modern vocational education system as proposed in the document "Implementation Plan for National Vocational Education Reform [7] and "Opinions on Promoting the High-Quality Development of Modern Vocational Education [8] issued by the State Council, and from the opening of vocational and technical teacher training programs, the gradual dilution of vocational teacher education It cannot meet the needs of the construction of vocational and technical teacher training teams in various regions. Secondly, from 2000 to 2016, there was a boom in the transformation of local traditional teacher-training colleges and universities, or a boom in de-teaching, and from the data, the colleges and universities that continued to operate with teacher-training as a feature

were concentrated within 2000, and very few retained teacher-training as a feature in their orientation, and sixty percent of the colleges and universities switched from operating with teacher-training features to integrated operation, and again the merging, incorporation and transformation of teacher-training colleges and universities led to the Construction and weakening, resulting in the gradual dilution of teacher training characteristics, and even some institutions directly cut teacher education, part of the institutions with strong teacher training majors to non-teacher training in excess, resulting in the professional four not phase, to my school's physics majors, for example, in the 2018 version - 2020 version of the personnel training program training objectives for non-teacher training, the curriculum has teacher teaching courses but does not have the characteristics of teacher education. When students carry out social practice internships, eighty percent of them take place in primary and secondary schools. The above illustrates the problems highlighted by the current teacher training programmes offered by local universities, which are seriously detached from the needs and services of regional economic development, gradually diluting the service purpose and cooperation for teacher training in regional basic education, and lacking research on the construction of teachers in various disciplines of basic education in the region. As a result, the teacher education offered by local undergraduate institutions is not recognized by the regional basic education system, and even loses its regional teacher education characteristics and social recognition, leading to difficulties in employment for teacher training graduates. Once again the subject training objectives are not clearly positioned. Objectively, the transformation of institutions around the world into comprehensive schools after upgrading, the constant addition of non-teacher education majors or the transformation from teacher education majors to non-teacher education majors, the massive expansion of recruitment, the decomposition of teacher education forces and other influences have led to the subject training objectives of teacher education majors losing the characteristics of teacher education majors and the characteristics of new teacher education and professional confusion. There is no in-depth educational research combined with the needs of secondary education in the region, which makes the discipline training objectives unclear. Subjectively, the traditional teacher training majors in various places are detached from the orientation of serving the construction of teachers for secondary education in the region because of promotion, de-teaching and transformation, leading to a shortage of vocational education teachers and hindering the unbalanced development of vocational teacher education and the construction of vocational teacher education disciplines in line with the region. Finally in terms of the opening of vocational teacher training colleges, the conclusions that are in a position to be adopted; only one, Tianjin Vocational and Technical Teacher Training University and Guangdong Technical Teacher Training University. In terms of distribution, only Tianjin, Guangdong, Guangxi, Jilin, Henan, Jiangxi, Hebei and Fujian are currently involved in vocational teacher education, making the construction of vocational teacher education restricted and not conducive to a sound disciplinary system of vocational teacher education. As of 2022, only nine institutions are training vocational and technical teacher education students, and only 152 majors have their training objectives set as vocational and technical teacher education, which lacks competitive pressure and hinders the development of vocational teacher education and the construction of disciplines.

5.1. In-depth study on the development of a regional vocational education teaching force in various disciplines

The orientation of vocational teacher education is to train highly qualified and professional "two-teacher" teachers, whose training targets are mainly engaged in vocational education and teaching, and whose training level directly affects the quality of education and teaching of the entire vocational education system. At present, the level of vocational teacher education in

China cannot fully meet the development needs of modern vocational education. Regional universities should actively seek cooperation with regional vocational education in terms of teacher demand and integration of industry and education, taking into account the needs of vocational education in the region; for example: 1. sending teachers from vocational teacher training departments to enterprises for study and training to improve the quality and professional skills of the vocational teacher training team, 2. sending teachers from teacher training colleges to secondary schools for one and a half semesters to teach and study, 3. organising teachers to enterprises and secondary schools for research and study. It is possible to effectively establish a vocational teacher training programme that meets regional vocational education standards, i.e. with new teacher training characteristics and regional vocational teacher training features, but also able to meet the construction of regional vocational education teacher teams and meet the accreditation standards for vocational teacher education. This will effectively promote the construction of vocational teacher education programmes, ensure the quality of personnel training, meet the needs of modern vocational education, enhance the influence of schools and promote social recognition of vocational teacher education.

5.2. Precise optimization of training objectives

In vocational teacher training professional training objectives should be divided into key objectives and auxiliary objectives, if vocational teacher education as the orientation, training objectives can be secondary vocational education as the main, primary and secondary education as a supplement, other industries as an extension; for example: 1. The first semester after the admission of new students is not training direction orientation, to be organized at the end of the first semester to assess the students to divide the direction, 2. Comprehensive assessment of students to divide the training. 3. In the curriculum of talent training objectives can be based on the advantages of the second-level colleges for professional joint construction, such as modern education technology vocational and technical teacher training, the second-level polytechnics of our university can be responsible for offering professional courses, and the College of Teacher Education is exclusively responsible for offering courses in education such as pedagogy, psychology, teacher professional development and school development management.

5.3. Joint vocational teacher training model

Local institutions should actively carry out the establishment of vocational teacher education and training alliances, vocational teacher monitoring and evaluation systems, teaching resource sharing platforms and joint examination mechanisms; for example: 1. organise regular study and apprenticeships for students in orientation training at their future work schools, 2. organise regular lectures, academic exchanges, subject competitions and stage internships in conjunction with enterprises, vocational (secondary) education schools and vocational and technical teacher training colleges (For example, the first phase of professional internship in enterprises and the second phase of educational internship), 3. cross-training, with the first semester in teacher training colleges and the second semester in vocational and technical teacher training schools, 4. regular evaluation of vocational teacher training students every semester, according to the results of which the vocational teacher training programme can be dynamically optimised to ensure the quality of the training objectives 5. Establishing the sharing of resources in courses such as pedagogy, psychology, school development and professionalism, and jointly establishing mechanisms for quality courses, cooperation in teaching and reform projects, cooperation in scientific research, mutual recognition of credits, etc., and conducting joint examinations at the end of each semester + educational skills assessment by the orientation training schools. We will collaborate to promote the soundness of vocational teacher education disciplines, do a good job of providing substantial services to

the regional education cause, and provide a talent guarantee to promote the construction of a modern vocational education teacher force.

5.4. Promoting vocational teacher education in an integrated manner

Local governments should strengthen cooperation with local colleges and universities, and the government should co-ordinate and promote policies and mechanisms to protect them; for example, attracting outstanding candidates to apply through policies such as targeted training of vocational teacher trainees and admission of free vocational teacher trainees, ensuring the source and quality of vocational and technical teacher education, and gathering talents from different disciplinary backgrounds to enrich vocational teacher education teachers. It is also possible to create different perspectives and knowledge structures for students by offering interdisciplinary courses and introducing quality online teaching resources. A system of professional qualifications can also be used to guide students in certain professional skills, such as degrees and teaching qualifications and other technical qualifications, to improve the quality of education and teaching. We will work together to promote the accreditation of vocational teacher education, collaborate to promote the construction of vocational teacher education disciplines and accelerate the accreditation of vocational teacher education. To promote the construction of a modern vocational education teacher training team, to train highly skilled personnel in all walks of life for all regions, and to provide a talent guarantee to promote the economic development of the region.

6. Conclusion

The results of this paper's research through the collection and collation of data and its theoretical and empirical analysis show that the current vocational and technical teacher education cannot meet the construction of vocational education teachers covering the whole country. The construction of professions does not have the characteristics of new teacher education, the construction of disciplines is incomplete, the positioning of discipline training objectives is confusing, which leads to deviations in the quality of the talents trained, the construction of subject teachers in local secondary vocational schools is out of touch with reality and cannot fully adapt to the needs of modern vocational education teacher construction, the curriculum does not highlight the graduation requirements in the Accreditation Standards for Vocational and Technical Teacher Education Programs "This makes it difficult to ensure the quality of vocational education teachers and to highlight the characteristics of vocational teacher education. The transformation boom of higher education institutions has led to the dilution of vocational teacher education and the four disparities of the profession. Combining the current situation of vocational teacher education and the Accreditation Standards for Vocational and Technical Teacher Education, it proposes an in-depth study of the construction of a regional vocational education teacher team in various disciplines, the precise optimization of training objectives, the joint training mode of vocational teacher education, and a new mechanism for the integrated promotion of vocational teacher education.

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