

A Review of Chinese Higher Vocational Colleges' Research on Studying Abroad in China Based on Citespace

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ABSTRACT

As the type of education that has the most direct connection with production practice, in recent years, higher vocational colleges in China actively carry out the education of studying abroad in China, training a considerable number of local high-quality skilled talents for Chinese-funded enterprises to "go global" and providing talent guarantee for local social and economic development. Based on literature research, it is found that the research results about the education of foreign students in China in higher vocational colleges are abundant. It is found that the international education for higher vocational colleges in China has the characteristics of interdisciplinary, universality, planning and diversity in the research theory, research method, research content and research perspective. However, compared with the research achievements of curriculum organization and teaching plan, the research achievements of teaching resources construction and teaching assessment system construction are less, which is in sharp contrast with the development trend of studying abroad in China in higher vocational colleges. With the proposal of "Chinese plus vocational skills" education model, the education of studying in China in higher vocational colleges will enter a new stage of development, and related research needs to be further explored, such as teaching techniques improvement, teaching corpus resources construction and quality evaluation system establishment.

Keywords: Vocational colleges, Study in China, Vocational education, International students

1. INTRODUCTION

At present, China has entered a new stage of development, with the accelerating industrial upgrading and economic restructuring, the demand for technical and technical talents from all walks of life is becoming more and more urgent, and the important position and role of vocational education is becoming more and more prominent [1].

A series of important documents, such as the Action Plan for Improving the Quality of Vocational Education (2020-2023), the Fourteenth Five-Year Plan for National Economic and Social Development of the People's Republic of China and the Outline of Long-term Goals for 2035, have been promulgated successively, and the development plan of vocational education has been fully deployed, which has set a solid goal for improving the quality, increasing efficiency and innovating the development of vocational education, and more clearly put forward the "Chinese plus

vocational skills" project to help China's vocational education go out [2].

As the type of education that has the most direct connection with production practice, in recent years, higher vocational colleges in China actively carry out the education of studying abroad in China, training a considerable number of local high-quality skilled talents for Chinese-funded enterprises to "go global" and providing talent guarantee for local social and economic development. According to statistics, in 2019, the number of foreign-run schools in China's higher vocational colleges increased to 337, and the number of international students in China reached 17,000. There were 957 professional teaching standards and 5,881 curriculum standards adopted by higher vocational colleges abroad. [3]

In order to improve the degree of fit between the local professional skills training and the needs of local enterprises, and finally promote the "going out" process of China's vocational education school-running

standards and technical industry standards, in recent ten years, teachers in various colleges and universities have conducted comprehensive and three-dimensional research and inspection on the field of studying abroad in China while exploring teaching modes and organizing student management. This research aims to sort out the existing research results in this field, make a holistic summary of the present research situation of studying abroad in higher vocational colleges, and provide basic ideas for the future research direction in this field.

2. RESEARCH IDEAS

2.1. Research Object

The data selected by the research institute are all from CNKI (China Knowledge Network) platform. By introducing Boolean operator, the title of the article is "Higher Vocational Education" and "International Students", and the theme is "Teaching". The publication start time was set from January 1, 2010 to December 31, 2020. A total of 173 papers were searched, excluding 53 papers irrelevant to the topic (some of which meet the search conditions are about the significance and communication effects of studying abroad in China). Finally, a total of 120 samples were determined, including 118 journal papers and 2 master's degree papers.

2.2. Research Methods And Tools

Using the research content analysis method, this paper analyzes the research status of preparatory education for international students in China by combining quantitative and qualitative research methods. On the one hand, with the help of the metrological visual analysis platform provided by CNKI (CNKI), the annual trend of literature, author units and regions, source journals, etc. are quantitatively analyzed, and the analysis results are presented in chart form, and a comprehensive and objective description is carried out based on the research situation. On the other hand, it establishes a quantitative index analysis table, classifies the retrieved documents by subject, probes into the research contents of the documents in depth, and makes comments and prospects on this basis. Using the research content analysis method, this paper analyzes the research status of preparatory education for international students in China by combining quantitative and qualitative research methods. On the one hand, with the help of the metrological visual analysis platform provided by CNKI (CNKI), the annual trend of literature, author units and regions, source journals, etc. are quantitatively analyzed, and the analysis results are presented in chart form, and a comprehensive and objective description is carried out

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3. LITERATURE STATISTICAL DATA AND VISUAL ANALYSIS

The basic information of the research sample includes the title of the article, the name and unit of the author, the year of publication of the article, the name of the published journal, the key words of the article, etc. Based on the above categories, through comprehensive quantitative statistics of sample documents, the following three types of tables are formed: annual trend of published papers, author unit and region, journal source.

3.1. Publish The Annual Trend

One of the important indicators to measure the output of academic research is the number of papers published. According to the measurement visualization data processing platform provided by CNKI (CNKI), the publishing trend of papers related to the teaching of international students in higher vocational colleges from 2010 to 2020 can be summarized.

As shown in Figure 1, the teaching and research achievements of foreign students in higher vocational colleges in China in recent ten years are generally on the rise. From 2010 to 2014, higher vocational colleges began to explore the field of studying abroad in China, with an average annual publication of less than two articles. During this period, higher vocational colleges are still in the stage of experience accumulation, with few research results and low attention from institutions. By 2015, the National Development and Reform Commission, the Ministry of Foreign Affairs and the Ministry of Commerce jointly issued the document "Vision and Action for Promoting the Co-construction of the Silk Road Economic Belt and the 21st Century Maritime Silk Road", which clearly pointed out that "expanding the scale of international students among each other", the number of research papers in this field had increased to six. Although the total number of published papers decreased in 2016 (4 papers), with the implementation and sustainable development of the "the belt and road initiative" initiative, China has become the largest destination country for studying abroad in Asia in 2017, and the number of teaching and research based on international students in higher vocational colleges has multiplied (12 papers), and the number of published papers will reach 40 by 2020. It can be predicted that the teaching research of foreign students in higher vocational colleges is becoming an academic hotspot.

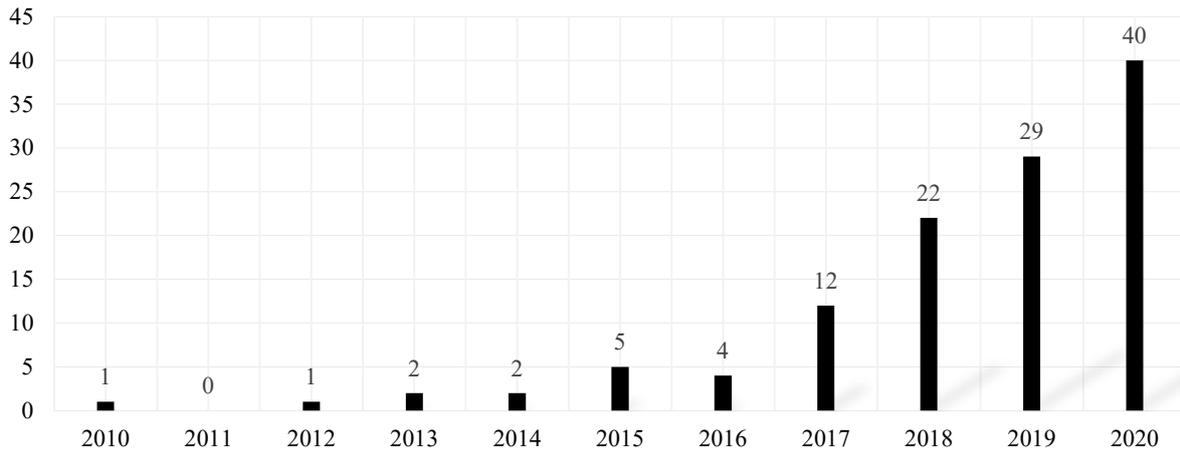


Figure 1 Annual publication volume

3.2. Distribution Of The Author's Source Institutions

Through analysis, it is found that the authors of the literature in the sample are all from institutions of higher learning that are qualified to enroll international students in China, among which the authors of periodical papers are all faculty members of higher vocational colleges. Table 1 shows the distribution of the institutions where the authors are located.

Table 1 Distribution of authors' source institutions with more than 4 posts

The author's unit	Number of posts (articles)
jiangsu animal husbandry & veterinary college	nine
Beijing Information Technology College	seven
Changzhou Textile and Apparel Vocational and Technical College	five
Yiwu Industrial and Commercial College	four
Tongren vocational and technical college	four
Wuxi institute of technology	four

As can be seen from Table 1, all higher vocational colleges have carried out research on studying abroad in China, among which Jiangsu Vocational College of Agriculture and Animal Husbandry Science and Technology, Beijing Vocational College of Information Technology, Changzhou Vocational College of Textile and Garment, etc. pay special attention to this field, followed by Yiwu Industrial and Commercial

Vocational College, Tongren Vocational and Technical College and Wuxi Vocational and Technical College.

Based on the analysis of policy and actual situation, the research motivation of higher vocational colleges is mainly based on the number of international students enrolled in China and the duration of enrollment, and its causes can be divided into the following categories. First, for policy advantages, such as Tongren Vocational and Technical College, relying on the China-ASEAN Education Exchange Week held in Guizhou Province, it has established close contacts and exchanges with universities in "the belt and road initiative" countries to promote the growth of the number of international students enrolled in China; Second, the advantages of regional economic and trade development. According to the ranking statistics of the total import and export volume of "the belt and road initiative" countries in the 2018 "the belt and road initiative" Trade Cooperation Big Data Report, Jiangsu Province and Zhejiang Province are located in the second and third place in the country respectively, laying a solid foundation for the communication and scientific research between many higher vocational colleges in the province and national universities in the belt and road initiative. Third, for the advantages of professional disciplines of the college, such as Jiangsu Vocational College of Agriculture and Animal Husbandry Technology and Beijing Vocational College of Information Technology, relevant research is carried out around the specialty of landscape architecture technology and mechatronics respectively.

3.3. Distribution Of Literature Sources

According to the periodical classification of CNKI (China Knowledge Network), among 120 research samples, excluding 2 master's degree papers, there are 118 periodical papers in total, including 4 papers from core journals, accounting for 3.4% of the total periodical papers, and 114 papers from general academic journals,

accounting for 96.6% of the total periodical papers. As shown in Table 2.

Table 2 Distribution of literature sources

Literature source		Quantity of articles (articles)	Proportion (%)
core journal	vocational education	one	3.4
	chinese vocational and technical education	three	
General journals	academic	114	96.6

(Note: Table data is reserved to one decimal place)

According to the data, the core source journals in Peking University contain a small proportion of teaching papers of foreign students from higher vocational colleges in China, which can be inferred that the academic circles pay less attention to the research in this field. However,

with the increase of the number of international students enrolled in higher vocational colleges and the proposal of "Chinese plus occupation" education concept, the research on the teaching of international students in higher vocational colleges will become a development trend, and the academic circles will pay more and more attention to it.

3.4. Classification Of Document Contents

Through combing the literature and in-depth study of the content of the literature, it is found that the research in this field as a whole focuses on the influencing factors of "improving the teaching effect and improving the teaching output". This study takes learners, lecturers and managers as macro-research dimensions from the perspective of teaching activity participation groups, builds a research framework with reference to multiple models, classifies the sample titles with primary and secondary indicators from each research perspective, sorts out the contents that have been studied and those that have not been studied from the perspective of various groups, and obtains specific categories.

Table 3 Statistical analysis of the contents of educational papers for international students in higher vocational colleges

Research perspective	Primary classification	secondary classification	research contents	quantity	Proportion
learner	learning environment	cultural environment	Cultural differences and cultural adaptation	9	7.6%
		College environment	attraction	4	3.4%
	individual difference	Cognitive factors	Intelligence, learning ability	2	1.7%
		Emotional factors	Motivation, learning attitude	2	1.7%
Instructor	teaching resource	Compilation of teaching materials	Development of loose-leaf teaching materials	1	0.8%
	Organization of courses	Chinese language class	Teaching strategy, HSK, curriculum construction	20	16.9%
		common required course	Politics, culture and sports.	12	10.2%
		Specialized courses	Medicine, international trade, Rail transit, machinery manufacturing.	21	17.8%
Teaching assessment	Testing and evaluation	Student assessment method	2	1.7%	
Manager	teaching management	Plan as a whole	Dilemma, Summary and Countermeasures	13	11.0%
	teaching program	Personnel training system	Curriculum development, student development	19	16.1%
	quality of teaching	source of students	Satisfaction, cultural adaptation	6	5.1%
teachers		Team building and quality evaluation system	7	5.9%	

According to Table 3, in recent ten years, the research hotspots related to the teaching of foreign students in higher vocational colleges in China have focused more on the humanistic environment in the learning environment, the discussion on the curriculum organization of various teaching classes, the talent

training system in teaching plans and the practice and summary of teaching management planning, followed by the research on teaching quality management, and less on the special research on the institutional environment, individual differences research, textbook

compilation and teaching assessment system construction in the learning environment.

4. CURRENT SITUATION OF TEACHING RESEARCH OF FOREIGN STUDENTS IN HIGHER VOCATIONAL COLLEGES

This section is a comparative or descriptive analysis of the study based on the study results, previously literature, etc. The results should be offered in a logical sequence, given the most important findings first and addressing the stated objectives. The author should deal only with new or important aspects of the results obtained. The relevance of the findings in the context of existing literature or contemporary practice should be addressed.

4.1. Take The Learner As The Research Perspective

In 1970, Astin, a scholar, built an "input-environment-output" model, pointing out that input factors such as students' growth background and individual differences before entering the school, and environmental factors such as the humanistic environment of the study destination and the environment of colleges and universities are two key factors that affect the output indicators such as teaching effect, knowledge acquisition and skill acquisition [4].

Because the foreign students in China are foreign learners, their growing background and cognitive style are quite different from those of local students, among the literature from the perspective of learners, there are the most researches based on the classification of human environment, and most of them focus on the theme of "cultural differences" or "cultural adaptation".

Zhang Yuting (2018) pointed out that a language assistance platform should be established for international students in China. Yang Jin (2018) created task-based situational teaching method to improve students' recognition of Chinese culture and language learning motivation. Chen Manqian (2019), based on Berry's theory of cultural adaptation, investigated the response of foreign students in China to cultural shock, in order to explore the management effect based on different strategies. Pan Ziyang (2019) worked out a specific implementation plan for the cultural adaptation of international students in China. Hu Xiaoli (2020) thinks that the teaching environment, food environment, urban climate and urban transportation are the key factors to investigate the cultural adaptation of international students in China. Hou Weizheng (2020) focused on the types of communication errors of international students. Zhou Li (2020) emphasized that international students in China should learn, recognize and support Chinese culture through teaching from three aspects: cognition, emotion and action. Yang Yang

(2020) focused on the underage group of international students studying in China, analyzed the cultural adaptation problems of the research object, such as interpersonal communication difficulties and difficulty in understanding the management mode caused by environmental changes, and established a two-line management mode in which differentiated management and convergent management coexist. Mu Weiping (2020) investigated the psychological adaptation, academic adaptation and cultural adaptation of international students in China by questionnaire, and put forward some suggestions for solving the problems of humanistic care, teacher construction and student management according to the data results.

The research on the university environment focuses on the establishment strategy of university attraction. Higher vocational colleges generally lag behind undergraduate colleges in terms of college prestige, educational resources and scholarship setting. Scholars mostly put forward "recruit-manage-teach" from the aspects of enrollment publicity (Yang Hantao, 2016), student management system (Ma Qian, 2014), training base construction (Liao Haiying, 2014) and scholarship setting (Li Cuixia, 2013).

Combining the theoretical framework of individual differences constructed by Ellis (1994) in the study of second language acquisition with the affective filter hypothesis put forward by Krashen(1982), individual differences are composed of learners' gender, intelligence, learning ability, learning motivation and learning attitude [5] [6].

Xie Jinggui (2019) explores the teaching strategies for foreign students with zero basic Chinese based on four language abilities. Shuang Lee (2019) focuses on international students' reading ability, expounds the defects of international students and teachers in cognition and teaching ideas, and puts forward four teaching improvement suggestions: reconstructing the educational core, strengthening extracurricular practice, updating teaching means and establishing an evaluation system.

Chen Fang (2020), based on the theory of learning motivation, explored the establishment of an international student training model integrating recruitment and discipline. Zhu Junyi (2020) conducted an empirical study on Chinese learning motivation of foreign students in China, and determined the primary and secondary order of "instrumental motivation, external factors, cultural and linguistic interests, communication needs", and thus set up a classroom entrance and exit mechanism to stimulate learning motivation.

4.2. Take The Lecturer As The Research Perspective

Academic research based on the lecturer's perspective mainly focuses on teaching materials, curriculum organization and teaching assessment (see Table 5 for details).

Among them, there is little research on teaching materials and assessment. Luo Xia (2020) explored the development of loose-leaf bilingual teaching materials. Lu Xiaoyan (2019) put forward a reform scheme of "process+end-of-term" assessment based on the principle of assessment system reform by analyzing the status quo of assessment subjects, assessment contents and assessment orientation, and applied it to the assessment process of international students majoring in landscape architecture technology in Jiangsu Agricultural, Agricultural and Animal Husbandry Technology Vocational and Technical College, which steadily improved the classroom attendance and learning initiative. Zhang Jianxin (2020) introduced in detail the specific steps of the implementation of the foreign students' curriculum in Beijing Institute of Information Technology, and worked out the teaching achievement assessment scheme.

The education of international students in higher vocational colleges is different from undergraduate education, and there are many problems worthy of consideration and study in the process of compiling teaching materials and formulating achievement assessment standards, which should attract scholars' attention.

The literature research for curriculum organization is based on a certain type of curriculum or a certain course, which studies the problems existing in the teaching process and explores solutions. It is mainly divided into Chinese language course teaching research, public course teaching research and "Chinese plus occupation" course education research.

4.2.1. Chinese Language Class

By analyzing the specific contents of the research results under the teaching classification of Chinese language courses, it is found that scholars first carried out overall strategy research on teaching implementation. Ma Tao (2018) regards language education for overseas Chinese students as a "Chinese teaching project" and manages it by project. Kang Bei (2019) conducted a survey on the satisfaction of Chinese courses among international students in school, and based on the survey results, put forward corresponding suggestions from three aspects: international students, teachers and management. Han Jiannan (2018) put forward countermeasures and suggestions for Chinese teaching for international

students in China from three aspects: teachers, teaching materials and teaching methods. Wu Cong (2019) thinks that attention should be paid to classroom management in the process of Chinese teaching, and regulations should be formulated to restrict teaching behavior. Wei Jing (2020) put forward the corresponding teaching reform strategies from the aspects of teaching difficulty, applicability of teaching materials and rationality of curriculum setting. Zhang Yuanyuan (2020) made a survey on Chinese learning satisfaction of international students in China, and thought that we should pay more attention to the study life and interpersonal communication of international students in China from the aspects of their psychological adaptability, Chinese proficiency, diet adaptability and cultural communication ability.

Some scholars have carried out relevant research according to the requirements of Chinese language ability of international students in China in the Quality Standard of Higher Education for International Students in China (Trial) (2018). Guo Chunyuan (2015) analyzed two problems existing in the process of language learning of international students in higher vocational colleges, one is between HSK Chinese Proficiency Test and the other is the connection with majors. Zhao Yan (2017) takes Chinese teaching for international students in Guizhou Tongren Vocational and Technical College as an example, combining HSK Chinese Proficiency Test, in-school Chinese Skills Competition with Chinese teaching, and realizing "promoting learning through competition" by combining examination with teaching. Su Meng (2016) proposed the improvement of teaching strategies based on HSK Chinese Proficiency Test, specialty connection and extracurricular learning. Wan Shufen (2017) introduced task-based teaching method to construct Chinese teaching class for international students.

The other part explores the curriculum construction. Song Yuting (2018) suggested that the Chinese language ability of foreign students in China should be comprehensively improved from four aspects: building teachers, reforming classroom teaching, developing Chinese communication activities and expanding extracurricular reading. Mou Li (2015) suggested introducing the curriculum model of "one body and two wings" into Chinese for international students. Yang Li (2019) introduced "Orff Teaching Method" into the teaching of international students in China. Shen Hongxia (2019) thinks that the curriculum reform for Lao students should start from five "axis" perspectives, namely, language skills, film and television skills, language literacy, cultural communication and cooperation with specialized courses teaching; In the same year, he put forward the integration strategy of mental health education and Chinese education, and emphasized the importance of establishing psychological intervention mechanism. Ge Jing (2019)

pointed out that the instrumentality and culture of Chinese language should be highlighted, and an education system for international students in China with higher vocational characteristics should be formed in the educational exploration. Shuang Lee (2018) thought that the multi-literacy teaching method could improve the effect of Chinese teaching for international students in China. In the following year, he introduced the multi-literacy teaching method to Chinese teaching for international students in China, and set up a comparative experimental model, thus proving its effectiveness. Wang Zhigang (2018) suggested that the teaching concepts of humanism and constructivism should be introduced to carry out Chinese teaching for foreign students in higher vocational colleges of engineering. Yue Xi (2019) suggested that the hierarchical teaching method should be applied to Chinese reading class. Xie Mingming (2020) suggested exploring the teaching mode of "teaching with competition instead of teaching". Shirley (2020) combines Maslow's hierarchy of needs theory with the law of study and development of international students in China to explore the optimization path of curriculum.

4.2.2. Public Courses

At present, the research on the teaching of public courses for international students in China is focused on physical education class, culture course and ideological and political course.

In physical education class, Huang Weiwei (2017) took Chinese Wushu as an example, and expounded the optimization path of physical education curriculum for international students. Jian Xu (2019) suggested that while optimizing the teaching mode and class schedule in physical education class, we should improve the site infrastructure construction and strengthen teachers' English teaching ability. Peng Tao (2020) made a comparative study between physical education class, an international student, and physical education class, an ordinary class, from the aspects of teaching objectives, teaching content and teaching organization, and held that elements with Chinese characteristics should be added to physical education class for international students and standardized and institutionalized teaching guidance should be established.

In the aspect of culture class, Wang Huilian (2019) made a comparative analysis of four sets of "China Profile" textbooks from the aspects of content arrangement, writing principles, language characteristics and after-class exercises. AMIA Lu (2015) proposed that the teaching characteristics of cultural courses should be highlighted in the teaching process according to the cultural belonging psychology of international students from different countries. Liu Na (2020) proposed that the proportion of teaching practice in Chinese culture teaching should be increased, so that

students can experience the connotation of Chinese culture through personal experience. Luo Chunhui (2020) thinks that Chinese culture courses should be classified according to the cultural background of international students from different countries of origin. Li Linjin (2020) analyzed the four elements of the learning situation of international students in China, namely, language foundation, cultural complex, learning motivation and cultural differences, and explored the teaching reform path based on the four elements by taking the Tang poetry course for international students in China as an example.

In terms of ideological and political courses, Jin Mingwei (2018) pointed out that the ideological and political courses for international students in China are mostly focused on safety knowledge and cultural knowledge, lacking pertinence. Xia Fangfang (2020) explored the importance of the construction of the second classroom to the ideological and political education of international students in China under the multicultural theory.

Some scholars also argue that the teaching objectives of ideological and political courses and cultural courses are consistent, and they should not be completely distinguished in research. For example, Huang Chengzhu (2020) set up a teaching implementation path with "ideological and political" as the core for the culture course for international students in China, emphasizing the importance of overall planning of the course and the necessity of integrating Chinese elements into the course. Chen Xiajin (2020) suggested that the teaching of ideological and political courses should be combined with traditional Chinese cultural stories, and presented in the form of theme modules.

4.2.3. Specialized Courses

With the development of studying abroad in China, the integrated education mode of "Chinese plus occupation" with "Chinese as the means and specialty as the core" has gradually replaced the language teaching and specialty teaching in the original study abroad education in higher vocational colleges. By analyzing the literature, it can be roughly divided into six categories: medicine, computer, landscape architecture, mechanical and electrical engineering, rail transit and international trade. The research contents are mostly teaching plans and teaching implementation of related professional courses.

Meng Xi (2018) thinks that the HSK exam should be the starting point for the education of international medical students in China, so as to increase students' participation in basic medical research projects. Tian Xiaolu (2019) made an in-depth exploration of pathology course in medical specialty, and put forward

some reform suggestions on the teaching content of this course, such as living, clinical, pictorialization and visualization. Yang Xue (2020) considered from the perspective of teaching methods that real cases should be introduced into the teaching process and medical treatment scenes should be created to guide students to complete classroom tasks in the form of group cooperation. Xu Zhiping (2020) conducted a comparative study between the experimental group and the control group to explore the influencing factors of the teaching effect of international students majoring in medical nursing in China. The results showed that the implementation of the results-based teaching reform could effectively improve the teaching effect and improve the teaching quality.

Zhao Qiu (2017) put forward a "trinity" talent training mode for the electronic information major of Nanjing Institute of Technology, which takes English as a bridge and integrates Chinese language teaching module and professional teaching module. Pei Hao (2018) suggested that the core position of "promoting learning through competition" should be strengthened in the teaching of international students in China, and illustrated the specific curriculum implementation process with the computer network major as an example. Zhao Huijuan (2018) carried out the reform of project-based teaching mode and case analysis on the teaching of software technology major for international students in China, and thought that teachers of various subjects should strengthen cooperation and cooperation to improve the professionalism and completion of teaching.

Zhou Xia (2018) and Liu Xing (2019) both put forward corresponding suggestions for the teaching of international students majoring in landscape architecture from the aspects of training objectives, curriculum arrangement, teaching methods, assessment methods and teaching resources. Xie Lina (2020) explored a teaching system for the international students majoring in landscape architecture design in Chongqing Three Gorges Vocational and Technical College, which not only highlights the professional characteristics, but also pays attention to the "three-line simultaneous development and integration of documents and certificates" of Chinese cultural communication.

Xie Bangling (2018) suggested that the "streamlined" teaching of electromechanical courses should be improved to "radiating", and divergent teaching should be carried out around a certain teaching task in the course. Wang Xin (2020), based on the course practice of detection unit in automatic manufacturing technology, made a complete case analysis from four aspects: teaching background, teaching objectives, teaching practice and teaching effect. Li Jing (2020) thinks that the construction of the education system for international students majoring in

mechatronics should follow the internationally recognized CDIO (Conceive, Design, Implement, Operate) engineering education mode, and puts forward corresponding reform ideas. Fu Hualiang (2017) and Dong Wei (2020) suggested that the teaching methods of electromechanical international students in China should be reformed from four aspects: teaching objectives, teaching content, teaching design and teaching evaluation. Mu Tao (2020) showed the theory, practice and assessment of Industrial Robot Technology course for international students in shaanxi polytechnic institute, and emphasized that the teaching setting of international students in higher vocational colleges should be guided by skill teaching. Lynn Yang (2020) thinks that the organic integration of the three modules of teaching scheme design, teacher training and training base construction is an important measure to ensure the teaching quality of overseas students majoring in rail transit in China, and suggests that an education alliance be formed to carry out characteristic teaching and group cooperation mode.

Li Wei (2019) reconstructed the basic course of logistics based on BOP-PPS teaching model framework and PBL teaching method. Dong Haiying (2019) put forward some suggestions on the training of international business students in China from the aspects of professional hotspots, business characteristics of the country of origin and professional ability. Jiang Yiyang (2020) suggested that teachers should integrate massive open online course English subtitles and international abbreviations or symbols into cross-border e-commerce classroom teaching, and set up a second classroom so that students can understand the teaching content in time. Li Jin (2020) proposed that the quantitative indicators of teaching assessment for international students in China should include six modules, including classroom performance, homework performance, extracurricular activities performance, vocabulary growth rate of professional terms, practical training performance and final scores, and suggested that diversified assessment methods should be implemented.

The characteristics of higher vocational colleges determine the importance and particularity of specialized skill courses. How to improve the output of teaching results and enhance the employment competitiveness of international students in China through specialized course teaching has become the focus of this category research.

4.3. Take The Manager As The Research Perspective

From the perspective of managers, researchers mostly start from top-level design considerations, and study in three aspects: teaching management, teacher management and student management.

4.3.1. Teaching Management

Starting from the organization and management of higher vocational colleges' study abroad education in China, scholars sorted out the current difficulties according to their experience in studying abroad in China. Liu Shiping (2015) analyzed that due to the late start of the work for international students in China, the understanding of this work in higher vocational colleges is not comprehensive and systematic. Compared with undergraduate colleges, there are obvious deficiencies in management system, teaching materials and teaching AIDS, and the level of teachers. Hao Ziyue (2018) and Zhu Aiwen (2019) pointed out the current situation of "few types" and "small amount" of scholarships for international students in higher vocational colleges.

At present, it is generally believed in the industry that the current situation of international students' education in higher vocational colleges in China mainly has some problems, such as small overall scale, low level of students and insufficient educational carrying capacity (Lu Ying, 2019; Yang Jianhui, 2019; Wu Meilan, 2020). In addition, Fang Bao (2020) thinks that the education of studying in China in higher vocational colleges still lacks in mutual recognition of academic qualifications and international influence.

Through summing up the experience, most scholars think that the existing teaching and management system for international students in China can't meet the actual needs of international students in China, and have made a series of reform ideas on publicity strategy, scholarship system, division of management functions, teaching implementation, teaching equipment, etc. (Yang Shuai, 2015; Yan Haiyan, 2017; Han Xinzhi, 2018; Pei Hao, 2019; Zoe, 2020).

Zhang Yan (2018) analyzed the four major factors that higher vocational colleges face in promoting the education of international students studying in China, namely, national strategy, cultural attraction, promotion of colleges and universities, and personal wishes, and based on this, explored the fundamental factors that promote the quality and efficiency of higher vocational colleges' education of studying in China, and thought that we should rely on colleges' specialty to carry out in-depth cooperation with local governments, enterprises and colleges to form brand effect.

4.3.2. Personnel Training

After sorting out the research literature, it is found that scholars start their research from the following two starting points:

The first is curriculum development. Some scholars pay attention to the construction principles and personnel training objectives of the education system for studying abroad in China. For example, Shan Min

(2013) elaborated five principles that should be followed in the construction of education system for international students in higher vocational colleges, namely, overall supervision, module linkage, integrated teaching, timely feedback and continuous innovation. Zhao Shu Li (2016) proposed that higher vocational colleges should highlight professional characteristics, establish an international school-enterprise cooperation platform, and broaden employment channels for international students in China. Feng Jingyi (2017) thinks that when planning the curriculum system for international students, we should focus on the original knowledge system structure of international students, the direction of major development and their personal development wishes. Sun Taiwei (2017) thinks that we should focus on studying the phenomenon of "cultural shock" when foreign students come to China to adapt to the new environment, and organize various teaching units in higher vocational colleges to cooperate to build a guiding mechanism for cultural adaptation. Therefore, Shuang Lee (2018) suggested setting up buffer areas for the cultural adaptation of international students in China. Huang Jin (2020) believes that the training objectives of international students in higher vocational colleges should be centered around three dimensions: language, culture and skills. Sun Taiwei (2020) suggested that the cross-cultural education reform of international students in China should be implemented from four dimensions: school, teachers, students and society.

Another part of scholars focus on teaching reform. Zhang Hong (2018) constructed the talent training scheme of "four in one, three certificates integration" for international students in higher vocational colleges, which took Chinese language communication ability, professional theoretical knowledge, professional practice ability and understanding of Chinese culture as the core of talent training, and defined graduation certificate, HSK certificate of CET-4 or above and primary vocational qualification certificate of major as the output task indicators. Xu Shuangping (2019) made an in-depth exploration of the "amphibious" education model for international students in China. Yu Xi (2019) thinks that the teaching strategy should be adjusted, and the teaching method of targeted transfer should be formulated. In the future, Chinese students and local students will be taught in the same class. At the same time, using information technology, animation or video can be used to visually show the key teaching contents to foreign students. Yang Jianhui (2019) introduced the tutorial system in the teaching management of international students in China, and introduced life tutors, academic tutors and corporate tutors to provide guidance and training for international students in China in cultural adaptation, professional study and practical training. Su Tingting (2019) also put forward reform suggestions for ASEAN students' classroom teaching.

Zhu Min (2020) constructed a training plan for international students in higher vocational colleges in China, and suggested that the training of international students in higher vocational colleges in China should aim at students' Chinese application ability, Chinese cultural cognition ability, professional knowledge ability, post practice ability and innovation ability, and take graduation certificate, HSK level 4 certificate, skill competition certificate and professional-related primary vocational qualification certificate as assessment indicators, and adopt the "five in one, documentary and documentary integration" talent training mode.

The second is student development. Han Rui (2017) analyzed the limiting factors of the development of higher vocational colleges' study abroad education in China from the perspective of employment. On the one hand, he suggested that higher vocational colleges should speed up the channels of further studies to attract foreign students to study in China; On the other hand, it is suggested that higher vocational colleges should strengthen the contact with enterprises, promote the reform of teaching content with the guidance of professional needs, and enhance the employment competitiveness of international students in China. Li Juanmei (2017) suggested that Chinese enterprises in the source country and the source country should be United to explore the "order-based" talent training mode for international students in China. Wang Xiaolan (2018), taking Huanghe Water Conservancy Vocational and Technical College as an example, gave a comprehensive and detailed introduction to its linear training system for international students in China, which provided effective reference for higher vocational colleges to study in China, especially for the promotion of academic qualifications and employment of international students after graduation. Yin Ying (2020) believes that the education of international students in higher vocational colleges should highlight the development characteristics of higher vocational colleges, pay attention to the cultivation of students' vocational skills and the acquisition of qualification certificates, build a platform for entrepreneurship and employment for international students, and encourage international students to actively participate in internship practice. Li Xueli (2020) pointed out that by establishing a four-year "college-to-undergraduate" education promotion channel for international students in China, it can effectively promote the sustained growth of the attendance rate of international students in China. Fang Bao (2020) emphasized that we should strengthen the characteristics of talent training in higher vocational colleges, and explore the "order-based" talent training mode based on majors.

4.3.3. *Teaching Quality*

Teachers are the leaders of the whole teaching activities. According to the explanation of cognitive and constructivist learning theories, teachers' teaching skills and teacher-student interaction and cooperation are important indicators to assess the teaching effect [7]. Ding Zhenzhong (2012) pointed out that the lack of cultural adaptation education, the lack of teachers' foreign teaching experience and the confusion of management division are the important factors that lead to the ineffective teaching and management of Korean foreign students in China in early higher vocational colleges. Jiang Tiankai (2017) insisted on adopting the "amphibious" teaching mode, which can effectively improve the teaching quality of international students in higher vocational colleges, that is, Chinese teaching and professional teaching are carried out simultaneously. Ye Hongquan (2018) suggested the reform of scholarship system, teaching hardware facilities, teaching staff, curriculum, after-school arrangement, employment recommendation and other aspects to improve the teaching quality of international students in China. Zhang Hong (2018) analyzed the promotion effects of "optimizing scholarship system" and "improving the entry and exit mechanism of Chinese personnel" on the quality of overseas education in China from the perspective of the development situation and market demand of higher vocational colleges. Wang Qianyun (2019) pointed out that the current education for studying abroad in China in higher vocational colleges has the characteristics of different quality standards, unbalanced number and quality of students, and teachers' lack of experience in teaching and managing international students. On this basis, it briefly analyzed the main factors that affect the teaching effect of international students, namely, language background, Chinese acquisition ability and study habits. Li Yujuan (2020) further deepened the exploration of teaching quality supervision for international students in China, and suggested improving strict reward and punishment system for classroom performance and learning evaluation standards; In the same year, the evaluation system of teaching quality in the teaching information age was established. Zhu Mingyuan (2020) explored the construction of quality evaluation system for international students in China based on the evaluation sources of students, peers and supervisors.

Correspondingly, students are direct participants in teaching activities and direct receivers of classroom teaching information [8] [9], which can provide objective, reliable and effective evaluation for teaching effect [10]. Yan Wang (2010) analyzed the characteristics of Korean students studying in China, such as short educational system, single source of students, clear learning purpose and so on. Lu Xinlu (2017) thinks that the management system of institutions with different styles will lead to a certain psychological gap and resistance among international

students from ASEAN countries. In order to improve the teaching effect, we should strengthen the education of students' cultural adaptation on the basis of fully respecting the customs of ASEAN countries. Zong Le (2019), based on the present situation of classroom learning of international students from Thailand and Bangladesh, suggested that the teaching quality assurance system should be established and improved from two aspects, namely, curriculum difficulty setting and attendance style assessment. Lu Qi (2019) mentioned that Indonesia's international students in China are different from China's national conditions in terms of beliefs, so it is necessary to formulate special training programs for international students in China and increase the proportion of cross-cultural adaptation courses. Li Shuang (2019) conducted a survey on the teaching satisfaction of Nepalese students studying in China, and explored the positive influence mechanism of foreign students studying in China on teachers' teaching satisfaction before and after their employment in foreign companies. Sun Zelin (2020) guided the reform of talent training program by studying the motivation of Indonesian international students studying in China, increased the class hours of practical training courses and employment guidance courses, and linked the teaching assessment scores with employment recommendation and scholarships, which greatly promoted the learning motivation of international students studying in China and greatly improved the teaching effect accordingly.

5. CONCLUSION

5.1. Research Review

Based on the above literature research, it is found that the research results about the education of foreign students in China in higher vocational colleges are abundant. On the whole, compared with the research achievements of curriculum organization and teaching plan, the research achievements of teaching resources construction and teaching assessment system construction are less, which is in sharp contrast with the development trend of studying abroad in China in higher vocational colleges.

Summarize the research status of overseas study education in higher vocational colleges in China in recent ten years, mainly showing the following characteristics:

First, the research theory is interdisciplinary. Some scholars adopt interdisciplinary research methods, and introduce some basic theories of pedagogy, linguistics, cross-cultural studies and psychology, such as existentialism theory, second language acquisition theory, cross-cultural adaptation theory, motivation theory, etc., which provide useful reference for the establishment of discipline theory of studying abroad in

higher vocational colleges and the combing of teaching theory.

Second, the research content is extensive. Most researchers are good at summing up the teaching experience, discussing the problems existing in the teaching situation of foreign students in higher vocational colleges from different angles and levels, and trying to put forward the effect optimization scheme, including the construction of teaching system, the construction of teachers' team, the selection of teaching materials, curriculum setting, etc.

Third, the research perspective is planned. At present, nearly 50% of the research starts from the perspective of "managers", focusing on the internal management mechanism and training strategies of the education system for international students in higher vocational colleges.

Fourth, the research samples are diverse. In the research based on the countries of international students in China, the research samples include international students from South Korea, Indonesia, Nepal, Thailand, Egypt and other countries.

There are also shortcomings:

From the perspective of research theory, due to the late start and lack of students in higher vocational colleges, the research on this topic by scholars in the industry is still in the exploratory stage. Most of the research theories are borrowed from the research results of studying abroad in China from other disciplines or undergraduate levels, and the theoretical explanation is not detailed enough, and the combination with the research content is not close enough.

From the perspective of research methods, although many research methods such as questionnaire survey, case study, interview, literature review and interdisciplinary research are used, the research results are mostly expository articles, with few empirical reports. Among them, due to the small number of research samples, the application of questionnaire is not rigorous enough.

From the content of research, researchers prefer to study based on classroom construction, and there are few studies on the influencing factors of learning effect, especially the analysis of learning effect of environmental factors and individual differences of students. At the same time, there are few researches on teaching strategies and learning strategies based on linguistics.

From the research results, because scholars pay more attention to the top-level design and overall planning, they have not conducted in-depth research and summary on the majors of international students studying in China, and have not yet formed a widely recognized professional teaching standard and

assessment standard, and an educational theoretical system for international students studying in China with vocational education connotation.

5.2. Research Prospect

After ten years of exploration, the education of international students in higher vocational colleges has made great progress: in career, the number of colleges and universities that recruit international students and the number of international students in higher vocational colleges have increased, and the development of the education of international students in higher vocational colleges in China has been improving quality and efficiency; In terms of disciplines, we have deepened our understanding of the educational objectives and orientation of international students in higher vocational colleges, worked out corresponding personnel training programs based on vocational and technical education majors, and improved the teaching plans of various teaching courses. In fact, on the basis of undergraduate education research, this paper tries to build a theoretical framework for studying in China in higher vocational colleges, and makes a preliminary exploration.

With the proposal of "Chinese plus vocational skills" education model, the education of studying in China in higher vocational colleges will enter a new stage of development, and related research needs to be further explored. Macroscopically speaking, with the development of China's education for studying in China and the continuous promotion of the belt and road initiative's national policies, we should discuss the education for studying in China in higher vocational colleges under the background of China's going out of vocational technology. For example, higher vocational colleges should strengthen linkage and cooperation, try to establish a professional Chinese corpus, and realize online resource construction by using Internet technology under the control of epidemic situation normalization, so as to further promote the development of higher vocational colleges' education for studying in China. Microscopically, we should attach importance to the combination of research theory and practice, strengthen the comprehensive application of various research methods, and increase the proportion of empirical research; Pay attention to the influencing factors of foreign students' learning in China, study the strategy of promoting learning based on language elements, explore the teaching strategy of combining Chinese with vocational skills, and investigate the key points and implementation paths of vocational Chinese teachers' construction under the background of international Chinese education; Pay attention to the establishment of the quality system and evaluation system of studying abroad in China.

FUNDING

Study on the online education quality of "Chinese + Vocational Skills" in higher vocational colleges, No.2021B022, from The Chinese Society for Technical and Vocational Education, Principle Investigator: Wenqian Gao.

AUTHORS' CONTRIBUTIONS:

Wenqian Gao, performed the data analyses and wrote the manuscript.

ACKNOWLEDGMENTS

Thanks are due to Dr. Luo Xiao for the valuable discussion and constant encouragement.

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