



RESEARCH ON INTERNATIONALIZATION DEVELOPMENT  
OF HIGHER VOCATIONAL COLLEGES IN THE POST-COVID-19 ERA



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RESEARCH ON INTERNATIONALIZATION DEVELOPMENT  
OF HIGHER VOCATIONAL COLLEGES IN THE POST-COVID-19 ERA



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A Thesis Submitted in Partial Fulfillment of the Requirements  
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OF HIGHER VOCATIONAL COLLEGES IN THE POST-COVID-19 ERA

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This research is the study of Internationalization Development of Higher Vocational Colleges for thesis of Srinakarintarawiro Graduate University. Objectives are figuring out current situation of internationalization development of Chongqing Chemical Industry Vocational College and putting forward suggestions based on the analysis. This research mainly takes CCIVC as an example, using literature review method, case study method and questionnaire survey method with the respondents of managers, administrative staff, teachers, students, and graduates of CCIVC. Based on qualitative analysis, combined with the theory of Jane, the following five aspects of internationalization are affected: academic projects, cooperation and exchanges, teaching model, curriculum system and external environment. At last the suggestions for international development strategy can be applied to its international development to CCIVC and some other similar colleges.

Keyword : Higher Vocational College, Internationalization, Current situation Suggestion

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# CHAPTER 1

## INTRODUCTION

### Background

In early 2020, the novel coronavirus pneumonia swept the world, leading to the worst disaster since the World War II. On March 11, 2020, the World Health Organization (WHO) declared the outbreak of COVID-19 a global pandemic and issued the highest level of warning for the disease. According to the latest data on the World Health Organization website, as of 17:50 CET on 12 July 2022 (23:50 CET), the number of confirmed cases worldwide has reached 55,4290,112; The number of deaths has reached 6,351,801 (World Health Organization, 2022).

The COVID-19 pandemic has brought a huge impact on the international development of universities. In an effort to control the spread of the virus, governments have imposed strict border controls and quarantine measures, bringing global air passenger services to a near standstill and a precipitous drop in cross-border travel. In the early days of the outbreak, campuses were forced to close, staff and students were unable to return to campus, teaching and learning were difficult, and academic conferences and seminars were cancelled. According to the current situation, the epidemic will continue to affect the flow of international students, and students will not be able to study abroad. Likewise, communication and cooperation among scholars also face great difficulties. Under the epidemic, the international development of education has encountered severe challenges

### Objectives of the Study

In the context of the severe impact of COVID-19 on the international development of higher education, what challenges and difficulties do China's higher vocational colleges, especially those with backward international development, such as Chongqing Chemical Industry Vocational College, face on the road of international development, and how should they plan and adjust to effectively overcome the impact of the epidemic and further improve the level of internationalization?

So Objective of this Research is Current situation in five aspects of internationalization development of Higher Vocational Colleges.

### **Significance of the Study**

The internationalization of higher education is an important measure to develop higher education in China in the new era. Since the 18th CPC National Congress, the CPC Central Committee has attached great importance to the work of education opening to the outside world and put forward detailed requirements and plans for education opening to the outside world. In his speech to the 2018 National Education Congress, the General Secretary clearly pointed out that "we will expand the opening-up of education and carry out high-level cooperation in running schools with world-class resources". In the strategic plan 2035 of China's Education Modernization, which was issued by the CPC Central Committee and The State Council in 2019, "Creating a new pattern of opening up in education" and "Promoting the education Action under the Belt and Road Initiative" were listed as one of the ten strategic tasks and one of the ten key tasks respectively. Since then, China's education opening has entered the national medium - and long-term strategic plan. In the national "double first-class" construction overall plan and "Double high" plan, "internationalization" has been listed as an important task in the construction of world-class universities and high-level higher vocational schools, and has become an important standard to measure the development level of universities and higher vocational schools.

### Scope of the Study

This research mainly focuses on the CCIVC (Chongqing Chemical Industry Vocational College) and some other colleges, the respondents of questionnaire are the managers, administrative staff, teachers, students, and graduates of CCIVC.

### Definition of terms

#### Higher Vocational Education

Higher vocational education is a concept in China. Although this concept is not "universal", this form of education also exists in the West, for example, the British multi-technical college, the American community college, the French "University Technical College" and so on. In our country, "higher vocational education" and "higher vocational and technical education" basically mean the same thing, and the purpose of both is to let students directly enter the labor market and engage in a particular occupation (Huang, 2014). The International Classification of Educational Standards 2011 defines vocational education as "education that enables learners to acquire knowledge, skills and abilities specific to a certain occupation or industry or several occupations or industries". UNESCO Institute for Statistics (2012) divides education into general/academic education and vocational/professional education. Chinese higher vocational education should correspond to "5B" in its classification standard. It can also be seen from this classification that the status of vocational education is equal to that of general education. There is no universal definition of "higher vocational education". In China, when it comes to higher vocational education, scholars generally discuss it from the following aspects: structure, classification, level, training objectives and so on (Huang, 2010).

#### Internationalization of Higher Education

Internationalization of higher education refers to the trend that higher education in various countries is increasingly oriented to the world based on domestic development. In the process of internationalization of higher vocational education, higher vocational education in one country will learn from other countries and integrate

the mutual exchange and cooperation with other countries into the teaching, scientific research and service of local colleges. Through the internationalization of education, local colleges and universities can reasonably adopt internationally advanced educational concepts and cultivate highly skilled talents who can meet the development needs of the country and the world, to serve the well-being of the country, the region and the whole mankind. About the internationalization of higher vocational education, the research started in the 1990s. Knight, a scholar from Canadian (2011, p. 11) defined internationalization as "the process of integrating international, cross-cultural and global dimensions into the purpose, function or transmission of higher education", which means that education should focus on the future and improve the level of internationalization. To provide talent support for global industry development.

#### 1. Jane Knight's Theory of internationalization strategy classification in colleges and universities

Jane Knight, an expert in the research field of internationalization of higher education, believes that "strategies and measures are the core of the success and sustainable development of internationalization at the university level" (Huang, 2013, p. 67). Jane Knight classifies the internationalization strategy theory of higher education into three levels: At the national level, the education department level and the university level, Jane Knight's internationalization strategy of colleges and universities includes project strategy and organizational strategy, among which the project strategy focuses on academic projects, research and academic cooperation, external relations and extracurricular activities, and the organizational strategy pays more attention to the internal organization and management of the university and corresponding supporting services. That is, management, operation, service, human resources and other dimensions. This provides an operational conceptual analysis framework for the research of this subject.

## CHAPTER 2

### REVIEW OF THE LITERATURE

#### "The Belt and Road" and the internationalization of Higher vocational education

China has signed Belt and Road cooperation agreements with nearly 100 countries and international organizations and conducted extensive cooperation with neighboring countries in infrastructure construction and trade. With the implementation and promotion of the "Belt and Road" Initiative, the "Belt and Road" construction and the internationalization of higher vocational education related research has become a hot spot in the industry. Based on the analysis of the annual quality reports of 1344 higher vocational colleges in 2019, scholars Bai and an (2020) found that "the Belt and Road" Initiative is highly correlated with the internationalization of higher vocational education. The internationalization of higher vocational education in China mainly presents three practical forms: the internationalization of "raw materials", the internationalization of "semi-finished products" and the internationalization of "finished products". Although the internationalization level of higher vocational education has been improving year by year, there are still some problems, such as unclear internationalization strategy, depletion of resources, insufficient internationalization cooperation, different regions of international influence and lack of international brands. Zhang and Liu (2020) summarized the problems existing in international exchange and cooperation of higher vocational colleges as three levels of difficulties at the government level, the university level and the main body linkage level. Some colleges failed to effectively seize the opportunities brought by the "Belt and Road" Initiative to improve the quality of education. Yang and Xiao (2019) aiming at the problems existing in the supply side of the internationalization of higher vocational education in the current stage, proposed that we should pay attention to the adjustment and optimization of the supply side, and put forward specific suggestions for improvement in the aspects of production and factor side.

### Practice of Sino-foreign cooperative education in higher vocational colleges

Sino-foreign cooperation in running a school is one of the important contents of the internationalization of higher vocational colleges, which has naturally become the focus of scholars' attention. Kang et al. (2020) analyzed the current situation of Sino-foreign cooperative education in higher vocational colleges from five aspects. It points out that there are some problems and challenges in the development of Chinese-foreign cooperative education in higher vocational schools, such as unstable development, small enrollment scale, unscientific specialty setting in Chinese-foreign cooperative education in higher vocational schools, large differences in regional distribution of Chinese-foreign cooperative education in higher vocational schools, the quality of Chinese-foreign cooperative education needs to be further improved, and the cooperation with "One Belt and One Road" countries needs to be strengthened. Based on this, the author puts forward the corresponding development countermeasures from the aspects of government, school and school-enterprise cooperation. Chen (2019) believes that under the background of economic globalization, the pace of internationalization of higher vocational education is accelerating, and Sino-foreign cooperative education has become an important path for higher vocational colleges to seek new breakthroughs in development. She thinks that in the process of promoting Sino-foreign cooperation in running schools, higher vocational colleges have difficulties in policy, educational foundation and sustainable development. Some researchers have paid attention to the project quality assurance of Chinese-foreign cooperation in higher vocational schools. To ensure the sustainability of Chinese-foreign cooperation in running schools, Lv et al. (2017) selected higher vocational schools with Chinese-Australian cooperation in different regions of our country. Take the accounting major of Chongqing Electronic Engineering Vocational College as an example to analyze the target system, resource system, organization system, evaluation system and risk factors of Sino-Australian cooperative education.



## Teachers and Students

The internationalization development of higher vocational colleges cannot be separated from the teachers and students, so, some scholars do a lot of related research. Gao (2020) proposed that the internationalization of teaching staff is a necessary factor for the development of the internationalization of higher vocational colleges and the implementation of the Construction Plan of High-level Vocational Schools and Specialties with Chinese Characteristics. At present, the problems of this important factor are as follows: the concept and consciousness of the internationalization of teachers are weak at the cognitive level, the approach of internationalization of teachers at the action level is single, and the internationalization level of teachers at the effect level is low. It is necessary to construct the incentive mechanism from three aspects to improve the internationalization degree of vocational college teachers. At the government level, "policy + plan + platform" leads the way; At the level of institutions, "goal + reward + punishment + funding + evaluation" promotes development; At the teacher level, the Awareness + Purpose program encourages growth. X. Ding (2020) pointed out the shortcomings of the teachers' internationalization development from the aspects of teachers' internationalization positioning cognition, teachers' internationalization teaching ability, teachers' internationalization professional skills, teachers' internationalization communication ability and put forward some suggestions to solve them. He (2019) believes that with the promotion of internationalization of higher vocational colleges and the expansion of international student enrollment, there are some problems and challenges in the teaching management of international students, such as the lack of long-term goals in teaching management, the weak cross-cultural adaptability of international students, the expectation of internationalization of curriculum standards, the urgent need for internationalization of teaching staff, and the lack of international learning environment and atmosphere. Higher vocational colleges should do the following four aspects: First, education administrators should broaden their horizons and understand the international education market. Second, we should create opportunities to enhance the cross-cultural

adaptability of international students. The third is to clarify the talent training objectives and internationalize the curriculum standards; Fourth, improve teachers' international vision and cross-cultural competence.

#### A large shortage of technical skills person

According to the investigation of Chinese-funded enterprises and stakeholders in countries along the "Belt and Road" by the Ministry of Commerce, SASAC and UNDP, it is found that "going global" enterprises are faced with the shortage of professional and technical workers in the technology spillover areas (J. X. Ding, 2020), and most of these areas still lag behind in vocational education. Myanmar's Ambassador to China, U Thit Linn On said, "We need to strengthen vocational skills education. Myanmar is more in need of people who can directly work after study than undergraduates and postgraduates" (Li, 2019). Many other countries along the Belt and Road have similar needs. This gap of technical skills talents means that the main body of the market served by Chinese higher vocational colleges has been widened, to cultivate technical skills talents not only for local people in the technology overflow area, but also for international technical skills talents for "going global" enterprises.

## CHAPTER 3

### METHODOLOGY

#### Research Design

This qualitative research is to deeply understand how to implement the internationalization in higher vocational colleges based on the research results. First, do a lot of research on the related theory, and clarify the framework of this research. Also, do some literature reading and investigation, the general situation of the internationalization of higher vocational colleges is comprehensively understood. Then, through field research and interview, combined with Jane Knight's internationalization strategy classification theory and comparative advantage theory, this paper deeply interprets the characteristic practices and advantages of its internationalization development, and puts forward some suggestions for the development of Chongqing Vocational College of Chemical Engineering.

It can be summarized into the following parts: (1) Summary of the research on the internationalization development of higher vocational colleges mainly combs the existing research on the internationalization development of higher vocational colleges, in order to grasp the idea, focus, method and direction of the research on the internationalization development of higher vocational colleges. (2) Define the core concept. (3) Taking Chongqing Vocational College of Chemical Engineering as an example, this paper analyzes the dilemma of its international development in the post-epidemic era. (4) Put forward the reference enlightenment.

#### Research Method

The research methods used in this study include literature research, case study, interview, questionnaire and so on.

##### 2.1 Literature review method

Collect and sort out the literature, through the literature research to clarify the relevant concepts and theories of internationalization in higher vocational colleges, understand the background and current situation of international exchanges and

cooperation of higher vocational colleges. The literature referred to in this paper is mainly primary and secondary literature, including books, interviews and various online literature and so on.

## 2.2 Case study method

Case study method, also known as case study method, reflects the whole through the study of individuals, which is typical, profound and operable. The case study referred to in this paper is mainly Chongqing Chemical Industry Vocational College. Through the analysis of the current situation of the school's internationalization development in the post-epidemic era, the dilemma of its internationalization development can be understood.

## 2.3 Questionnaire method

A method of obtaining information and data relevant to a study by asking the researcher specific, designed questions. In this paper, the respondents are the managers, administrative staff, teachers, students and graduates of CCIVC. Through the results of the questionnaire survey, we have a preliminary understanding of the status quo and difficulties of internationalization development of higher vocational colleges in the post-epidemic era of CCIVC. I sent my questionnaire to 3 professors to assessment the quality, here are there brief introduction. Zhou Tong, Professor, Doctor of Engineering, currently serves as Deputy Director of International Division of Chongqing Vocational Institute of Engineering. Shi Zhangzhou, Associate Professor, currently serves as Director of International Division, Chongqing Finance and Economics College. Liu Baimei, Associate Professor, currently serves as Director of International Division, Chongqing Technology and Business Institute.

## CHAPTER 4

### FINDINGS

According to Professor Jane Knight, the international development of universities includes academic projects, cooperation and exchanges, teaching model, curriculum system and external environment. Through research and analysis, it is found that due to the far-reaching impact of the novel coronavirus epidemic worldwide, the internationalization development of higher vocational colleges has the following status quo in these dimensions, which objectively restricts the overall advancement of the internationalization development of higher vocational education.

#### Research objectives

Current situation in five aspects of internationalization development of Higher Vocational Colleges

Research method

Qualitative analysis Combined with Literature review, Case study of CCIVC and Questionnaire

Research result and analysis

#### 3.1 International project cooperation has been hindered.

The outbreak of COVID-19 has accelerated the speed of anti-globalization and made great changes in the international political, economic, and cultural environment, affecting the process of international cooperation in higher vocational education in China and forcing the pace of internationalization to slow down. On the one hand, international cooperation is facing an institutional crisis. For example, in the 2020 Opinions of eight departments including the Ministry of Education on Accelerating and Expanding the Opening Up of Education in the New Era, it is mentioned that in the past period, there were nearly 2,300 Chinese-foreign cooperative educational institutions and projects at all levels approved and recorded by the Ministry of Education of the People's Republic of China (2020). However, as the trust gap between countries gradually widened, The Ukraine crisis, Brexit, the trade war between China and the United States,

the conflict of scientific and technological decoupling and other events have brought negative impacts on the progress of the "Belt and Road" international cooperation projects, which cannot meet the needs of deep-level cooperation projects between countries, which also means that the internationalization of higher vocational education in China faces institutional barriers. On the other hand, the credit mutual recognition mechanism between countries needs to be improved. Higher vocational colleges in different countries have differences in entrance standards, educational arrangements and course types, etc. Therefore, credit mutual recognition has always been a difficulty in international cooperation and exchange of higher vocational education (Han et al., 2021). In order to alleviate the problem of students hindered by the epidemic and realize that they can "study abroad" without going abroad, the country launched the enrollment expansion plan of Chinese-foreign cooperative schools. However, this enrollment expansion plan has virtually expanded the differences between Chinese-foreign cooperative schools and programs in the quality of students, and increased the difficulty of overseas study conditions, curriculum docking and academic certification and conversion. Take Chongqing Chemical Industry Vocational College as an example. On the one hand, due to the late start of education internationalization, less experience in practical activities and weak initiative awareness of education internationalization, the improvement of education quality is restricted. The 2019 School International Program just started, and almost all programs were suspended in early 2020 due to the full outbreak of the pandemic. On the other hand, the existing international talent training objectives and models, teaching and curriculum standards of higher vocational colleges can hardly meet the requirements of participating in the construction of the "Belt and Road".

### **3.2 The normal flow of people was blocked.**

Since the prevention and control of the epidemic in 2020, China and most other countries in the world have been affected by the epidemic, especially the exchanges among educational personnel. Due to the risk of the transmission of the novel coronavirus, after the outbreak of the novel coronavirus, offline communication

between China and most of the world's educational institutions has been forced to stop, and normal communication and cooperation can only be maintained through Internet teaching or conferences, and some normal face-to-face courses or teaching plans have been transferred from offline to online. Objectively, the flow of international students has been greatly reduced. At the same time, the vast majority of domestic overseas students have been forced to cancel the plan to go abroad, even the international students cannot return to school normally, and many international students have been forced to suspend their studies. According to the QS International Student survey report, the pandemic has had the greatest impact on Chinese students, followed by Indian students, with 66 percent of Chinese students saying the pandemic has affected their study abroad plans. As we all know, in the process of education internationalization, people are the most active factor and the most important element of communication and cooperation. Since the outbreak of COVID-19, the impact on students has shown two trends. One is the interruption of personnel exchanges due to the impact of COVID-19. The other is that due to the impact of COVID-19, the international situation of higher vocational colleges at home and abroad has changed, which hinders the normal cultural exchanges and cooperation, objectively leads to the interruption of normal personnel exchanges, and even affects the global flow pattern of international students. For example, the education internationalization of Chongqing Chemical Industry Vocational College is mainly oriented towards ASEAN. Due to the impact of the epidemic, the exchanges with students of higher vocational education from Thailand, South Africa and other countries were forced to stop. On the other hand, the international faculty is relatively insufficient, that is, the international faculty reserve meeting the requirements of higher vocational colleges is insufficient. Although vocational colleges have introduced many highly educated teachers with overseas education background, the international discourse power of teachers is not enough, and there is still a certain gap between the level of international teachers and the requirements of higher vocational education to "go global". For example, Gao (2019) conducted an empirical study on 628 middle and higher vocational teachers and found that, at present, the professional ability of teachers

in higher vocational colleges is generally above the average level, among which, teaching ability is the highest, school-enterprise cooperation and social service ability is the lowest, and scientific research ability is weak.

### **3.3 Traditional education and teaching methods are blocked.**

At present, vocational education is in the era of high integration of education teaching and information technology. At the same time, under the background of rapid development of advanced information technology such as Internet and big data, there is a new reform of teaching methods. The limitation of teaching system in time distribution and space form has been broken and the change of teaching paradigm and learning paradigm has been realized. According to the data of the World Vocational Education Online Learning Survey conducted by the International Labor Organization and UNESCO, 64% of the 115 countries that participated in the survey carried out remote online vocational education during the epidemic, and 12% of the countries adopted a combination of online and offline teaching methods (Dai, 2018). During the epidemic, in order to cut off the way of human-to-human transmission of the virus, protect the lives, health and safety of teachers and students, and implement the instruction of the Ministry of Education to "suspend classes without stopping school", Chongqing Chemical Industry Vocational College, for example, replaced the original offline teaching with online teaching during a period of delayed opening. Tencent Conference, Rain Class and other online learning platforms are widely used to carry out education and teaching to students, which has become the only teaching mode in the special stage. For some colleges and universities that recruit international students, they mainly use offline learning for international students, while online teaching for international students who have been studying abroad. Of course, we also clearly realize that online courses played an irreplaceable role in restoring normal education and teaching during the epidemic period. However, while the original education and teaching methods were affected, the real problem of low quality of education and teaching appeared, and it is urgent to improve the teaching quality of online courses.



### 3.4 The international curriculum system is not complete.

Under the guidance of national policies, higher vocational colleges have introduced and developed a lot of international courses and achieved certain results in the process of promoting the internationalization of higher vocational education. However, there are obvious weaknesses in the overall construction of the international curriculum system. On the one hand, it is reflected in the low quality of online teaching, especially during the epidemic period, most international students "stay" at home to study online. Due to the limitations of technology application and teachers' experience, online teaching of some international courses is difficult to meet the requirements of combining theoretical knowledge with practical activities and fails to fully meet the needs of international students for experiencing local culture and conducting cross-cultural communication. The teaching quality of the course content and students' sense of learning experience decreased. In addition, practical teaching and learning in highly practical majors (such as clinical medicine and art majors) cannot be completed through online teaching, which also brings new challenges to educators (He & Wang, 2021). On the other hand, it is reflected in the narrow coverage of international courses. Although project platforms such as "Chinese + Vocational Skills" have been created for overseas students to carry out online learning and skills training, the number of online international course platforms in higher vocational colleges is relatively small, and the output capacity of course resources is weak, which makes it difficult to give full play to the actual value of international courses and meet the diversified needs of international students. In particular, when some higher vocational colleges introduce foreign high-quality curriculum resources, they do not carry out localization reform, which leads to the difficulty in ensuring the quality of the curriculum. Due to the shortage of teachers, Chongqing Chemical Industry Vocational College has not been able to support young and middle-aged teachers to participate in overseas research and training, teacher exchange, overseas study visits and other programs. Moreover, due to the limited number of teachers, tedious approval procedures, study time limit and the impact of the

epidemic, the improvement of the internationalization level of teachers has been restricted.

### **3.5 The environment of education internationalization has undergone great changes.**

The sudden outbreak of the novel coronavirus pneumonia not only affects the normal development of education internationalization, but also affects the international political and economic situation, and the internationalization of higher vocational education is facing unprecedented challenges. For the internationalization of higher vocational education in China, on the one hand, the epidemic intensifies Chinese parents' concerns about the safety of their children studying abroad and their doubts about the employment prospects after graduation. At the same time, it also increases the economic cost of some families to support their children to study abroad, which seriously affects the internationalization of higher vocational colleges. On the other hand, due to the "politicization of the epidemic", normal international exchanges and cooperation between China and the United States and other countries have been limited, which has brought unprecedented challenges to the normal transnational humanistic and scientific exchanges and international cooperation between teachers, students and researchers in higher vocational colleges.

## CHAPTER 5

### CONCLUSION AND DISCUSSION

Based on the above analysis of the status quo of the internationalization development of higher vocational colleges, this chapter will put forward suggestions for the internationalization development of CCIVC.

1. Strengthen cooperation in international programs of higher vocational Education and deepen international exchanges and cooperation.

To improve the overall strength of higher vocational education and effectively prevent all kinds of risks, we need to put forward new requirements for international cooperation pattern to broaden international cooperation and exchange of higher vocational education. Therefore, to strengthen the cooperation of internationalization projects of higher vocational education and deepen international exchanges and cooperation can be started from the following two aspects: On the one hand, improve the relevant policies of internationalization of higher vocational education. Taking Chongqing Chemical Industry Vocational College as an example, it needs to further improve the system construction of overseas education and international exchange of teachers, make a good overall plan for cooperation projects, and stimulate the enthusiasm of the school to carry out project cooperation by means of policy guidance, awards and grants, and activity publicity. On the other hand, we should expand international exchanges and cooperation. We will make overall plans for international cooperation and exchange activities, and establish a strategic alliance platform for international cooperation and exchange. We will establish and improve an internationally accepted quality assurance system for vocational qualification certification, and open channels for international cooperation and exchange in higher vocational education. Further explore the mutual recognition of courses and credits in higher vocational colleges among countries, establish course standards in line with national conditions and improve the credit mutual recognition mechanism based on international standards and in combination with the standards of domestic majors, industrial enterprises and market demands (Xiong et al., 2019). Promote the in-depth

development of cooperation projects such as "Luban Workshop", "Silk Institute" and "International Cooperation Park", select high-quality educational resources to "bring in", integrate high-quality educational resources to "go out", and realize mutual learning of high-quality educational resources (Guo, 2018). During foreign exchange activities, higher vocational colleges should establish the image of a responsible big country, strengthen international multi-level strategic dialogue, increase mutual trust through cooperation and exchange, and improve the international discourse power in the field of our higher vocational education.

2. Expand the cooperation space for the internationalization of higher vocational education.

On the one hand, in view of the impact of the post-epidemic era on the internationalization development of higher vocational colleges, we should strengthen the investigation of the current status of education internationalization, and do a good job in the top-level design of internationalization development, so as to give play to the role of its unique governance means or management methods, and improve the planning and planning of the internationalization development of higher vocational colleges. An in-depth investigation is made on the indicators such as joint education, scientific research cooperation and daily exchanges in the process of internationalization, so as to provide reference for the path selection under the new circumstances, and at the same time to promote the healthy development of the internationalization of higher vocational education in the post-epidemic era. On the other hand, based on the international development of the original higher vocational colleges, according to the latest needs of the international development of higher vocational colleges in the new era, the export of China's vocational education experience and standards is carried out in a targeted and systematic way. In recent years, China's vocational education has developed rapidly, especially higher vocational colleges have achieved high-quality development, relying on the advantages and professional characteristics of the model higher vocational colleges and double higher colleges, and constantly deepen exchanges and

cooperation with the world's colleges and universities, and explore diversified paths of internationalization.

### 3. Build a complementary teaching model of "online + offline."

At present, online courses are in the development stage of personalized learning and two-way interaction with Web 2.0 technology, cloud computing and big data as the core technologies. Especially during the epidemic period, higher vocational colleges generally adopt the combination of "online courses + offline courses". Although the quality of online teaching is not high, online teaching still plays an irreplaceable role. In the post-epidemic era, higher vocational colleges should take "education quality" as the core and build a complementary teaching model of "online + offline". On the one hand, higher vocational colleges need to create a "new normal" of mixed online and offline teaching, that is, to build a complementary teaching model of "online + offline". This requires that in places or colleges where conditions permit, offline teaching is still the main method to ensure the quality of education and teaching. At the same time, the real-time transition from offline teaching to online teaching can be realized at any time for the areas with multiple outbreaks, so as to ensure the development of daily education and teaching. However, due to the technical bottleneck of online courses with two-dimensional network technology, the existing online courses are still unable to achieve real situational practical teaching and experiential learning, and it is difficult to achieve the same effect as offline teaching. In view of this situation, higher vocational colleges can comprehensively utilize the latest theories and technologies to further develop virtual reality, augmented reality and other technologies. Through multi-channel body senses such as language, experience and gesture, they can realize simulation experience interaction and integrate human perception, gesture and body behavior with technology, so as to realize multi-channel experiential interaction of multi-end immersion perception environment. It will fundamentally break the technical bottleneck of online courses in the process of internationalization of higher vocational colleges, provide virtual reality online courses with strong authenticity, beyond reality and good teacher-

student interaction experience for students at home and abroad, and then broaden the embodied field of online virtual cognition of vocational education courses.

#### 4. Establishing and improving the international curriculum system

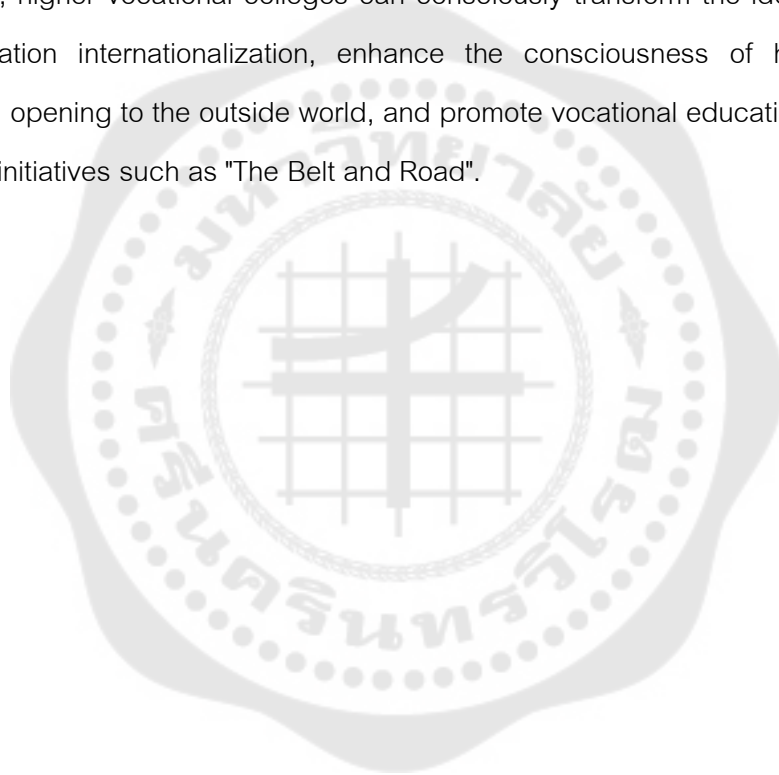
To realize the training goal of internationalization of higher vocational education, it is necessary to have a scientific and reasonable curriculum system that is in line with international standards and educational and teaching contents that meet the needs of internationalization (Pang & Liu, 2016). Therefore, the international development of higher vocational education must construct and perfect the international curriculum system and form the international brand of vocational education. On the one hand, the introduction of high-quality foreign courses. Higher vocational colleges can introduce foreign high-quality course resources through Chinese and foreign educational institutions, and transform them locally, so as to integrate advanced elements into classroom learning, practical training courses and graduation practice, and avoid adopting a single strategy of "taking over doctrine", so that the classroom teaching content will be "not suitable for the soil" (Kang et al., 2021). On the other hand, develop international courses. Vocational colleges should encourage teachers and enterprises to participate in the development of international curriculum, rely on the advantages of Chinese industries and technologies, establish clear training goals for talents in combination with the international market demand, and develop professional courses combining online and offline. The content of the course should take the goal and positioning as the basic starting point, based on the frontier of the subject, effectively combine the theoretical and practical knowledge such as language, cross-cultural knowledge, international education, new skills and new concepts, and take the improvement of intercultural communication ability, broadening international vision and improving international literacy as the important content of the curriculum system. In addition, international courses are promoted. Higher vocational colleges should start from the marketization, internationalization, and specialization of international courses, take international classes and Chinese-foreign cooperation projects as the pilot points, and promote the construction of international courses. Through the teachers' application

of international advanced teaching concepts and methods, the existing online international teaching resources are repeatedly polished, the online courses and teaching content are further optimized, the operation service level of the international curriculum platform is improved, and the speed of the international curriculum certification of higher vocational education is accelerated. Actively guide teachers and students to "go out", by participating in the national skills Competition of higher vocational colleges, world Skills Competition, graduation practice, scientific research cooperation and other project activities, to enhance students' innovative consciousness and ability, accelerate the speed of "going out" in service of domestic industrial enterprises, spread the quality of Chinese educational resources, build international brands of vocational education courses, and improve the internationalization level of higher vocational education.

5.Improve the recognition of higher vocational colleges in the process of internationalization.

A few countries blamed China for the "original sin" of the COVID-19 outbreak, which to some extent affected China's image in the world. Therefore, in the internationalization process of higher vocational colleges, we should take "cultural identity" as the core, enhance the sense of identity in the internationalization process of higher vocational colleges, and create an external environment with strong adaptability. This requires our higher vocational colleges to adhere to the road of opening up and independent international development, uphold the principle of tolerating the cultures, systems and systems of different countries, especially on the basis of tolerating the political culture, economic culture, national culture and language culture of different countries, properly handle the dialectical relationship between their own culture and other cultures. At the same time, we should strengthen the construction of the cultural discourse power of higher vocational colleges, especially relying on the opportunity of the internationalization of higher vocational colleges, and spread China's excellent vocational education experience, standards and excellent traditional culture of the Chinese nation to foreign countries, so as to form an objective, scientific and matching

Chinese discourse system. Taking Chongqing Chemical Industry Vocational College as an example, The Chinese Teaching and Research Department summarizes the teaching practice of Thai students in China, and designs Chinese courses with traditional Chinese culture as the main counterpart. While teaching the language, students can feel the culture and voluntarily undertake the mission of inheriting the cultural friendship between the two countries. Only in this way can we ensure the sustainability of international development and achieve equal exchanges and win-win cooperation. Therefore, under this idea, higher vocational colleges can consciously transform the ideological concept of education internationalization, enhance the consciousness of higher vocational colleges' opening to the outside world, and promote vocational education to better serve national initiatives such as "The Belt and Road".





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## APPENDIX

1. Questionnaire quality assessment of the status quo of internationalization development of higher vocational colleges in the post-epidemic era by Zhou Tong
2. Questionnaire quality assessment of the status quo of internationalization development of higher vocational colleges in the post-epidemic era by Shi Zhuanzhaun
3. Questionnaire quality assessment of the status quo of internationalization development of higher vocational colleges in the post-epidemic era by Liu Baimei

## Appendix details

后疫情时代高职院校国际化发展的现状调查问卷质量评估 Questionnaire quality assessment of the status quo of internationalization development of higher vocational colleges in the post-epidemic era			
问题设置Questionnaire	专家评分情况Expert rating		
	0	1	2
1. 您的身份是? What is your identity?			√
2. 贵校是否制定了国际化发展战略? Does your school have an international development strategy?	√		
3. 您认为疫情对贵校的国际化发展战略有影响吗? Do you think the epidemic has an impact on your international development strategy?			√
4. 疫情期间贵校赴境外学术交流计划是否已完成? Has your school completed the overseas academic exchange plan during the epidemic?			√
5. 疫情期间贵校是否经常在学校举办各种国际文化活动? During the epidemic period, did your school often hold various international cultural activities on campus?			√
6. 对比疫情前贵校在学校举办各种国际文化活动的次数有何变化? Compared with the number of international cultural activities held by your school before the epidemic, what are the changes?			√
7. 疫情对贵校国际项目合作的影响主要体现在哪些地方? (多选) Where is the impact of the epidemic on your international project cooperation mainly reflected? (multiple choice)			√
8. 贵校是否有国际留学生? Does your university have international students?		√	
9. 对比疫情发生前, 贵校同期的国际留学生人数有何变化? What are the changes in the number of international students in your university during the same period compared with before the outbreak of the epidemic?			√
10. 贵校是否有组建国际师资队伍? Does your school have an international faculty?		√	
11. 疫情期间, 贵校组建国际师资队伍的进度如何? What is the progress of building international faculty in your school during the epidemic?			√
12. 疫情期间, 贵校主要的教学方式是? What is the main teaching method of your school during the epidemic?			√
13. 关于在线教学和传统课堂教学, 您认为哪种方式的教学效果最好? Which approach do you think has the best effect on online teaching and traditional classroom teaching?		√	
14. 您认为哪种方式的学习效率更高? Which way do you think is more efficient in learning?	√		
15. 您认为线上教学相比于传统教学方式存在哪些问题? (多选) What problems do you think exist in online teaching compared with traditional teaching methods? (multiple choice)			√
16. 您认为在疫情的影响下教育国际化环境出现了哪些变化? (多选) What changes do you think have taken place in the environment of education internationalization under the influence of the epidemic? (multiple choice)			√
17. 疫情下贵校国际化发展对您的工作或学习有什么影响? What impact does your international development have on your work or study under the epidemic?		√	
总分Total score	28		
专家签字Signature: <i>T.M.H.</i>	时间D. 2022.7.2		

后疫情时代高职院校国际化发展的现状调查问卷质量评估			
Questionnaire quality assessment of the status quo of internationalization development of higher vocational colleges in the post-epidemic era			
问题设置Questionnaire	专家评分情况Expert rating		
	0	1	2
1. 您的身份是? What is your identity?			✓
2. 贵校是否制定了国际化发展战略? Does your school have an international development strategy?		✓	
3. 您认为疫情对贵校的国际化发展战略有影响吗? Do you think the epidemic has an impact on your international development strategy?			✓
4. 疫情期间贵校赴境外学术交流计划是否已完成? Has your school completed the overseas academic exchange plan during the epidemic?			✓
5. 疫情期间贵校是否经常在学校举办各种国际文化活动? During the epidemic period, did your school often hold various international cultural activities on campus?			✓
6. 对比疫情前贵校在学校举办各种国际文化活动的次数有何变化? Compared with the number of international cultural activities held by your school before the epidemic, what are the changes?			✓
7. 疫情对贵校国际项目合作的影响主要体现在哪些地方? (多选) Where is the impact of the epidemic on your international project cooperation mainly reflected? (multiple choice)			✓
8. 贵校是否有国际留学生? Does your university have international students?		✓	
9. 对比疫情发生前, 贵校同期的国际留学生人数有何变化? What are the changes in the number of international students in your university during the same period compared with before the outbreak of the epidemic?			✓
10. 贵校是否有组建国际师资队伍? Does your school have an international faculty?		✓	
11. 疫情期间, 贵校组建国际师资队伍的进度如何? What is the progress of building international faculty in your school during the epidemic?			✓
12. 疫情期间, 贵校主要的教学方式是? What is the main teaching method of your school during the epidemic?			✓
13. 关于在线教学和传统课堂教学, 您认为哪种方式的教学效果最好? Which approach do you think has the best effect on online teaching and traditional classroom teaching?			✓
14. 您认为哪种方式的学习效率更高? Which way do you think is more efficient in learning?		✓	
15. 您认为线上教学相比于传统教学方式存在哪些问题? (多选) What problems do you think exist in online teaching compared with traditional teaching methods? (multiple choice)			✓
16. 您认为在疫情影响下教育国际化环境出现了哪些变化? (多选) What changes do you think have taken place in the environment of education internationalization under the influence of the epidemic? (multiple choice)			✓
17. 疫情下贵校国际化发展对您的工作或学习有什么影响? What impact does your international development have on your work or study under the epidemic?			✓
总分Total score	30		
专家签字Signature: 刘彬	时间Date: 2022.7.2		

后疫情时代高职院校国际化发展的现状调查问卷质量评估			
Questionnaire quality assessment of the status quo of internationalization development of higher vocational colleges in the post-epidemic era			
问题设置Questionnaire	专家评分情况Expert rating		
	0	1	2
1. 您的身份是? What is your identity?			✓
2. 贵校是否制定了国际化发展战略? Does your school have an international development strategy?			✓
3. 您认为疫情对贵校的国际化发展战略有影响吗? Do you think the epidemic has an impact on your international development strategy?			✓
4. 疫情期间贵校赴境外学术交流计划是否已完成? Has your school completed the overseas academic exchange plan during the epidemic?			✓
5. 疫情期间贵校是否经常在学校举办各种国际文化活动? During the epidemic period, did your school often hold various international cultural activities on campus?			✓
6. 对比疫情前贵校在学校举办各种国际文化活动的次数有何变化? Compared with the number of international cultural activities held by your school before the epidemic, what are the changes?			✓
7. 疫情对贵校国际项目合作的影响主要体现在哪些地方? (多选) Where is the impact of the epidemic on your international project cooperation mainly reflected? (multiple choice)			✓
8. 贵校是否有国际留学生? Does your university have international students?		✓	
9. 对比疫情发生前, 贵校同期的国际留学生人数有何变化? What are the changes in the number of international students in your university during the same period compared with before the outbreak of the epidemic?			✓
10. 贵校是否有组建国际师资队伍? Does your school have an international faculty?		✓	
11. 疫情期间, 贵校组建国际师资队伍的进度如何? What is the progress of building international faculty in your school during the epidemic?			✓
12. 疫情期间, 贵校主要的教学方式是? What is the main teaching method of your school during the epidemic?			✓
13. 关于在线教学和传统课堂教学, 您认为哪种方式的教学效果最好? Which approach do you think has the best effect on online teaching and traditional classroom teaching?			✓
14. 您认为哪种方式的学习效率更高? Which way do you think is more efficient in learning?		✓	
15. 您认为线上教学相比于传统教学方式存在哪些问题? (多选) What problems do you think exist in online teaching compared with traditional teaching methods? (multiple choice)			✓
16. 您认为在疫情影响下教育国际化环境出现了哪些变化? (多选) What changes do you think have taken place in the environment of education internationalization under the influence of the epidemic? (multiple choice)			✓
17. 疫情下贵校国际化发展对您的工作或学习有什么影响? What impact does your international development have on your work or study under the epidemic?			✓
总分Total score	30		
专家签字Signature: 刘彬	时间Date: 2022.7.2		

VITA

