

ZIBELINE INTERNATIONAL™  
P U B L I S H I N G

ISSN: 2222-7059 (Print)

EISSN: 2222-7067 (Online)

# Advances in Industrial Engineering and Management (AIEM)

DOI: <http://doi.org/10.7508/aiem.01.2022.41.44>

## REVIEW ARTICLE

# CHALLENGES AND COUNTERMEASURES FACED BY HIGHER VOCATIONAL COLLEGES IN HENAN PROVINCE IN CONNOTATION CONSTRUCTION

Chunyan Hu, Chonlavit Sutunyarak\*

Chakrabongse Bhuvanarth International Institute for Interdisciplinary Studies

Rajamangala University of Technology Tawan-ok, 10400, Thailand

\*Corresponding Author E-mail: [chonlavit\\_su@rmutto.ac.th](mailto:chonlavit_su@rmutto.ac.th)

This is an open access article distributed under the Creative Commons Attribution License CC BY 4.0, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

## ARTICLE DETAILS

### Article History:

Received 31 May 2022

Accepted 7 September 2022

Available online 13 September 2022

## ABSTRACT

The current study aims to explore the challenges and countermeasures faced by higher vocational colleges in Henan in connotation construction as well as the relationship between the connotation construction and extension development. Vocational education in Henan Province started late and its foundation is relatively poor. Higher vocational education started late and there is no mature school running system to rely on. There is a need for connotation construction. The current study used mixed method with both quantitative and qualitative method. The current study has then found that the challenges of the connotation construction of the vocational college in Henan are lack of resources, lower quality in management and stigma. While the countermeasures for this would-be government support and effective leadership. This study has also proved there is a significant relationship between the connotation construction and extension development of higher vocational college in Henan province.

## KEYWORDS

Connotation Construction, Extension Development, Vocational College, Henan

## 1. INTRODUCTION

### 1.1 Research Background

As China enters a new stage of growth, infrastructural development and economic structure adjustment are accelerating, the demand for technical and skilled personnel in all aspects of life is growing, and the critical position and function of vocational education are becoming increasingly apparent (Stoyanets et al., 2020). First of all, higher vocational education has experienced rapid and extensive development (Ozer, 2019). Although after this series of extension development, many higher vocational colleges have developed and expanded in terms of scale, if a higher vocational college wants to develop healthily and continuously, it is not enough to rely on extension expansion alone. Therefore, taking the road of connotation development is the inevitable trend of the development of higher vocational education (Boud and Hager, 2012). In June 2021, the Ministry of education and Henan provincial government issued the opinions on deepening vocational education reform and promoting skill society construction, which will take a series of measures to create a "Henan sample" to deepen vocational education reform and promote skill society construction. Higher vocational education in China has seen significant transformations in recent years, not only in terms of the number of institutions and the scope of operations, but also in terms of the response and attention given by the general public

(Zhang et al., 2021). After the Ministry of Education issued various views on enhancing the teaching quality of higher vocational education comprehensively in 2006, the quality construction of higher vocational education has been elevated to a more prominent place in the discourse on higher vocational education. As a result, connotation building must be carried out by higher vocational colleges. Vocational education in Henan Province started late and its foundation is relatively poor (Zhuang, 2008). If want to catch up with the pace of domestic vocational education, higher vocational colleges in Henan Province should first change the school running system and mechanism. In order to develop healthily and continuously, higher vocational colleges must change their school running ideas and ideas. Forming an advanced school running concept recognized by all members and reflecting the requirements of the times is the core of taking the road of connotation development. As a higher vocational college in Henan Province, we should determine what is our school running concept and how to practice our own development concept. These are the challenges encountered in the construction of development connotation. Then, specialty construction is the carrier and way to implement the talent training mode of higher vocational education and realize the goal of talent training (Gui et al., 2020). Therefore, in the process of talent training, each higher vocational college should choose its own development form and appropriate talent training mode according to its own regional, regional and professional needs. Finally, higher vocational colleges should improve

### Quick Response Code



### Access this article online

Website  
[www.aiem.com.my](http://www.aiem.com.my)DOI:  
[10.7508/aiem.01.2022.41.44](https://doi.org/10.7508/aiem.01.2022.41.44)

the professional level of full-time teachers and improve the academic structure of teachers (Lin et al., 2017). Higher vocational colleges should take various measures such as further study, introduction and external employment to vigorously improve the professional theoretical level and academic level of teachers. Further strengthen the training of teachers in higher vocational colleges (Lin et al., 2017).

## 1.2 Research Objectives

1) To explore the challenges faced by higher vocational colleges in Henan Province in Connotation Construction. 2) To explore countermeasure could be implemented to deal with the challenges faced by higher vocational colleges in Henan Province in Connotation Construction. 3) To analyze the relationship between connotation construction and extension development of Higher Vocational Colleges. In term of that, the current study has formed the research questions as per following: 1) What are the challenges faced by higher vocational colleges in Henan Province in Connotation Construction? 2) What is the countermeasure could be implemented to deal with the challenges faced by higher vocational colleges in Henan Province in Connotation Construction? 3) What is the relationship between connotation construction and extension development of Higher Vocational Colleges?

## 1.3 Scope of Research

At present, there are more than 80 Vocational Colleges in Henan Province. This paper focuses on the problems encountered in the connotation construction of these more than 80 Vocational Colleges in Henan Province, such as changing the school running system and mechanism, changing the school running concept and ideas, promoting professional construction and development, changing the talent training mode, reform and innovation, improving the quality of teachers, and promoting the construction of teachers with double teacher structure, Implement curriculum reform and development, find out the commonalities of these problems in the construction of connotation, and then summarize them. More than 80 higher vocational colleges will certainly encounter various problems in the connotation construction. The problems encountered by these different vocational colleges will certainly have similarities, which is the scope of this paper.

## 1.4 Expected Outcomes

1) By innovating the mechanism and system of Higher Vocational Colleges in Henan Province, we can further update the school running concept of Higher Vocational Colleges in Henan Province, focus on government overall planning, school enterprise cooperation and group school running, and explore the school running mechanism with the participation of departments, industries and enterprises. 2) Through the comprehensive optimization of the teacher structure of Higher Vocational Colleges in Henan Province, the education and teaching ability of various higher vocational colleges in Henan Province is further improved, more high-quality technical application-oriented talents are cultivated for the society, and the ability to serve the society is further enhanced. 3) By promoting some higher vocational colleges in Henan Province to establish characteristic majors, establish cultural brands and create a learning atmosphere of characteristic culture, we can summarize some experience and play a role of theoretical guidance and social culture guidance for other higher vocational colleges.

## 2. LITERATURE REVIEW

### 2.1 The Development Status of Higher Vocational Colleges in Henan Province

Henan Province is located in the Central Plains. According to Li (2009), Henan Province is a populous province that are full of resources which are benefiting higher vocational colleges. Investing heavily in vocational education and enhancing the quality of employees are critical components of fostering the Central Plains' economic growth (Zhang et al., 2021). Through more than ten years of extensive development, many higher vocational colleges in Henan Province have first exposed some problems in development. So far, there are 84 higher vocational colleges and universities in Henan Province, and there are 5 higher vocational colleges and universities to be approved. So many higher vocational

colleges and universities currently have some common problems.

### 2.2 Definition of Core Concepts

Many concepts often have ambiguity in daily life and have different meanings in different situations. In academic research, if the concept is not clearly defined, it is easy to cause the deviation of research scope. Therefore, in order to conduct in-depth research on the challenges encountered by higher vocational colleges in the construction of development connotation, it is necessary to clearly define the core concepts mentioned in this study, so as to ensure the clarity of the research scope.

### 2.3 The Relationship Between Connotation Construction and Extension Development of Higher Vocational Colleges

Based on inclusive development and epitaxial development, it is the ultimate requirement of epitaxial development. Connotative development is established on the basis of extensional development. The improvement of the overall quality and efficiency of the school needs the support of human, talent, material and other elements. At the same time, the foundation of efficient development is the premise to realize the school running level and teaching quality.

### 2.4 SWOT Analysis of Connotation Construction of Higher Vocational Colleges

#### 2.4.1 Strength

China has accumulated rich experience in the rapid development of higher vocational animal husbandry. After more than 40 years of rapid development, China's higher vocational education has changed from horizontal expansion to internal development. It has made continuous innovation in the improvement of school running conditions, institutional reform, professional construction, teacher team construction, talent training, industry-animal husbandry integration, school-enterprise cooperation, social services and other aspects, and its overall competitive strength has been significantly enhanced. In addition to providing talent and intellectual support for the social development of the district, it has also accumulated experience for the development of higher vocational education itself. The quality of digital education is more and more recognized by other countries and regions. In this regard, experience is also creating favorable conditions for the development of higher vocational colleges in China.

#### 2.4.2 Weakness

Lack of international teachers will be the weakness. In recent years, China's higher vocational colleges have made great efforts to improve the international construction level of their teaching staff by carrying out overseas exchange of teachers. However, there is still a big gap between the actual needs of higher vocational colleges to run schools abroad, which is reflected in the low number of teachers with bilingual teaching ability and international vision. Many teachers with high professional level and rich teaching experience lack the ability to teach in foreign languages and cannot adapt to the requirements of cross-border teaching.

#### 2.4.3 Opportunities

The "Double Higher Education Program", also known as the "Shuang Gao" in Chinese, is a major decision made by the Central Committee of the Communist Party of China and The State Council of the People's Republic of China to build a number of world-class higher vocational schools and key majors that lead reform and support development with Chinese characteristics. It is also an important decision made to promote the modernization of Chinese education.

#### 2.4.4 Threats

Inadequate finance for the operation of schools. Although higher vocational colleges serve as the primary source of funding for school-enterprise collaboration in operating schools in China at the moment, the funding available for operating schools at higher vocational colleges is limited and

the funding comes from only one source, namely, financial funding. As the building of high-level higher vocational colleges in China continues to progress, fewer funds are being allocated to the operation of schools in the face of intense competition. In short, this means that if the funding from the investors or government are not approved, this could be a big threat for development of connotation construction of higher vocational college.

### 3. METHODOLOGY

#### 3.1 Mixed Method

The current study is using qualitative method which it helps to understand more actual perception of the educators in vocational education in Henan. Qualitative method means that it is collecting the data through the non-numeric data. This normally will collect through interview session. Also, the current study is using quantitative method which helps to understand the relationship between the connotation construction and extension development of Higher Vocational Colleges.

#### 3.2 Population & Sample

The current study will be recruiting 10 participants work in vocational education in Henan for at least three years and above for qualitative study. Each of the top ten of the vocational college in Henan will have one representative to be included in this study. The top ten of the vocational college in Henan Province are: Yellow river conservancy Technical institute, Henan Industrial Vocational and technical school, Henan Vocational and Technical College, Sahngqiu Polytechnic, Henan Economic and Trade Vocational College, Pingdingshan Industrial Vocational and Technical College, Henan Agricultural Vocational College, Zhengzhou Railway Vocational and Technical College, Xuchang vocational and Technical College.

#### 3.3 Data Collection

The current study will employ a semi-structured interview. It is a style of interviewing in which the interviewer asks only a few predetermined questions and the others are unplanned. Since semi-structured interviews incorporate the advantages of both organized and unstructured interviews, they provide the best of both worlds in terms of information gathering. For researchers who want to: (1) collect qualitative, open-ended data; (2) extract participants' thoughts, feelings, and opinions about a certain issue; (3) delve deeply into personal, and often sensitive, themes, semi structured interviews are an appropriate data collection strategy. Other than that, questionnaire will be used as another data collection way. Indeed, questionnaire is designed based on the variable connotation construction and development of Higher Vocational Colleges. The questionnaire is close-ended question with rating from 1 (strongly disagree) to 5 (strongly agree).

#### 3.4 Data Analysis

Coding is the process by which one defines the subject matter of the data being analysed in qualitative research. Coding is the process of detecting a passage in a text or other data item, searching for and identifying concepts, and establishing linkages between them. Thus, coding is not merely assigning labels to data; it is the process of linking data with a research idea and subsequently with more data. The gap between concept-driven and data-driven coding is a crucial one in coding methodologies (or open coding). If one wishes to approach the data using an established system of codes and searching for concepts/ideas within the text (concept-driven technique), or if one wishes to approach the data without prior conceptualization and allow the text to speak for itself (text-driven technique), either approach is acceptable (data-driven coding). Alternatively, investigators can employ a preexisting coding system or investigate the first replies or observations and establish a classification strategy based on the emerging key categories. Both methodologies need a comprehensive initial examination of the data, as well as documentation of any patterns or themes that emerge during the investigation.

## 4. DATA ANALYSIS

### 4.1 Qualitative Analysis

The first research question of the current study is 'What are the challenges

faced by higher vocational colleges in Henan Province in Connotation Construction?'. There are three themes are formed for answering the first research questions, which are insufficient resources, low quality of management planning, and stigma. In order to get into the path of the coding process, it is imperative to understand the extracts that are contributed to the codes in order to form the themes. Hence, there are three themes are formed, which are insufficient resources, low quality in management as well as stigma. The second research question of the current study is 'What are the countermeasure could be implemented to deal with the challenges faced by higher vocational colleges in Henan Province in Connotation Construction?'. The second theme that is formed to answer the second research questions is effective leadership and get support from the government. After understanding the extracts that are meaningful and could be contributed.

### 4.2 Quantitative Analysis

Pearson R is an analysis to understand the relationship between the variables. In term of that, if the p-value is lower than 0.05, it considered the variables are related. According to the table above, connotation construction and extension development of higher vocational college are correlated,  $r=0.33$ ,  $P=0.001$ . This means that there is a relationship between the connotation construction and extension development of higher vocational college. Indeed, the Pearson R is with a positive sign, which means they are positively correlated to each other,  $r=0.33$ ,  $P=0.001$ .

This study has run for the simple linear regression model as well. Similar to Pearson R, the p-value that is lower than 0.05, means that the independent variable is predicted the dependent variable. Based on the tables above, connotation construction is predicted extension development of higher vocational college, which means there is a significant relationship between them,  $b=0.042$ ,  $95\%CI [0.178, 0.670]$ ,  $P=0.001$ . Indeed, the better the connotation construction, the better extension development of the higher vocational college.

### 4.3 Discussions

In term to answer to the first research question, qualitative analysis is run and formed three themes for it. The themes that are constructed for answering the research question are insufficient resources, low quality in management and stigma. This means that the challenging part faced by higher vocational colleges in Henan Province in Connotation Construction are insufficient resources, low quality in management and stigma. The second research question of the current study is also answered by the qualitative analysis which are effective leadership and government support. Each of them could be discussed based upon the related past studies. At present, the social attraction of higher vocational education is relatively weak, vocational education has not been widely and highly recognized by parents and students, and students' initiative to apply for and study is not strong. Statistics show that from 2015 to 2019, students in vocational colleges accounted for only about 40% of those in ordinary colleges, indicating that the social value of skilled talents has not been truly recognized and their social status is generally very low. The reasons for this situation are, first, the existence of binary separation in the system. China has been implementing the traditional personnel management system of "light occupation, heavy rank" for a long time, which artificially separates "workers" and "cadres" and manages them differently according to their status. Under this management system, cadres are usually regarded as talents, workers are

Table 1: Correlations

		CC	ED
CC	Pearson Correlation	1	0.326**
	Sig. (2-tailed)	-	0.001
	N	100	100
ED	Pearson Correlation	0.326**	1
	Sig. (2-tailed)	0.001	-
	N	100	100

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Table 2: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.326 <sup>a</sup>	0.107	0.097	2.53345	0.107	11.686	1	98	0.001

a. Predictors: (Constant), CC

**Table 3: ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	75.002	1	75.002	11.686	0.001 <sup>b</sup>
	Residual	628.998	98	6.418	-	-
	Total	704.000	99	-	-	-

a. Dependent Variable: ED

b. Predictors: (Constant), CC

**Table 4: Coefficient<sup>a</sup>**

Model	B	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		Std. Error	Beta				Lower Bound	Upper Bound
1	Constant	10.953	1.787	-	6.130	0.000	7.407	14.499
	CC	0.424	0.124	0.326	3.418	0.001	0.178	0.670

a. Dependent Variable: ED

just ordinary laborers, and the vast majority of highly skilled talents are classified as workers. Essentially, government is taking active role with dealing with this challenge. The government must take severe measures to ensure that youths have jobs quickly after completing their degrees, such as giving youths preference over foreign employees when filling vacancies. Another method is to increase the link between education and employment as the first step toward improving vocational colleges. The government's primary objective should be to enhance collaboration between the public and private sectors.

## 5. CONCLUSION

The current study has then found that the challenges of the connotation construction of the vocational college in Henan are lack of resources, lower quality in management and stigma. While the countermeasures for this would be government support and effective leadership. This study has also proved there is a significant relationship between the connotation construction and extension development of higher vocational college in Henan province. Indeed, the recommendations based on the findings are discussed in later section as well as the limitations of the study. The current study is recommended the vocational college to restructure their management. Based upon the challenges as mentioned and the ways of the countermeasures, the management are highly needed to restructure to have more efficient leaders to lead the management team. For the vocational college, leadership development may be viewed as a strategic focus. This is because talented leaders are required for the effective formulation and implementation of business strategies, the management of follower attitudes and behaviours, the control of team processes and outputs, and the overall performance of the organization (Subramony et al., 2018). Also, the vocational colleges are recommended to add on the counselling services to alleviate the negative emotions of the students towards stigma. This allows the students to avoid to be affected by the stereotyped of the society and willing to be in vocational college. Indeed, vocational colleges could then be developed steadily.

## REFERENCES

- Boud, D., Hager, P., 2012. Re-thinking continuing professional development through changing metaphors and location in professional practices. *Studies in Continuing Education*, 34(1), Pp. 17-30. <https://doi.org/10.1080/0158037X.2011.608656>
- Jian, Z.W., 2008. Research on the development strategy of Henan higher vocational education. *Journal of Anyang Normal University*
- Lin, H., Huang, W., Hu, X., 2017. Research on the design of talent training mode based on "the ordered class" for certain majors in vocational education. In *3rd International Conference on Arts, Design and Contemporary Education (ICADCE 2017)* (Pp. 931-934). Atlantis Press. <https://dx.doi.org/10.2991/icadce-17.2017.230>
- Stoyanets, N., Zhao, H., Li, G., 2020. Modernization of vocational education in the context of rural human resources development in China. *Agricultural and Resource Economics: International Scientific E-Journal*, 6(1868-2020-931), Pp. 76-90. <http://dx.doi.org/10.22004/ag.econ.302970>
- Subramonym, M., Segers, J., Chadwick, C. Shyamsunder, A., 2018. Leadership development practice bundles and organizational performance: The mediating role of human capital and social capital. *Journal of Business Research*, 83, Pp. 120-129. <https://doi.org/10.1016/j.jbusres.2017.09.044>
- Zhang, H., Sukpasjaroen, K., Chankoson, T., 2021. Factors influencing employability and management countermeasures of nursing graduates in vocational education in Henan province, China. *Proceedings of IAC 2021 in Vienna*, 1, Pp. 57.
- Ozer, M., 2019. Reconsidering the fundamental problems of vocational education and training in turkey and proposed solutions for restructuring. *Sosyoloji Dergisi/Journal of Sociology*, Pp. 39(2).
- Gui, Y., Fu, B., Pan, Q., Luo, M., 2020. Research on the talent training mode of "integration of work, study and business" in Chin's higher vocational education under the background of industry 4.0. *2020 International Conference on Teaching, Assessment, and Learning for Engineering (TALE)*, Pp. 731-736 <https://doi.org/10.1109/TALE48869.2020.9368444>