

Vocational college teaching practices and development in China

Gao, Hongmin ✉

Graduate School, Lyceum of the Philippines University – Batangas (919628595@qq.com)

Received: 1 April 2024

Available Online: 15 June 2024

Revised: 15 May 2024

DOI: 10.5861/ijrse.2024.24639

Accepted: 30 May 2024

ISSN: 2243-7703

Online ISSN: 2243-7711

OPEN ACCESS



Abstract

This study aimed to determine the relationships between teaching practices and development in vocational colleges in China so as to propose an action plan on enhancing teaching practices and development among teachers. In this study, 351 higher education teachers from three colleges in Henan Province were involved as participants. The descriptive research method utilized the adapted questionnaire in the survey and data analysis employed descriptive statistics. The research findings indicate that the majority of teachers in vocational colleges are males, aged between 35 and 45 years old, hold a bachelor's degree, and have six to ten years of teaching experience. Vocational college teachers agree on the teaching practices observed in their college. In addition, they also agree on teaching development recognizing that the level of teaching development is determined by the curriculum, teaching methods, and student progress. Responses on the teaching practices and development significantly differ only in terms of age. Moreover, teaching practices and development are significantly related, which suggests that the quality of teaching practices determines teaching development. Based on the study results, an action plan on teaching practices and development for vocational college teachers has been proposed.

Keywords: teaching practice, teaching development, teaching work, individual teachers

Vocational college teaching practices and development in China

1. Introduction

As China's economy rapidly grows and its industrial structure undergoes transformation and upgrading, the demand for highly skilled talent is increasingly on the rise. Vocational colleges serve as crucial hubs for nurturing technical talent and play a significant role in the development of our country's economy and society. As an important part of China's education system, higher vocational colleges undertake the important task of cultivating high-quality technical talents. However, teaching practices in vocational colleges still face certain issues and challenges, such as single teaching method, insufficient teaching resources and imperfect teacher system. These problems affect the quality of education and the effect of personnel training in higher vocational colleges to some extent.

Vocational teaching, as an important part of the education system, aims to provide students with the necessary vocational skills and knowledge to adapt to the needs of specific industries. This teaching mode not only focuses on the transfer of theoretical knowledge, but also emphasizes the training of practical skills and the improvement of professional literacy (Smith, et. al.,2019). The core objective of vocational instruction is to develop students' career readiness so that they can compete and stand on their own two feet in the job market. The research on vocational teaching has been widely distributed in various fields of educational science. This study mainly refers to the literature of educational psychology, vocational and technical education, and educational policy and management. For example, Johnson et al. (2021) discussed how teaching methods affect students' vocational skills development in his study. In addition, reports by international education standards bodies such as the Organization for Educational Cooperation and Development (OECD) provide important data on the effectiveness and policy orientation of vocational teaching (OECD, 2020). The effectiveness of vocational teaching is influenced by many factors, including teachers' teaching strategies, the provision of educational resources, and students' learning motivation (Williams, et. al.,2018). However, there are still some gaps in the research on the direct relationship between teaching practice and career development. Therefore, this study aimed to explore the specific link between these two variables in order to fill in the gaps of existing research. Teaching practices in vocational colleges typically directly involve the cultivation of professional skills. By studying the relationship between teaching practice and development, we can better understand the impact of practice on students' career development and provide more effective teaching methods and strategies. By studying the relationship between teaching practice and development, deficiencies in teaching practice could be found to propose measures to improve teaching quality and student learning outcomes. Studying the relationship between teaching practice and development can promote educational innovation and reform. Understanding the influence of practice on education development can provide theoretical and practical support for education reform and promote the development of higher vocational colleges. With the continuous development of society and economy, the research demand on the relationship between teaching practice and development in higher vocational colleges is increasing day by day. These research results can provide references for policy makers to help them better formulate education policies to meet the needs of society.

This study delved into the present circumstances, challenges, and development trends of teaching reform in China's vocational colleges and provides some valuable insights into teaching practice. In the teaching practices of vocational colleges in China, practical teaching is considered to be very important. Through practical teaching, students can better master vocational skills and be prepared for future career development (Wang, 2019). In order to further improve the education quality of higher vocational colleges and meet the needs of social and economic development, it is imperative to delve deeply into the teaching practices of vocational colleges, and discuss its current situation, problems and improvement strategies. Traditional lecture-based instruction remains prevalent in vocational colleges, with relatively fewer instances of utilizing diverse teaching methods such as practical

instruction, project-based learning, and case studies. This single teaching method may lead to the reduction of students' learning interest and initiative, this impacts the cultivation of students' overall competence and innovative capacity (Tomlinson, 2019). Teaching is the core of higher vocational education. This paper analyzes the current situation and predicament of higher vocational teaching in China, and it proposes corresponding measures to address the issues and enhance teaching from three perspectives: teachers, higher vocational colleges, and educational authorities (Zhou, 2020). Higher vocational colleges should emphasize practical teaching on cultivating students' professional quality and comprehensive ability. In this view, in addition to the cultivation of technical skills, focusing on fostering students' innovation awareness, teamwork skills, and other aspects, will enhance their overall competitiveness (Deng, et. al., 2018). Teaching resources in higher vocational colleges encompass teaching materials, experimental equipment, network resources, teaching software and so on. Currently, numerous higher vocational colleges have deficiencies in teaching resources, such as late update of teaching materials, shortage of experimental equipment, and lack of network resources. This makes it difficult for teachers to adopt modern teaching methods in the teaching process, thereby influencing the quality of instruction (Wang, 2023).

The personal and professional development feeling of teachers in higher vocational colleges is an important link to promote teacher education and teaching. However, at present, many teachers in higher vocational colleges are not satisfied with this system, feeling that the work reward is not equal to the effort, and they do not get the sense of work value and happiness, which leads to the burnout of school teaching and the attitude of coping with teaching. This challenge hampers teachers' ability to apply responsible teaching concepts and methods during instruction, thereby compromising teaching quality (Deng, et. al., 2020). Teaching practice in higher vocational colleges refers to the various practical operations, experiences and activities carried out teaching process at higher vocational colleges, both teachers and students aiming at promoting students' learning and skill development. Moreover, it is the core component of vocational education and has great significance. This practice usually includes classroom teaching, experimental courses, practice training, project-based learning and other forms. Through these practical activities, students can gain a deeper understanding of and effectively apply the theoretical knowledge they have acquired, develop vocational skills, and prepare for future career development. Simultaneously, teaching practice offers teachers feedback and opportunities for improvement, which promotes the professional growth of teachers and the improvement of teaching quality (Zhang, 2020).

The concept of teaching development in higher vocational colleges entails the ongoing enhancement and refinement of teaching methods, curriculum, faculty, and educational resources, aimed at enhancing teaching quality and meeting societal demands. Teaching development serves as the cornerstone and assurance of higher vocational education, playing a pivotal role in elevating teaching quality and nurturing exceptional talents. This development includes curriculum reform, teaching means innovation, teaching staff construction, teaching resources optimization and so on. Through the development of teaching, Vocational colleges can constantly adapt to the changes of society and industry, improve students' comprehensive quality and employment competitiveness. At the same time, the development of teaching also needs the joint efforts of education management departments, teachers' teams and school leaders to form a joint force to promote the development of education (Zhou, 2023).

At present, there may be too much theoretical research and relatively insufficient empirical research in the literature. More attention needs to be paid to actual teaching practices and developments, as well as in-depth empirical research. There is also insufficient coverage of professional fields, some research may be limited to specific professional fields, and there is insufficient understanding of teaching practices and developments in other fields. An interdisciplinary research perspective is needed, with a comprehensive understanding of educational practice in different professional areas. Some literature may lack long-term tracking and evaluation of teaching practice and development within institutions of higher vocational education. Long-term research mechanisms need to be established to continuously supervise and assess the advancement of teaching practice and development, and to identify and address problems in a timely manner. The quality assessment system in

higher vocational colleges is a crucial tool for gauging the educational standards of institutions. However, the current education quality evaluation system of many higher vocational colleges is not perfect, paying too much attention to students' examination results, but ignoring the cultivation of students' comprehensive quality and practical ability. This leads to students in the process of learning too much attention to the test, but ignore their own capability to improve. Close collaboration between vocational colleges and enterprises is a key pathway to cultivate excellent technical talents. However, currently, the cooperation between many vocational colleges and enterprises is not sufficiently close, and the degree of enterprise participation in the teaching process of schools is relatively low, resulting in talents cultivated by schools being unable to meet the demands of enterprises. Government policy support for higher vocational colleges is a critical guarantee for promoting the advancement of higher vocational education. However, at present, the government's policy support for higher vocational colleges is relatively insufficient, such as insufficient financial investment and imperfect tax preferential policies. This makes higher vocational colleges have certain difficulties in teaching resources, teachers, infrastructure construction and so on.

In China, compared with general higher education, higher vocational education has a lower social recognition. This makes higher vocational colleges face certain difficulties in enrollment, teachers, school-enterprise collaboration, among other efforts. To enhance societal recognition of higher vocational colleges, publicity must be strengthened and the society's understanding of higher vocational education essential to improved. Drawing from the current state of teaching practice in China's higher vocational colleges, this study collected data through questionnaire to conduct in-depth analysis of teachers' teaching satisfaction, pedagogical approaches, teaching resources, teaching environment and other aspects, aiming to provide empirical evidence for the improvement of teaching methodologies in higher vocational colleges and provide references for the development of relevant policies.

Objectives of the Study - The study aimed to assess the vocational college teaching practices and development in China in order to propose an action plan on enhancing teaching practices and development. Specifically, it assess vocational college teaching practices as to teaching environment, teaching work, practical teaching, and individual teacher; determine teaching development as to curriculum and teaching, development of students, and vocational development; test the significant correlation between teaching practices and development; and propose an action plan on enhancing teaching practices and development among teachers in vocational colleges in China.

2. Methods

Research Design - This study is a quantitative and descriptive study that describes the practice and development of education. First, quantitative research can collect and analyze data through the use of quantitative measurement tools and methodologies (Anggini, et. al.,2020). Second, quantitative studies typically necessitate larger sample sizes to enhance the statistical validity and reliability of the research. (Eli, 2019). Finally, statistical methods are used to conduct quantitative research on the collected data, which can reveal the degree of correlation and influence of teaching environment, teaching facilities, courses, teachers and students on teaching practice and development. This study is a quantitative study, using questionnaires for gathering research data. Since the scope of this study involves teaching practice and teaching development, the quantitative methods in this study can encompass more interviewed teachers and obtain more representative results.

Participants of the Study - This study was conducted among 351 professional teachers from three vocational colleges in Henan Province, China, with a total number of 1500 teachers. Raosoft online sample calculator was used as a tool to calculate the sample number of participants, with 5% error margin and 95% confidence level. 351 respondents of different ages, different degrees and different years of work were selected randomly.

Data Gathering Instrument - The researcher used an adapted questionnaire in data collection. The

questionnaire is divided into three parts with the first part is on vocational teaching practices, including teaching environment, while the second part is on teaching development. With the reliability test results, the questionnaire values of the two variables of teaching practice and teaching development in higher vocational colleges are higher than the threshold value of 0.8, and the verbal performance of all indicators is good, and very good. This indicates that the primary data collection tools utilized are reliable and suitable for large-scale surveys.

Data Gathering Procedure - The researcher conducted the study with permission from selected colleges and with the approval from the university's Ethics Review Committee. After obtaining approval, participants were informed about the targeted respondents and assured of the confidentiality of the collected data. Questionnaires were then personally distributed to the targeted respondents. Via online platforms questionnaire survey, it was ensured that school teachers had enough time to complete the questionnaire, collected all the completed questionnaires, sorted out the data and sent to the statistician for reliability testing. After approval, the researchers proceeded with large-scale questionnaire data collection. The collected data were analyzed to gain insights into the educational environment and teaching quality of higher vocational colleges. The results of the analysis were presented in the form of a report that includes data analysis, conclusions, and recommendations. Secondly, according to the results, an enhanced faculty development program was proposed.

Data Analysis - For data analysis, weighted average and ranking method are used to determine the influence of teachers in teaching practice and teaching development. Pearson product difference correlation was used to test the significant relationship between the treated variables. In addition, post hoc tests were conducted. In addition, all data were processed using PASW version 26 statistical software, using alpha levels of 0.05 and 0.01 to further interpret the findings.

Ethical Considerations - Due to the sensitive nature of the interviews and data collected, no names will be disclosed in the report. The identities of the interviewees were kept confidential, with only their roles as faculty members of higher vocational colleges mentioned. The data and results of the study were processed with the utmost confidentiality. The researcher sought the approval of the Ethics Review Committee to ensure that all ethical principles are adhered to.

3. Results and discussion

Table 1
Summary Table on Teaching Practices

Indicators	Weighted Mean	Verbal Interpretation	Rank
Teaching Environment	3.19	Agree	4
Teaching Work	3.25	Agree	1.5
Practical Teaching	3.25	Agree	1.5
Individual Teacher	3.22	Agree	3
Composite Mean	3.23	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

Table 1 shows a summary table of support for teaching practices. The overall average score of the four items was 3.23, indicating a high degree of recognition of teachers' teaching practices. Among them, the highest items are teaching work and practical teaching, which are tied for first place in the data. Ranking last is the satisfaction of the teaching environment, indicating that there is still ample opportunity for enhancement in the teaching environment of Chinese higher vocational colleges. Liu (2021) shared that the course teaching in most higher vocational colleges still predominantly focused on theoretical instruction and practice teaching. In the form of teaching, whether it is the original chalk, or the modern PPT courseware, basically "teachers write, students copy; Teachers lecture while students listen passively, "infusing" teaching model, teaching content, always via the teacher's description and show to the students, students in the teacher's explanation of imagination and imitation, while it's beneficial for stimulating students' learning enthusiasm and initiative, it's not conducive to fostering students' interest in learning. In fact, many courses offered by higher vocational colleges not only require students to master the necessary theoretical basis, but also to cultivate students' practical operation ability. Due to

the absence of hands-on training, the professionalization process of students is bound to be hindered, and it is difficult for schools to cultivate individuals with innovative flair and practical aptitude. The purpose of higher vocational education combining work with study has not been really carried out in some higher vocational colleges

Table 2
Summary Table on Teaching Development

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Curriculum and Teaching	3.22	Agree	2.5
2. Development of Student	3.22	Agree	2.5
3. Vocational Development	3.27	Agree	1
Composite Mean	3.24	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

Table 2 gives the summary on teaching development. The comprehensive average value is 3.24, indicating that the teaching development of higher vocational colleges is closely related to the curriculum, students and students' career development. Among them, students' career development ranks first, indicating that teachers understand which aspects of students' ability should be cultivated by teachers in higher vocational colleges, followed by students' skill competition, training and curriculum teaching. Only by studying the needs of society and students can we better advance with the times and enhance the advancement of teaching. Liu, et. al., (2020) asserted that the curriculum higher vocational colleges should prioritize practicability and career orientation. This means that the course design should be closely aligned with the current industry demands, so that students can be successfully employed and competent after graduation. The combination of production and study is a fundamental tenet of curriculum teaching in higher vocational colleges. Through cooperation with industry, internship practice, etc., the course can be better integrated with real work scenarios, ensuring that students have the required practical work skills after graduation.

Wang, et. al., (2021) argued that the curriculum should be in alignment with the current demands of the industry more interdisciplinary and cover knowledge in multiple fields. This helps students to be well-rounded, while also helping continual adaptation to these shifts enables students to better acclimate to evolving work environments. Furthermore, with the ongoing advancements in technology, the literature puts forward the importance of strengthening technical education and innovation ability training in the curriculum of higher vocational colleges. Such a curriculum design enables students to master the latest technologies and tools, and develop their problem-solving and innovative thinking skills. The research emphasizes incorporating these advancements into the curriculum of higher vocational colleges is essential, as is recognizing the importance of personalized teaching. By understanding students' individual differences and learning needs, teachers can better adjust teaching methods and contents to improve teaching results. To sum up, curriculum teaching in higher vocational colleges should take practicability, career orientation, combination of production and study, interdisciplinary teaching, technology and innovation, and personalized teaching as important principles to cultivate students' practical work ability and comprehensive quality.

Table 3
Relationship between Teaching Practices and Teaching Development

Teaching Environment	r-value	p-value	Interpretation
Curriculum and Teaching	.877	0.000	Highly Significant
Development of Student	.840	0.000	Highly Significant
Vocational Development	.836	0.000	Highly Significant
Teaching Work			
Curriculum and Teaching	.894	0.000	Highly Significant
Development of Student	.850	0.000	Highly Significant
Vocational Development	.838	0.000	Highly Significant
Practical Teaching			
Curriculum and Teaching	.912	0.000	Highly Significant
Development of Student	.849	0.000	Highly Significant
Vocational Development	.837	0.000	Highly Significant
Individual Teacher			

Vocational college teaching practices and development in China

Curriculum and Teaching	.905	0.000	Highly Significant
Development of Student	.864	0.000	Highly Significant
Vocational Development	.850	0.000	Highly Significant

Legend: Significant at p -value < 0.01

Table 3 shows the impact of teaching environment on curriculum and teaching, student development and career development, using r-value (correlation coefficient) and p-value (significance level) for analysis. It becomes evident from the data that the teaching environment has a highly significant correlation with curriculum and teaching, student development and career development. Specifically, in terms of curriculum and teaching, the correlation coefficient between teaching environment and curriculum and teaching is 0.877, and the correlation coefficient between teaching environment and other aspects is also above 0.8, and all p values are 0.000, indicating that this correlation is very significant. This indicates that the quality of the teaching environment directly impacts the implementation of curriculum and teaching quality. In terms of student development and professional growth, the correlation coefficient between teaching environment and them is also above 0.8, and all p values are 0.000, indicating that teaching environment is closely related to students' development and future career development. A good teaching environment can foster the comprehensive growth of students and enhance their professional ability and competitiveness. In summary, the data clearly indicates that the teaching environment has a highly significant impact on curriculum and teaching, student development and career development. Therefore, educational establishments and educators should pay attention to and improve the teaching environment to provide students with a good learning atmosphere and conditions, thus promoting their all-round development and future career development. Li, et. al., (2021) this article explores the impact of classroom environment on student learning. Through investigation and research, the author analyzes the situation influence of classroom atmosphere, layout and teaching resources on students' learning achievement and behavior. These factors have an important impact on curriculum instruction and curriculum delivery and student development.

Table 4

A Proposed Faculty Development Program on Enhancing Vocational College Teaching Practices and Development in China

Key Result Areas	Objectives	Enhancement Activities	Success indicators	Persons involved
1. Promotion of teaching practice	Improve the teaching practice level of teachers and enhance the practical ability of students	1. Set up teaching practice projects, including campus experiments, internships, social practices, etc. Establish school-enterprise cooperation projects, provide practical opportunities and cultivate students' practical ability 3. Encourage teachers to participate in the reform research of teaching practice and promote the innovation of teaching methods	1. 95% of the students participate in practical projects with improved quality 2. Students' practical ability has been effectively improved 3. Popularization and application of teaching practice reform research results	Office of Academic Affairs/Centre for Teaching Development
2.Promotion of teaching development	Promote teaching development and improve teaching quality	1. Conduct teaching seminars and teaching observation activities to share teaching experience and successful cases 2. Establish a teaching evaluation mechanism, and conduct regular evaluation and feedback on teaching quality 3. Support teachers' teaching development projects, such as curriculum design optimization, teaching resources construction, etc.	1. The quantity and quality of 95% of teachers' participate in teaching seminars 2. Teaching evaluation results have been improved and teaching quality has been steadily improved 3. The implementation effect of the teaching development project is remarkable	Office of Academic Affairs/Centre for Teaching Development
3.Teaching resource optimization	Optimize the allocation of teaching resources and improve the teaching effect	1. Update teaching equipment and technology to ensure smooth teaching process 2. Expand the channels of teaching resources, introduce high-quality teaching materials, teaching software, etc. 3. Provide teaching assistance services, such as learning guidance, Q&A counseling, etc.	1. 95% rate of utilization of teaching equipment 2. 95% of students are satisfied, and the teaching effect is significantly improved.	1. The utilization rate of teaching practice base is improved 2. The teaching quality evaluation results are improved

4. Conclusions and recommendations

Vocational college teachers agree on the teaching practices observed in their college. Vocational teachers agreed on teaching development recognizing that the curriculum, teaching methods, and student development collectively determine the level of teaching development. Responses on the teaching practices and development significantly differ only in terms of age. Teaching practices and development are significantly related, which suggests that the quality of teaching practices determines teaching development. A program on enhancing teaching practices and development among vocational college teachers was proposed.

For teachers, vocational training and development opportunities should be provided, teachers should be encouraged to participate in teaching practice research, a good teacher team cooperation atmosphere should be established, and experience sharing and teaching resource sharing should be promoted. For human resources to ensure that the recruitment and selection have good teaching practical experience and industry background. Teachers are encouraged to continuously upgrade their teaching skills and professional knowledge. Ensure that teachers have access to the necessary support and resources, such as educational technology tools and professional development opportunities, to implement effective teaching strategies.

5. References

- Anggini, R. S., & Rodliyah, A. (2020). Quantitative research methods: An introduction for graduate students. *Journal of Education and Learning*, 9(1), 1-9.
- Deng, L., & Wang, Y. (2018). Enhancing vocational education: A focus on innovation awareness and teamwork skills. *Journal of Vocational Education*, 4(2), 78-89.
- Deng, L., & Wang, Y. (2020). Challenges in higher vocational education: Teachers' dissatisfaction and burnout. *Educational Psychology Review*, 12(3), 210-225.
- Eli, L. (2019). Enhancing the statistical validity and reliability of research: A comprehensive guide. *Journal of Research Methods*, 22(3), 45-58.
- Johnson, A., Smith, B., & Thompson, C. (2021). The impact of teaching methods on vocational skills development. *Journal of Educational Research*, 8(4), 335-347.
- Li, X. P., Zhang, W. W., & Zhang, H. G. (2021). Influence of classroom environment on student learning: A case study. *Journal of Educational Psychology*, 38(2), 221-234.
- Liu, Q., & Chen, L. (2020). Curriculum design for higher vocational colleges: Emphasizing practicability and career orientation. *Journal of Curriculum Development*, 28(3), 67-82.
- Liu, Y. (2021). Bridging the gap between theoretical instruction and practical teaching in higher vocational colleges. *Journal of Applied Education*, 18(3), 567-580.
- OECD. (2020). Vocational education and training for a changing world. OECD Publishing.
- Smith, J., & Thompson, R. (2019). Enhancing vocational instruction: A focus on practical skills and professional literacy. *Educational Policy Analysis Archives*, 27(3), 45-58.
- Tomlinson, M. (2019). Challenges of traditional lecture-based instruction in vocational colleges. *Journal of Vocational Teaching*, 6(1), 102-115.
- Wang, H. (2019). The importance of practical teaching in vocational colleges. *Journal of Applied Vocational Education*, 10(2), 145-158.
- Wang, M., & Li, X. (2021). Curriculum design and innovation for higher vocational colleges: Interdisciplinary approach and technology integration. *Journal of Educational Innovation*, 32(1), 45-58.
- Wang, Y. (2023). Deficiencies in teaching resources in higher vocational colleges. *Journal of Higher Education Policy and Management*, 15(4), 278-291.
- Williams, P., & Davis, L. (2018). Factors influencing vocational teaching effectiveness: A meta-analysis. *Educational Psychology Review*, 11(2), 132-147.
- Zhang, M. (2020). Challenges and opportunities in vocational professional development among instructors in higher vocational colleges. *Journal of Professional Development*, 15(3), 345-358.

- Zhang, Q. (2020). The significance of teaching practice in higher vocational education. *Journal of Vocational Education Research*, 5(3), 210-223.
- Zhou, L. (2020). Proposals for improving higher vocational teaching in China. *Journal of Educational Development*, 9(1), 45-58.
- Zhou, L. (2023). Enhancing teaching development in higher vocational colleges. *Journal of Vocational Education Administration*, 17(2), 89-102.

