

Innovative Teaching Strategies: A Breakthrough to Traditional Teaching IN Secondary Vocational Schools

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Abstract: With the reform of China's education sector, secondary vocational schools have begun to notice the shortcomings of the traditional teaching model. Although the traditional teaching mode is very advantageous for teaching students' theoretical knowledge, the practical knowledge still stays at the book level, which is not in line with the cultivation goal of vocational and technical education. Therefore, the traditional vocational and technical education model does not meet the current social demand for students' employment. The research design used in this study was quantitative descriptive and the participants were teachers from secondary vocational and technical schools in Jilin Province, totaling 35. The results of the study showed that the practice of using innovative strategies for classroom instruction, by introducing a project-based teaching methodology that allows students to explore and learn knowledge by engaging in real-world projects, not only promotes high-quality vocational-technical education, but also is in line with the direction of the development of vocational-technical education. The results of this study will also contribute to the innovation of teaching strategies and may also influence the localized vocational and technical education teaching model to provide some reference suggestions.

Keywords: Career and Technical Education, Teaching Strategies, Colleges and Universities.

1. Introduction

China passed the Law of the People's Republic of China on Vocational Education on April 20, 2022. Due to the rise of vocational and technical education, the disconnect between educational goals and actual needs, and the traditional teaching model that does not meet the objectives of vocational and technical school talent cultivation, educational institutions need to adjust their curricula and teaching content in a timely manner. On the other hand, teachers and students are struggling to cope with the challenges posed by learning in vocational and technical education, which has greatly increased the educational landscape.

Globally, different countries have different models of vocational and technical education personnel training. Worldwide, the education stream is mainly categorized into the German dual system model and the North American model.

German dual system model: BBS is a vocational education model in Germany, the use of vocational needs as the core of the training method, the entire teaching and training process is carried out in the factory enterprise and the country's vocational schools, and this education model and the enterprise training is the main focus, focusing on the comprehensive ability of the students, as of 2020, Germany, a total of 1.29 million vocational students to complete the vocational education of 323 occupational categories.

Value orientation: Educational value orientation refers to the core values and principles that are upheld in the educational process, which reflect the goals, beliefs and pursuits of education. Educational value orientation plays an important role in guiding educational practices, shaping the educational environment and assessing educational outcomes.

Project-Based Learning: (PBL) is a project-focused approach to teaching and learning that emphasizes student learning and inquiry of knowledge, skills, and concepts through engagement in practical, meaningful projects. In

Project-Based Learning, students take an active role throughout the course of the project, requiring active participation from problem definition, planning and implementation to presentation of results.

Therefore, the purpose of this study is to explore the differences between traditional and innovative teaching management models and to analyze the traditional and innovative teaching management models in Chinese vocational schools. Thus, efforts are made to develop the development of vocational and technical education in China and to promote teachers and students to work together harmoniously in order to realize the learning goals of vocational and technical education.

The aim of this study is to explore the difference between traditional teaching management mode and innovative teaching management model. Specifically, it seeks to answer the following

(1) To analyze the satisfaction of teachers in traditional and innovative teaching management model in vocational schools

(2) To compare the satisfaction of teachers in traditional and innovative teaching management model in vocational schools

Based on these objectives, a research hypothesis tested whether there is a significant difference in teachers' satisfaction with traditional instructional management models in vocational schools.

2. Conceptual Framework

2.1. Literature Review

Vocational and technical education is developing rapidly within China's modernized education system. The traditional teaching mode is no longer applicable to the current teaching mode, and schools should innovate their teaching mode in a timely manner. Wu (2009) believed that "China's education management faces the challenges of school-based management, research-based management, open

management and humanistic management in curriculum reform; In the exploration of modern schools, we face the challenge of establishing a modern school system and reshaping the spirit of modern schools”.

Models on vocational and technical education are mainly categorized into the German dual system model and the North American model. The German Dual Model is a German model of vocational education that closely integrates practice and theory. According to Liu, H (2010) within the German Dual System Model, the administrative and teaching and support staff are lean, divided, have clear responsibilities, clear relationships, and work efficiently. This model of vocational and technical education is closely related to the connotation of Dewey's theory of value. Hao, L. (2021) Dewey believed that value determines the evaluation of the worth of something, and education plays an important role in the cultivation of the ability to make value judgments.

Another vocational-technical model is the North American model of vocational-technical education. The North American model of vocational and technical education training is mainly the CBE model, which focuses on a variety of career paths, emphasizes students' future development, and learns more and broader basics, making them adaptable to many careers. According to the functionalist theory of value it is believed that human behavior and choices are made to satisfy specific goals or achieve specific outcomes. It focuses on the individual's utility, utilitarianism, and the results brought about by the behavior. Huang, P. (2022) Educational value orientation refers to the value relationship that the subject of education and education as a subject actually follow, point to, construct, and realize in the actual educational activities.

Dewey's principle of value-based reasoning, education is the preparation of students to become active, critical thinkers and participants in the demands of modern society. Dewey believed that learning should be based on students' experiences and practices. He advocated combining classroom instruction with real-world situations, allowing students to construct knowledge through practical experience and interaction. Students, teachers and businesses in can collaborate and communicate with each other in different learning scenarios. In conclusion, Dewey's theory of educational values emphasizes students' active participation, practical experience and social interaction in order to develop students' comprehensive quality and ability to adapt to modern society.

Reform and development of secondary vocational education in the new era according to the requirements of the Opinions on Promoting the High-Quality Development of Modern Vocational Education in 2021. Schools should promote the vertical integration of different levels of vocational education, improve the quality of secondary vocational education, the syllabus should highlight the content of practical skills training, with the more mature skills training as the main focus, and appropriately add some ahead of the technical training program, so that the experimental training materials to meet the requirements of practical teaching, in order to ensure the quality of practical teaching. At the same time, teachers should adopt a diversified teaching mode, change the limitations of traditional teaching methods, strengthen cooperation with enterprises, cultivate high-quality talents, meet the social demand for employment of secondary vocational and technical students, and build an integrated design vocational education personnel training

system. Learners improve their professional quality in such a learning process.

Therefore, the purpose of this study is to analyze the current problems from the collected data and to propose innovative teaching strategies that are in line with China.

2.2. Materials and Method

2.2.1. Study Design

The research design used in this study is quantitative descriptive research. The questionnaire method is a quantitative research method designed to collect quantifiable information that can be analyzed for frequency, mean, reliability and validity to increase the authenticity and reliability of the study.

Our research phenomenon is the instructional strategies that vocational-technical teachers apply in their classrooms. The independent variable is the teacher's personal characteristics or background, and the dependent variable is how these characteristics or background affect the teacher's application of innovative instructional strategies.

2.2.2. Sample of the Study

The participants of this study will be teachers in secondary vocational and technical schools in Jilin Province, totaling 45, but only 35 teachers will participate in this research survey based on Cochran's formula at 77.78% level of confidence. The inclusion criteria for the study population will be teachers of secondary vocational and technical schools with teaching experience and titles, because this study hopes to identify innovative teaching strategies from teachers' teaching strategies that are applicable to students of vocational and technical education, which requires some teaching experience and teaching management skills, so it does not include trainee teachers who have not been trained in the course.

2.2.3. Data Gathering Tool

The questionnaire to be used in this study is from different sources combined to create a survey that will answer the requirements of this study. Validity and reliability will be the two fundamental elements in the validation of a questionnaire. Validity is the extent to which an instrument measures what it is intended to measure. Reliability is intended to test the overall consistency of an instrument (Tavakol & Dennick, 2011).

The questionnaire consists of two parts containing the profile of the respondent and the questions using a 4-point Likert scale where 1 signifies strongly disagree to 4 strongly agree. After the reliability test, the questionnaire will be distributed to 45 teachers through Tencent Questionnaire .

2.2.4. Data Gathering Procedure

A formal letter will be drafted to request permission for distributing the questionnaire to the intended respondents. Additionally, authorization for questionnaire distribution must be granted by the school's dean, who will sign the letter using their name. This process ensures compliance with ethical standards governing research involving faculty members. Informed consent will also be included in the questionnaire to communicate to respondents that their participation is purely voluntary. The questionnaire will be reviewed and uploaded through Tencent questionnaires with the assistance of the school dean and a QR code link will be generated.

The questionnaire will be distributed through a combination of online and offline methods. It will be floated for one month to give ample time to the respondents to answer

the questionnaire or withdraw their engagement in the said research. After the set deadline, the data will be generated, organized, and analyzed using statistical means.

2.3. Treatment of Data

Descriptive statistics such as mean and standard deviation will be used for objective #1 in order to understand the average level of application of innovative teaching strategies by teachers in vocational-technical schools.

Inferential statistics such as one-sample t-test will be used to analyze the existence of significant differences in the impact of teachers' innovative teaching strategies on students.

Table 1 shows the range of the 4-point likert scale and will be used to categorize the responses of the participants regarding the impact of online distance learning to collaborative assessment. This scale was based on Watrin (2015).

Table 1. Likert scale

Likert Scale	Scale Range	Interpretation
1	1.00 – 1.75	Highly dissatisfied – the student is very disappointed and unsatisfied with the teaching management strategy used by the school
2	1.76 – 2.50	Dissatisfied – the student is disappointed with the teaching management strategy used by the school
3	2.51 – 3.25	Satisfied – the student is happy with the teaching management strategy used by the school
4	3.26 – 4.00	Highly satisfied - the student is very happy and contented with the teaching management strategy used by the school

2.3.1. Ethical Consideration

The following ethical considerations will be undertaken in the conduct of this research: The participation of the respondents is purely voluntary. They will not be forced to engage in the study and they can withdraw their involvement in the research at any given time. Their identity will be kept anonymous at all times. Indulgence of names will be optional. Their responses will be kept confidential as only the researchers will have an access to the answers that will be generated from the Tencent questionnaires.

In terms of risk management, the researchers will first discuss the aim of the study to the participants and read the questions to them in order to orient them regarding the indicators that will be asked. The researcher will allow the participants to asked questions on areas or indicators that are not clear to them. They will further be instructed that if they feel uncomfortable in accomplishing the questionnaire, they should contact the researchers to mitigate any negative impact that the study may cause them. The researchers will not ask for any additional document or information apart from what is written in the questionnaire and what was discussed with the respondents. The participants will be informed of the results of the study through Education subject. Furthermore, the results of this research will be submitted for paper presentation and publication in an international forum.

2.4. Results and Discussion

2.4.1. Facilities Statistics

Vocational education schools are going through a period of reform, and the reform and development of vocational and technical education strategies is a global issue that relates not only to the advancement of educational standards, but also to the stability of society and the development of individuals.

From the data in Table 2, we can see that in the first questionnaire question on the use of traditional teaching strategies, teachers generally expressed dissatisfaction with the traditional rote-learning mode of teaching ($M=2.40$, $Mo=2.00$, $SD=1.01$), which suggests that blind use of rote-learning should be avoided in the current strategy of vocational and technical education.

Meanwhile, according to the findings of the sixth question, the teachers found the strict reliance on textbooks during lectures to be undesirable ($M=2.40$, $Mo=2.00$, $SD=1.03$), which further suggests that traditional teaching strategies should be used in vocational-technical education to adopt a more engaging approach to teaching and learning.

In addition, as can be seen from the overall ratings of traditional teaching strategies ($M=2.69$, $Mo=2.71$, $SD=0.94$), the participants were generally satisfied with the traditional mode of teaching, which implies that the teaching strategies in vocational-technical education should only be based on the traditional mode with the necessary innovations and adjustments.

Table 2. Use of traditional instructional strategies

Indicators(n=35)	Mean	Mode	SD	Description
1.The use of drills that emphasized memorization.	2.40	2.00	1.01	Dissatisfied
2.Teacher-centered approach such as pure lectures.	2.70	3.00	0.86	Satisfied
3. A generalized curriculum that is aimed at the class as a whole.	2.90	3.00	0.83	Satisfied
4.Learning through repetition which serves to ensconce knowledge.	2.80	3.00	0.96	Satisfied
5.The teaching-learning process only happens inside the four walls of the classroom.	2.60	3.00	1.09	Satisfied
6.Strict reliance on textbooks.	2.40	2.00	1.03	Dissatisfied
7.Learning happens at a predetermined pace and schedule.	3.00	3.00	0.82	Satisfied
Overall	2.69	2.71	0.94	Satisfied

2.4.2. Teaching Innovative Strategies

As analyzed in Table 3, the participants showed a high level of satisfaction with the use of innovative teaching strategies in vocational-technical education, believing that these strategies are effective in promoting the development of the educational model. Teachers increase student engagement in the classroom by using innovative teaching methods, for example, according to the data from question 22 of the questionnaire (M=3.34, Mo=3.00, SD=0.68). In addition, feedback from question 23 showed that teachers tended to use multiple ways of reflecting on teaching strategies (M=3.29,

Mo=3.00, SD=0.75), emphasizing the importance of considering the overall performance of students rather than focusing solely on test scores (M=3.37, Mo=4.00, SD=0.73). Innovative teaching methods also encourage teachers to adjust course content based on student feedback, as shown in question 25 (M=3.40, Mo=4.00, SD=0.74). Overall, the overall satisfaction with the innovative teaching strategies was very high (M=3.19, Mo=3.31, SD=0.78), which suggests that teachers in vocational schools are very satisfied with the innovative teaching strategies.

Table 3. Use of innovative teaching strategies

Indicators(n=35)	Mean	Mode	SD	Description
8. The current instructional strategies meet the diverse learning needs of students.	2.83	3.00	0.89	Satisfied
9. Taking into account the different learning styles when preparing the lesson.	3.11	3.50	0.93	Satisfied
10. Taking into account students' previous knowledge to plan the activities based on their level.	3.26	3.00	0.82	Highly Satisfied
11. Use online resources and platforms for lectures.	3.23	3.00	0.81	Satisfied
12. The establishment of routines for group work when needed.	3.06	3.00	0.80	Satisfied
13. Starting the lesson by giving students an opportunity to set their own learning goals.	3.00	3.00	0.87	Satisfied
14. Learning goals are clearly stated for students to understand them (e.g. displaying them on the board, saying them out loud).	3.37	4.00	0.73	Highly Satisfied
15. Use different types of seating arrangements depending on the type of activity students are assigned to do.	3.29	3.00	0.75	Highly Satisfied
16. Creating extra activities for students to work when they have completed their main task.	3.11	3.00	0.83	Satisfied
17. Starting the lesson in an unusual manner to catch students' attention (eg. telling an amusing story or personal anecdote; starting in a very quiet or low voice).	3.31	4.00	0.87	Highly Satisfied
18. Modelling the task to demonstrate what students are expected to do (e.g. role playing the task with a student assigning a student to demonstrate the task).	3.31	4.00	0.76	Highly Satisfied
19. The use of concept check questions to make sure instructions are understood (e.g. what do you have to do first?“, "do you have to work in pairs or in groups?“).	3.00	3.00	0.84	Satisfied
20. Monitoring students' equal amount of time in all quadrants of the classroom.	2.91	3.00	0.85	Satisfied
21. Giving instructions on how to report their completed work.	3.26	3.00	0.70	Highly Satisfied
22. Increase in student engagement in the classroom	3.34	3.00	0.68	Highly Satisfied
23. Finishing the class with a reflection activity about the lesson (e.g. written reflection, oral reflection, report on what was learn).	3.29	3.00	0.75	Highly Satisfied
24. Prioritizing students' performance over solely focusing on test scores	3.37	4.00	0.73	Highly Satisfied
25. Improving program based on student feedback.	3.40	4.00	0.74	Highly Satisfied
Overall	3.19	3.31	0.78	Highly Satisfied

2.4.3. Problems with Traditional Teaching Strategies in Vocational-Technical Schools

Based on the collection and analysis of data from secondary vocational and technical schools in Jilin Province, several problems with current teaching strategies have been identified. First, students were dissatisfied with the reliance on rote memorization in traditional teaching methods, which made it difficult to promote the improvement of students' comprehensive abilities. Second, students were also

dissatisfied with teaching strategies that strictly followed textbook content, implying that the existing course content was too theoretical and disconnected from the actual work environment and needs. This disconnect may result in students finding that the knowledge and skills they have learned have limited application in real work scenarios or do not fully match with job requirements, which in turn affects students' interest in learning.

In the face of these challenges, teachers are actively

exploring and experimenting with innovative pedagogical approaches aimed at enhancing students' practical and problem-solving skills. This includes the introduction of more practical teaching contents and activities that are close to the actual needs of the workplace, such as project-based learning, in order to enhance the practicality and relevance of the courses. Through such pedagogical innovations, the aim is to provide more opportunities for students to apply what they have learned in real or simulated work environments, thereby enhancing their comprehensive vocational skills.

At the same time, teachers are constantly rethinking and optimizing their teaching methods to better suit the diverse learning needs and contexts of their students. This means that teaching strategies need to be more personalized and flexible, able to provide customized learning pathways and support based on the characteristics and needs of each student. This student-centered teaching philosophy helps to motivate students, improve their learning outcomes, and ultimately promote their all-round development in terms of vocational skills and comprehensive qualities.

2.4.4. Responses to Innovative Teaching Strategies in Vocational-Technical Schools

The analysis of the data from the questionnaire indicated that in terms of teaching strategies, teachers should aim to meet the needs of all students and pay attention to the diverse requirements of students. This means that teachers should design different teaching and learning activities according to students' personalities and needs in order to promote the development of each student. In terms of teaching resources, the adoption of a project-based approach is seen as an effective way of encouraging students to learn by engaging in authentic and meaningful projects, which not only helps them to acquire knowledge, skills and concepts, but also enhances their practical experience and problem-solving abilities.

For instructional feedback, teachers are advised to update and improve the course content based on students' feedback and suggestions. Teachers should regularly evaluate and adjust the curriculum to ensure that the content is both current and practical, and that it can keep pace with industry dynamics and the needs of the job market. In addition, it is important to introduce interesting and challenging elements to stimulate student interest and engagement.

Finally, teachers should make thorough preparations prior to course implementation, including integrating teaching resources and designing teaching objectives based on the syllabus. Such strategic and forward-looking preparation helps teachers to implement the lesson plans more efficiently and ensures that students learn in a supportive and stimulating environment so that they can better develop their potential and skills.

3. Literature References

Ahmed (2016) assert that: "The term stratification refers to the extent and form of tracking in the education system. In a system which is highly stratified or which has long duration of training, students get separated early in the track and their curriculum is different from those in the general stream or other tracks, to a great extent."

Andersson et al. (2014) assert that: "Vocational education and training (VET) has played an important role in Sweden in upper secondary school (equivalent to high school in the United States), meeting labor market demands for workers in different sectors during the past few years."

Gu (2018) said that "The demand for high-end skilled talents calls for a series of reforms in vocational and technical education."

Liang (2018) said that "Colleges and universities need to establish a correct sense of work, so that the lag caused by the traditional model can be effectively improved by building an advanced information resource sharing model"

Lin et al. (2014) believed that: "Our results reveal that: political capital plays a significant but negative role in firms' green product and process innovation performance. Furthermore, political factors and stakeholders' contingent roles in institutional context should synthetically be considered to initiate green innovation."

Liu (2021) said that: "Correctly understand the importance of developing secondary vocational education in promoting the popularization of higher education and the strategy of rejuvenating the country through science and education."

Lu (2021) assert that "The society's publicity on higher vocational education is insufficient, and the degree of understanding and recognition of higher vocational education is very different from that of foreign countries and developed coastal areas in China."

Lv et al. (2021) thought that "There are different views on the relationship between environmental regulation and green technology innovation in academia. Some studies believed that environmental regulation is an incentive factor for the development of green technology innovation, stating that environmental regulation has an innovation compensation effect and can promote the diffusion of green technology innovation."

Orlando et al. (2022) said that: "The social value or benefit of eco-innovation is defined in terms of human needs. Such needs drive the motivation of eco-behaviors."

Pan (2022) suggested that: "As an important component of higher vocational education, the lack of macro institutional guarantee and specific policy support for the cooperation between private and enterprise schools in running schools, the degree of compatibility between the professional settings of schools and the employment of enterprises, and the lack of government policies for the specific classification of various forms of running schools, restrict the enthusiasm and initiative of these types of schools."

Stenberg (2007) believed that "A study of the relative average returns to general and specific human capital accumulation is highly relevant because of its potentially important implications for the design of active labour market policy."

Tielman et al. (2021) thought that: "In culturally diverse classes, one of the challenges teachers are confronted with is that of valuebased interactions with students, which can create extra tensions for teachers because of differences in the variety of views and value orientations in these classes."

Wu (2021) assert that: "The development of education management must be combined with the general outline of higher vocational education, set up the most scientific and standardized professional curriculum system, and integrate the core value requirements of the main teaching management concept into all dimensions of the professional curriculum system."

Wu (2009) believed that "China's education management faces the challenges of school-based management, research-based management, open management and humanistic management in curriculum reform; In the exploration of modern schools, we face the challenge of establishing a

modern school system and reshaping the spirit of modern schools.”

Yang (2022) suggested that” With the popularization of higher education, the opportunities for students to participate in higher education have expanded, and the reality of modern economic and social development for talents who combine academic knowledge and ability attributes has been significantly enhanced.”

Zhang (2009) suggested that” The construction of China's education management disciplines should take the road of standardization and diversification on the basis of integrating resources.”

4. Conclusion and Recommendations

4.1. Conclusion

The research design used in this study is quantitative descriptive. This study aims to explore the differences between traditional and innovative teaching management models, and to improve teaching strategies based on the questionnaire data. Teachers are very much inclined to innovative strategies to satisfy all students, and to meet the diversified needs of the students by adopting a project-based approach for students to learn, so that they can learn the knowledge, skills, and concepts by participating in actual projects.

In terms of teaching feedback, teachers should also update and improve the course content based on students' feedback and suggestions, and regularly evaluate and adjust the course content to ensure that it is current and practical.

In addition, the results of this study showed that the participant teachers reported a very satisfactory attitude towards the innovation of teaching strategies, which can be proved by their level of consistency in the collected data.

Therefore, this means that teaching strategies should be continuously improved even in the process of development of vocational and technical education. Only in this way will the use of innovative teaching strategies lead to a better development of the management model of vocational and technical education.

4.2. Recommendations

The purpose of this study was to analyze the differences between traditional and innovative instructional management models and to highlight the value of innovative strategies in teaching and learning. The results of the study show an encouraging trend that educators are increasingly adopting innovative strategies for classroom teaching and abandoning rigid teaching methods. In particular, teachers showed a high level of enthusiasm and inclination in the application of innovative teaching strategies by introducing a project-based teaching methodology that allows students to explore and learn knowledge by engaging in real-world projects, a practice that not only promotes high quality vocational and technical education, but also is in line with the direction of the development of vocational and technical education.

In addition, the importance of pedagogical feedback was also emphasized in the study. Teachers updated and improved the course content based on students' feedback and suggestions, and ensured that the teaching content was both up-to-date and practical through regular assessments and adjustments. The flexibility and openness of this teaching mode can create a more dynamic and interactive learning environment for students.

Overall, through the application of innovative teaching strategies, clear learning objectives and incentives can be effectively set, which in turn stimulate students' learning enthusiasm and participation. This teaching method not only enhances students' motivation to learn, but also promotes their active participation and overall development in the field of vocational and technical education.

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