



The Motivations, Elements, and Pathways of Teaching Method Reform in Vocational Colleges under the Background of High-Quality Development

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Abstract. Chinese vocational education has entered a stage of high-quality development, which imposes higher demands on the reform of teaching methods. Driven by national policies, talent cultivation needs, teacher requirements, and school development, the reform of vocational education teaching methods is imperative. Six elements, including teaching objectives, teachers, students, and teaching content, form the endogenous logic of vocational education teaching methods and determine the specific connotations of the reform. Vocational colleges should promote the reform of teaching methods from five aspects: improving policy formulation, promoting reform projects, and strengthening teacher training, to efficiently enhance teaching levels and the quality of talent cultivation.

Keywords: high-quality development, vocational colleges, vocational education, teaching methods.

1 Introduction

The stage of high-quality development in vocational education is a response to the national industrial economy's entry into the high-quality development phase. It represents a reform and reshaping aimed at talent cultivation against the backdrop of industrial economic transformation and digital empowerment. High-quality development requires high-quality reforms.

The classroom is the primary battleground for cultivating talents in vocational colleges. Classroom teaching is the core work of talent cultivation. Teaching methods, briefly referred to as "teaching strategies," are the approaches, methods, and means adopted by teachers under certain teaching philosophies and principles to achieve teaching objectives by imparting teaching content within the classroom teaching context [1,2]. Vocational education teaching strategies are applied in vocational education teaching. As a dynamic element in optimizing the teaching process during classroom implementation in vocational colleges, teaching strategies are crucial for ensur-

ing the achievement of teaching objectives and enhancing teaching effectiveness [3]. Teaching strategies influence not only the teaching of teachers and the learning of students but also drive the reshaping of classroom teaching forms, determining the quality of classroom teaching [4]. Teaching strategies are complex and dynamically evolving concepts [2]. In actual classroom teaching, teaching strategies encompass both the teaching methods of teachers and the learning methods of students [5,6]. The reform of vocational education teaching strategies needs to be researched and explored based on following the laws and characteristics of vocational education teaching.

2 Motivations for Teaching Method Reform in Vocational Colleges

2.1 Policy Motivation

Teaching method reform is a focus of vocational education teaching reform. The "State Council's Issuance of the National Vocational Education Reform Implementation Plan" emphasizes adapting to the development needs of "Internet + Vocational Education" and using modern information technology to improve teaching methods. The "Opinions on Promoting High-Quality Development of Modern Vocational Education" stresses innovating teaching models and methods in vocational education, widely implementing project-based teaching, situational teaching, modular teaching, and promoting the deep integration of modern information technology with educational teaching to enhance classroom teaching quality. The "Guiding Opinions on the Formulation and Implementation of Professional Talent Training Programs in Vocational Colleges" emphasizes popularizing project-based teaching, case-based teaching, situational teaching, modular teaching, and extensively applying heuristic, inquiry-based, discussion-based, and participatory teaching methods, promoting new teaching models such as flipped classrooms, blended learning, and integrated theory-practice teaching. These policy documents collectively underscore the necessity and importance of teaching method reform.

2.2 Talent Cultivation Demand Motivation

The transformation of the industrial economy not only promotes the emergence of new professions and positions but also impacts existing ones, bringing new job content and work capability requirements. Talents cultivated by vocational colleges need not only possess high professional competencies but also the innovation and adaptability to cope with the new economic situation. Changes in the capability requirements and structure of talent cultivation necessitate reforms in education, teaching, and talent cultivation processes to address these changes. Since the education and teaching process primarily relies on classroom teaching, the reform of teaching methods and models is at the core of classroom teaching reform.

2.3 Teacher Capability Enhancement Motivation

Most vocational college teachers are recruited from general higher education professionals. Many lack extensive practical enterprise experience and an understanding of vocational education theories and practices. Their approaches in vocational education teaching often inherit those from general higher education. Lecture-based classroom teaching models struggle to cultivate practical operational capabilities, failing to meet the competency-based training goals of vocational colleges. Moreover, changes in vocational education teaching objectives and content, along with shifts in the main body and scene elements of vocational education, mean that general education teaching methods and models are not well-suited to vocational education classroom teaching. Outdated teaching philosophies and insufficient understanding of vocational education teaching methods lead to poor classroom teaching outcomes by vocational college teachers. Only through teaching method reform can teachers create lively, engaging, and participatory classroom environments.

2.4 School Development Motivation

The high-quality development context presents new propositions and challenges to vocational colleges, triggering comprehensive school reform reshaping. Whether theoretical or practical, the classroom remains the primary battlefield and stronghold for talent cultivation in vocational colleges. "Golden courses" represent the goal of classroom teaching reform in vocational colleges and are the main carrier reflecting the school's operating level and talent cultivation quality. Vocational elements and digital technology transformation have changed the classroom morphology in vocational colleges. New teaching equipment and practical training construction alter teaching conditions, and new teaching elements inevitably drive new teaching methods. Teaching method reform meets the needs of high-quality vocational education development and adapts to the ecological reshaping of school reform, contributing to the improvement of school quality levels and brand reputation building.

3 Intrinsic Elements of Vocational Education Teaching Methods

3.1 Objective Elements

Teaching objectives, unlike content elements, are not directly manifested in classroom teaching but dominate the presentation of teaching content and the direction of teaching activities. They are the core logical elements of teaching. Course teaching has overall knowledge, skills, and quality objectives, which are further detailed into refined teaching objectives for each teaching unit and classroom session. The choice of teaching methods should serve the realization of teaching objectives and the better delivery of teaching content. Specific knowledge objectives, skill objectives, and quality objectives for a class are the logical starting points for instructional design, determining what teaching content, methods, or props and equipment conditions are

chosen, and how the teaching process is organized.

3.2 Teacher Elements

Teachers are the conveyors of knowledge and skills and the designers considering which methods to use and how to express teaching content. Each teacher can combine individual language abilities, physical movement capabilities, and even personal charisma with course needs around the design of teaching philosophies and methods, diversifying their ways of expressing information and forming a unique teaching style. Teacher teams can also form structured capability organizations, collaborating to advance more efficient teaching methods and models.

3.3 Student Elements

Analyzing students' learning situations is an important part of instructional design. This means teachers study, analyze, and become familiar with the characteristics of learners as their teaching subjects and decide on teaching methods based on these analyses. Learners' attitudes towards learning, habits, styles, experiences, and cognitive traits all influence the choice of teaching methods. Modern teaching philosophies increasingly emphasize student-centered classroom teaching. Advanced educational theories such as multiple intelligences theory and constructivist learning theory have pushed student-centered teaching structures to the forefront of classroom practice, making the design of teaching methods and organization of teaching activities around student characteristics a crucial task in classroom teaching.

3.4 Content Elements

Teaching content is the object factor of teaching methods, the target upon which teaching methods act. Differences in teaching content inevitably affect the choice of methods. Generally, for cognitive knowledge such as concepts and principles, teachers present knowledge through blackboard writing, multimedia presentations, etc., and explain knowledge via lecture methods to help students recognize and understand the teaching content. For operational skills knowledge, teachers can demonstrate through hands-on teaching, using direct manipulation of objects to explain to students how to operate equipment, instruments, and production processes. Virtual demonstrations using videos, animations, virtual reality, etc., can also be employed for teaching.

3.5 Technological Tool Elements

The appropriate application of various teaching tools and equipment by teachers can play a crucial role in enhancing teaching effectiveness. They not only make teaching more intuitive and vivid, enhancing cognitive understanding but also assist teachers in conveying information beyond human limitations. Multimedia teaching can effectively deliver text, images, videos, animations, and other media forms, providing stronger audio-visual effects. Instruments, equipment, physical objects, and props replace text

and images with tangible tactile sensations and hands-on experience; VR/AR (Virtual Reality/Augmented Reality) break through the limitations of the physical world, integrating virtual scenarios into the teaching environment, combining virtuality with reality to achieve comprehensive teaching perspectives and compensate for deficiencies in real equipment resources.

3.6 Space Elements

The configuration of teaching equipment and the arrangement of desks and chairs in classroom are also significant for the application of teaching methods. For example, using whiteboards in classrooms, conducting multimedia teaching in multimedia-equipped classrooms, implementing smart teaching in classrooms equipped with advanced digital devices. Besides traditional classrooms, training rooms serve as the site for practical training, where teachers and students can carry out demonstration teaching, operational training, group projects, and scenario-based teaching activities supported by training equipment and materials. Modern information technology-supported online teaching (virtual teaching) profoundly impacts the form of education and teaching[7], innovating teaching models and methods.

4 Pathways for the Reform of Teaching Methods in Vocational Colleges under the Background of High-Quality Development

4.1 Improving Policy Formulation

As teaching methods are a technical entity, primarily reflected in courses and classroom settings. The policy formulation related to teaching methods by vocational colleges mainly includes policies on talent cultivation, curriculum construction, and classroom teaching reform. Therefore, there is a lack of specialized systems for the reform of teaching methods or models, which leads to insufficient attention to teaching method reform among teachers and weak practical effectiveness. Vocational colleges should combine specialized reform policies with integrated policies to jointly promote the reform of teaching methods, ensuring the quality of teaching reform and development.

4.2 Advancing Reform Projects

The implementation of policies relies on specific tasks. Project advancement is the main approach for vocational colleges to promote teaching method reform. In addition to relying on specific projects such as curriculum construction and classroom teaching reform to advance teaching method reform, vocational colleges should also consider focusing on specific teaching method reform projects based on the major and the course itself. For example, design special reform projects to advance project-based teaching, scenario-based teaching, case-based teaching, etc. Focus on designing special learning method reform projects based on the learning situation of vocational

colleges. For instance, advance group learning, on-site learning, cooperative learning, and other learning method reforms through specific projects. Focus on the application of digital technology and artificial intelligence technology to advance intelligent classroom and smart teaching projects; focus on integrating theory with practice, flipped classrooms, online and offline blended teaching models to design specialized reform projects to promote teaching model reform and innovation.

4.3 Strengthening Teacher Training and Daily Incentives

Vocational colleges should establish a systematic vocational education teaching method training system. Optimize the design of training content, focusing on mastering the principles and implementation of vocational education teaching methods. Schools should also strengthen discussions and experimental research on teaching methods, enhance the tracking of the effects of teaching method implementation, and provide encouragement and rewards to teachers with significant achievements in teaching methods.

4.4 Enhancing the Construction of Industry-Education Integration and School-Enterprise Cooperation Platforms

Industry-education integration and school-enterprise cooperation are fundamental operational models of Chinese vocational education, crucial for implementing the vocational characteristics of vocational education teaching. Joint promotion of teaching method reform by schools and enterprises can more systematically integrate educational resources and teaching elements, meeting the talent cultivation requirements proposed by high-quality development of vocational education. Vocational colleges should actively promote the establishment of industry-education integration and school-enterprise cooperation platforms by professional and course teams, advancing dual-element teacher teams from schools and enterprises, jointly building teaching resources, jointly establishing practical training bases, and carrying out production-oriented practical training projects in cooperation with enterprises, ensuring that teaching methods and models have innovative practice platforms.

4.5 Optimizing the Evaluation of Classroom Teaching Reform Effects

As an important part of the teaching management in vocational colleges, the evaluation of classroom teaching quality has a direct incentive effect on the reform and innovation of teachers' teaching methods. Vocational colleges should improve the indicator system in classroom teaching evaluation. Focus on the reform of effect quality, highlighting the evaluation of teaching methods and models. The evaluation of teaching methods and models should consider aspects such as adaptability to the course, the scientific nature of the method itself, the operability of the method implementation, the interactivity of teacher-student participation, and the efficiency of teaching effects, promoting teachers' selection, implementation, reform, and innovation of teaching methods and models.

5 Conclusion

The high-quality development of vocational education calls for high-level reforms in teaching methods. Vocational colleges should place great importance on the reform of teaching methods, deeply understand the external motivations driving the reform of teaching methods, and thoroughly analyze the intrinsic factors of teaching method reform. Vocational colleges should use policies as a guarantee, projects as a lever, teachers as the main force, dual forces of schools and enterprises as platforms, and effect evaluation as a baton to simultaneously promote the process and effectiveness of teaching method reform.

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References

1. N. Sandor. *Pedagogy*[M]. Tokyo:Meiji Shoten. 1979:268.
2. Zhong Qishui. Teaching Methods: Interpretation of the Concept. *Educational Research*, 38(01), 95-105 (2017).
3. Iris Schreiber & Hagit Ashkenazi. The Impact of Various Teaching Methods on the Knowledge of Students of Different Genders: The Case of Mathematics Word Problems. *Journal*, Volume 10, Issue 16.PP e35610-e35610. (2024).
4. Xiao Rong. Analysis of Problems and Countermeasures in the Reform of Vocational Education Teaching Methods. *Intelligence*, (19): 96-99 (2022).
5. Zhang Hang & Others. New Exploration of the Concept of Teaching Methods. *Education Forum*, (34): 306-307(2020).
6. Tang Hongxing. Research on the Development Trend of Current Vocational Education Teaching Methods. *Huazhang*, (01): 81-83 (2024).
7. Peter Beatrice, Annalisa Grimaldi, & Stefano Bonometti. Adding Immersive Virtual Reality Laboratory Simulations to Traditional Teaching Methods Enhances Biotechnology Learning Outcomes. *Frontiers in Education*, Volume 9, Issue . 2024, pp. 1354526-1354526. Italy(2024).

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