

Research on MySQL Database Management Teaching Model Integrating "Curriculum Ideological and Political" Elements

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Abstract

The current society has put forward higher and higher requirements for the comprehensive quality of graduates of higher vocational colleges, which not only requires them to have solid professional skills, but also requires them to have such spiritual qualities as hard work, good communication, love and respect for their posts. On the basis of in-depth analysis of the course status, teaching objectives, course characteristics and professional requirements of MySQL database management course, this paper discusses and analyzes the integration mechanism of ideological and political elements in three teaching stages, namely, the preparation stage, the in-class teaching stage and the post-class summary stage, and then analyzes the construction principles and methods of MySQL database management teaching case database integrated with "curriculum ideological and political" elements, It explores how to play a leading role in the value of "curriculum ideological and political" in the mixed teaching mode, and finally achieve the goal of cultivating talents and educating people, and professional teaching and ideological and political theory teaching.

Keywords

Curriculum ideological and political, Database management, teaching model.

1. Introduction

As an engineering course, the current teaching of MySQL Database Management faces a series of practical dilemmas, including an emphasis on technical skills over liberal arts, insufficient understanding of ideological and political education among teachers, and a disconnect between course content and ideological and political elements [1]. Unlike traditional ideological and political courses, "ideological and political integration in courses" subtly incorporates ideological and political elements throughout the entire teaching process, thereby cultivating students' correct worldviews, outlooks on life, and values imperceptibly. The relationship between ideological and political education and professional knowledge imparting is not one of isolation and non-interference, but of close connection and mutual promotion. Only by adhering to core values and integrating ideological and political education with professional knowledge education can students enhance their professional and technical abilities while forming correct worldviews, outlooks on life, and values. This approach can prevent phenomena such as mismatched moral and positional standing or high talent with low morality, and better provide strong talent support for modernization construction. Similar to most engineering courses, the teaching of MySQL Database Management also faces a series of practical dilemmas, including an emphasis on technical skills over liberal arts, insufficient understanding of ideological and political education among teachers, and difficulties in integrating course content with ideological and political education. In this context, teachers must pay greater attention to ideological and political education in their teaching, deeply excavate ideological and political elements in the existing teaching content, and focus on improving their teaching abilities to achieve both educational and professional development in a coordinated manner.

2. Course Analysis

For the MySQL Database Management course, an in-depth analysis of its course status, teaching objectives, course characteristics, and professional requirements is the premise and key to integrating ideological and political education into it.

2.1. Course Status

The MySQL Database Management course occupies a pivotal position among the foundational courses in the program. Serving as a bridge between database management and a series of programming courses such as Python Programming, PHP Programming, and WeChat Program Development, this course not only provides students with a platform to grasp concepts of relational databases, their development history, and knowledge of structured data collection, storage, and processing, but also serves as an important foundation for students to exert their professional skills in the era of big data. Based on theory, the course emphasizes practical operation skills and structured data processing, helping students understand and master knowledge related to relational databases and providing them with broad career development opportunities. With the widespread application of MySQL databases in various technical fields such as software development, web development, mobile development, mini-program development, and big data management, it has become one of the most mainstream database management tools. Therefore, the MySQL Database Management course is crucial not only for cultivating students' professional skills but also for their future employment and career development. Through this course, students can acquire the ability to install and deploy MySQL databases on different operating system platforms, proficiently use SQL statements for data manipulation, master advanced functions such as indexes, views, stored procedures, triggers, and implement database security strategies, perform database backup and restoration, and engage in database development and programming. The cultivation of these skills enables students to quickly adapt and excel in positions such as database management engineers after graduation, meeting the needs of industry development. In summary, the MySQL Database Management course holds an indispensable position in higher vocational education, providing students with solid professional knowledge and skills and laying a solid foundation for their career development.

2.2. Teaching Objectives

In the MySQL Database Management course that integrates "ideological and political integration in courses" elements, our teaching objectives aim to cultivate students' professional skills and qualities while strengthening ideological and political education. We are committed to enabling students to master the core knowledge and skills of MySQL database management, including database installation, configuration, operation, and programming, and shaping their positive, down-to-earth work attitude and good professional ethics. Through case analysis, video watching, and discussions, we stimulate students' identification with core values and cultivate their legal spirit, sense of rules, and awareness of building a powerful nation through science and technology. Furthermore, through team projects and collaborative learning, we improve students' organizational and coordination abilities and teamwork spirit, while enhancing their social communication and language expression skills. We encourage students to continuously innovate in database management practices, cultivate their ability to solve practical problems, and strengthen their hands-on practice and service project awareness. In light of the rapid development of data management technology, we cultivate students' self-learning and self-improvement abilities to adapt to the need for knowledge renewal. We also introduce common industry or enterprise standards in the data management industry to strengthen students' professional attributes and help them better excel in their job positions after graduation. Through teaching activities, we enable students to form correct worldviews,

outlooks on life, and values while enhancing their professional and technical abilities, providing talent support for modernization construction. Ultimately, we aim to enhance students' overall competitiveness in the job market through dual cultivation of professional skills and ideological and political education, cultivating high-quality talents who possess both professional and technical abilities and good moral qualities and social responsibility.

2.3. Course Characteristics

The MySQL Database Management course, as a professional foundation course bridging database management and various programming-related courses, exhibits distinct characteristics. Firstly, it focuses on structured data and emphasizes logical thinking, requiring data to be precise, well-defined, structured, and standardized, reflecting an emphasis on accuracy and normativity. Secondly, the integration of theory and practice is a prominent feature of the course, which prioritizes cultivating students' awareness and ability to engage in hands-on practice, problem-solving, and project service, emphasizing that the teaching of applied disciplines must be combined with practical operation. Furthermore, team collaboration plays a crucial role in the course, as large projects require reasonable division of labor and collaboration to complete, necessitating that students possess good teamwork spirit and organizational coordination skills. The course also emphasizes the cultivation of students' social communication and language expression abilities to adapt to future workplace demands. The course content covers basic concepts of databases, development history, structured data collection, storage, processing, etc., enabling students to have greater room for development in the era of big data. MySQL database has become one of the most mainstream database management tools due to its widespread application in various technical fields such as software development, web development, mobile development, mini-program development, and big data management. The teaching objectives of the course encompass not only the imparting of professional knowledge but also quality goals and professional competency goals, aiming to cultivate students' comprehensive quality and professional skills to adapt to the rapid development of data management technology and the frequent updating of knowledge in the profession. Through this course, students will acquire the ability to install and deploy MySQL databases on different operating system platforms, proficiently use SQL statements for data manipulation, grasp database security strategies and backup and restoration techniques, as well as develop database programming skills. In summary, the MySQL Database Management course, characterized by its strong applicability, prominent practical operation skills, significant importance of team collaboration, and high professional requirements, provides students with a comprehensive, in-depth, and practice-oriented learning platform.

2.4. Professional Requirements

The professional requirements addressed by the MySQL Database Management course place a high emphasis on students' comprehensive abilities, particularly in the context of higher vocational education, where these requirements are of utmost importance. Firstly, students must possess the ability to quickly self-learn and self-improve to adapt to the rapid development of data management technologies. This requires students not only to master current knowledge and skills but also to have forward-looking learning abilities, enabling them to continuously update their technical knowledge in future work. Secondly, as data management technology serves as the foundation for providing technical services across various industries, students need to have strong comprehension and understanding abilities, allowing them to flexibly apply data management technologies in different industries to provide effective data support. Furthermore, the ultimate goal of data management is to solve practical problems; therefore, students must have excellent hands-on practical abilities and problem-solving skills, which involve not only technical operations but also the analysis of problems and the proposal of innovative solutions. Additionally, to better prepare students for their future

jobs, it is necessary to introduce common industry or enterprise standards of the data management sector into the teaching process, strengthening students' professional attributes so that they can follow industry norms in practical operations, thereby improving work efficiency and quality. In summary, the professional requirements emphasize students' self-development abilities, cross-industry application abilities, practical operation abilities, and the ability to adhere to industry standards. The cultivation of these abilities is of great significance for students' future employment and career development in the field of database management. By fulfilling these professional requirements, students will be able to demonstrate their professional skills and comprehensive qualities in future work, providing strong talent support for socialist modernization.

3. Integration of Ideological and Political Elements

The integration of ideological and political elements into the MySQL Database Management course aims to achieve the dual goals of value guidance and talent cultivation through professional teaching. This integration begins at the lesson preparation stage, where teachers are required to deeply explore the ideological and political elements within the course content and combine them with corresponding ideological and political resources to form a teaching plan that integrates professional knowledge and ideological and political education. During the class, teachers stimulate students' emotional resonance and ideological collisions by guiding discussions, showing relevant videos, and analyzing cases, thereby internalizing ideological and political education. In the post-class summary stage, assignments and reflections are used to deepen students' understanding and identification with the ideological and political values embedded in the course content. Overall, the integration of ideological and political elements is a continuous and dynamic process that covers all stages of teaching. Through the use of multiple forms and approaches, it achieves an organic combination of knowledge imparting and value guidance.

3.1. Lesson Preparation Stage

In the lesson preparation stage of the MySQL Database Management course, the integration of ideological and political elements is a crucial step, which requires teachers to not only deeply understand the course content but also systematically organize and integrate ideological and political education resources from the top-level design of the course. Firstly, teachers need to conduct a detailed analysis of the teaching content of the MySQL Database Management course, identify various knowledge points, and consider the ideological and political elements embedded in these knowledge points. For example, when explaining the development history of data management and databases, the ideological and political element of "remembering history and staying true to the original aspiration" can be integrated, using historical documentaries and other resources to help students understand the close connection between the development of data management technology and national progress.

Next, teachers need to delve into the corresponding ideological and political resources based on the extracted ideological and political elements. These resources can include, but are not limited to, cases, videos, texts, and other forms, aiming to enhance students' understanding and perception through diversified presentation methods. For instance, when explaining structured data and relational databases, the ideological and political elements of "the spirit of the law and awareness of rules" can be introduced, along with legal education pamphlets, to strengthen students' understanding of the importance of rules and laws in data management.

Furthermore, the course content needs to be deeply integrated with ideological and political resources during the lesson preparation stage to form a reconstructed lesson plan that includes both professional knowledge and ideological and political education. In this process, teachers must ensure that the integration of ideological and political elements is natural and appropriate,

not forced or fragmented, so that professional knowledge and ideological and political education can promote each other and complement each other. For example, when explaining the installation and environment configuration of MySQL databases, the ideological and political element of "harmonious society and cooperation consciousness" can be combined to help students understand the social value and spirit of cooperation behind the technology while mastering technical operations.

Finally, the integration of ideological and political elements in the lesson preparation stage also requires teachers to have a high sense of responsibility and innovation, continuously exploring and trying new teaching methods and means to ensure the effectiveness and attractiveness of ideological and political education. Through such a lesson preparation process, teachers not only provide students with a rich knowledge learning platform but also construct a three-dimensional environment for shaping values, making the MySQL Database Management course an important carrier for cultivating students' comprehensive qualities.

3.2. Classroom Teaching Stage

In the classroom teaching stage of the MySQL Database Management course, the integration of ideological and political elements is a dynamic and interactive process, aiming to achieve an organic combination of knowledge imparting and value guidance through teaching activities. The core of this stage is to effectively integrate the ideological and political elements and resources prepared in the lesson preparation stage into classroom teaching, so that students can deeply understand and internalize the connotation of ideological and political education while mastering professional knowledge.

Firstly, while teaching professional knowledge, teachers will intersperse ideological and political elements related to the course content. For example, when explaining the installation and environment configuration of MySQL databases, teachers can introduce the ideological and political element of "harmonious society and cooperation consciousness," through discussions and case analyses, helping students understand the social value behind technical operations and the importance of teamwork. This practical approach to teaching helps students establish a connection between professional knowledge and socialist core values.

Next, teachers can use multimedia teaching resources, such as videos and images, to showcase actual cases or historical events related to ideological and political elements, evoking visual and emotional resonance in students. For example, playing videos of successful teamwork cases allows students to intuitively feel the power of cooperation and the importance of a harmonious society for individual and collective development.

Additionally, classroom discussions are an important means of integrating ideological and political elements. Teachers can design some open-ended questions to stimulate students' thinking and discussion, such as "How can the spirit of teamwork be practiced in database management projects?" or "What insights does building a harmonious society provide for the database management industry?" Through discussions, students can gain a deeper understanding of ideological and political elements and connect them with their professional learning and future career development.

Teachers can also organize group cooperative learning, allowing students to divide tasks and collaborate within groups to complete classroom tasks related to ideological and political elements. This cooperative learning not only strengthens students' team collaboration abilities but also enables them to experience the importance of a harmonious society and cooperation consciousness in practice.

Finally, teachers should encourage students to combine the learned ideological and political elements with personal growth and social responsibility, guiding students to think about how to apply these values to future work and social life. Through such teaching activities, students can not only acquire professional knowledge but also cultivate positive values and a sense of

social responsibility, laying a solid foundation for becoming socialist builders and successors with both moral character and talent.

3.3. Post-Class Summary Stage

In the post-class summary stage of the MySQL Database Management course, the integration of ideological and political elements is a key link for deepening and consolidating students' classroom learning outcomes, as well as internalizing ideological and political education and putting it into practice. The goal of this stage is to ensure that students can combine the professional knowledge learned in class with ideological and political concepts, forming personal profound understanding and practical action.

Firstly, when assigning post-class homework, teachers should not only include the review and consolidation of professional knowledge but also incorporate reflection and discussion on the ideological and political elements covered in the course. For example, students can be asked to write an essay on how to embody "harmonious society and cooperation consciousness" in database management or to design a database project plan that reflects core values in groups. Secondly, teachers can encourage students to conduct self-evaluation and peer evaluation, allowing students to not only focus on their mastery of professional knowledge but also reflect on their performance in teamwork and social responsibility. Through this method of self-evaluation and peer evaluation, students can gain a deeper understanding of the importance of a harmonious society and cooperation consciousness and continuously improve their ideological and political qualities in practice.

Next, teachers should conduct post-class reflection, assessing whether the ideological and political teaching objectives of the class have been fully achieved, whether students can understand and grasp the ideological spirit embedded in the course content, and whether they have made progress in the ideological and political aspect. Teachers can collect feedback from students through questionnaires, individual interviews, and other means to understand their feelings and suggestions regarding the integration of ideological and political elements, so as to adjust and optimize teaching methods and content.

Furthermore, teachers can organize online or offline discussion sessions for students to share their homework achievements and ideological and political insights. Through communication and discussion, students can inspire each other and deepen their understanding of ideological and political elements. During the discussions, teachers can guide students to combine ideological and political concepts with real life and future career planning, stimulating students' sense of social responsibility and historical mission.

Finally, teachers should integrate ideological and political elements into the long-term planning of the course, ensuring that every class, every project, and every discussion can continuously and systematically cultivate students' ideological and political qualities. Through the integration of ideological and political elements in the post-class summary stage, students can not only consolidate their professional knowledge but also grow ideologically and politically, laying a solid foundation for becoming technical talents with good professional ethics and a sense of social responsibility.

4. Case Design and Teaching Practice

4.1. Establishing a Case Library for Ideological and Political Education in Teaching

Establishing a case library for ideological and political education in teaching is a crucial strategy for integrating ideological and political elements into the MySQL Database Management course. By carefully selecting and designing a series of ideological and political cases closely related to database management technology, it aims to cultivate students' professional skills while

deepening their understanding of core values. These cases cover various aspects such as data security, data ethics, and teamwork, and include historical events, modern enterprise practices, and social hot topics, enhancing the diversity and practicality of teaching. Furthermore, the ideological and political value behind each case is thoroughly explored, enabling students to appreciate the connotation of ideological and political education while solving practical problems. The case library needs to be regularly updated to maintain its timeliness, and teachers should flexibly use these resources to design diversified teaching activities, achieving an organic combination of knowledge impartation and value guidance. Ultimately, the goal is to cultivate composite talents who possess both professional skills and good ideological and political qualities.

4.2. Improving the Blended Teaching Mode

Improving the blended teaching mode is a key approach to integrating ideological and political elements into the MySQL Database Management course. It emphasizes leading values with "ideological and political education in courses," and adopts a new teaching mode where teachers take the lead and students actively participate. In this mode, teachers need to enhance their awareness and ability to educate students, continuously explore the integration of ideological and political elements into teaching content, and pay attention to the permeation of ideological and political education throughout the lesson preparation, in-class teaching, and after-class summary stages, always aligning with ideological and political theory courses. At the same time, teachers should fully leverage the roles of interest-orientation and ideological and political education leadership, actively adopt different teaching methods such as self-directed learning, web-based inquiry learning, gamified learning, and scavenger hunt learning based on classroom realities, and encourage students to actively participate in classroom activities. In online teaching, teachers should collect and dynamically update ideological and political teaching resources in various forms such as videos, website materials, and extended links to attract students' interest, enhance their intuitive understanding, trigger ideological resonance, guide students to imitate and learn, and achieve the internalization and deepening of ideological and political education in students' subconscious. In offline teaching, teachers should pay attention to the influence of their external image and internal qualities on students, constantly improve themselves, always convey positive values to students, and select teaching materials related to ideological and political elements, so that students are constantly exposed to the process of ideological and political education. Through this blended teaching mode, the MySQL Database Management course can more effectively achieve an organic combination of knowledge impartation and value guidance, cultivate students' professional skills and ideological and political qualities, and provide strong talent support for modernization construction.

5. Conclusion

This paper deeply explores how to integrate ideological and political education into the MySQL Database Management course in computer-related majors in higher vocational colleges. It first emphasizes the current society's requirements for the comprehensive qualities of higher vocational college graduates, who not only need solid professional skills but also good spiritual qualities. On this basis, the paper analyzes the teaching status of the MySQL Database Management course, including teaching objectives, course characteristics, and professional requirements, and points out problems in teaching, such as an atmosphere that emphasizes science over liberal arts and the separation of ideological and political elements from course content. The paper proposes specific mechanisms for integrating ideological and political elements into the three teaching stages: lesson preparation, in-class teaching, and after-class summary. During the lesson preparation stage, teachers need to deeply excavate the ideological

and political elements in the course content and combine them with corresponding ideological and political resources. In the in-class teaching stage, through discussions, video watching, and case analysis, students' emotional resonance and ideological collisions are stimulated. In the after-class summary stage, assignments and reflection are used to deepen students' understanding and identification with ideological and political values. The paper also discusses methods for establishing a case library for ideological and political education in teaching and improving the blended teaching mode, emphasizing the leading role teachers should play in teaching and how to achieve an organic combination of knowledge impartation and value guidance through a combination of online and offline methods. Through these methods, the aim is to cultivate students' professional skills and ideological and political qualities, providing talent support for modernization construction.

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