Research on Curriculum Ideological and Political Design under Online and Offline Hybrid Teaching Mode

--Take "Advanced Language Programming" Course as an Example

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Abstract. The hybrid teaching mode, combining online and offline approaches, utilizes Internet technology to integrate ideological and political courses in colleges. This integration effectively enhances the teaching outcomes and expands the practical scope of these course. To fully leverage the advantages of this hybrid mode in integrating ideological and political education, this study focuses on the "Advanced Language Programming" course as an example. It examines the ideological and political design of this course under the hybrid teaching mode by considering aspects such as enhancing students' ideological and political literacy, designing effective teaching methods, constructing a comprehensive curriculum resource library for ideology and politics, as well as ensuring its dynamic updates. Emphasis is placed on improving students' ideological and political literacy within the context of this course while exploring various strategies to achieve it. Additionally, this paper presents a systematic approach for identifying ideological and political elements within professional courses which serves as a guide for deeply excavating relevant content within the curriculum. Furthermore, it establishes a curriculum resource library dedicated to ideology and politics with mechanisms in place for continuous updates. These proposed methodologies provide valuable support for seamlessly integrating ideology education into curriculum content under the online-offline mixed teaching mode.

Keywords: Blended online and offline teaching mode, Ideological and political curriculum, Advanced language programming, Instructional model design, Construction of ideological and political resource library.

1   Introduction

The cultivation of morality and individuals serves as the fundamental criterion for evaluating all work conducted in higher education institutions. The Guiding Outline of Ideological and Political Construction of Curriculum in Colleges and Universities emphasizes the integration of political education into the personnel training system, comprehensively promoting ideological and political construction within college curricula,

while harnessing the educational potential inherent in each course [1-2]. By seamlessly combining online teaching methods with traditional offline approaches, the hybrid teaching model effectively leverages the complementary strengths of both modes, thereby enhancing teaching effectiveness, improving students' learning efficiency, and expanding practical opportunities for ideological and political education within courses offered at colleges [3-7]. Establishing an architecture for ideological and political education under this hybrid teaching model holds significant implications for leveraging information technology to enhance ideological and political education in higher education institutions. This paper takes Advanced Language Programming as a case study to investigate how course-specific ideological and political literacy can be improved through designing appropriate teaching modes as well as constructing resources dedicated to ideological and political education [8-12], ultimately presenting a comprehensive architectural framework for implementing course-specific ideological and political education within the context of online-offline hybrid instruction.

2   Teaching Model Design

The Advanced Language Programming course is a fundamental component of the curriculum for science and engineering students, serving as a crucial means to foster their programming skills and computational thinking abilities. This course is distinguished by its emphasis on various grammatical concepts and abstract subject matter. To facilitate students' comprehension of theoretical knowledge and enable them to apply programming principles in practical problem-solving scenarios, an extensive array of hands-on exercises has been incorporated into the course design process. In this section, Figure 1 illustrates the instructional approach tailored specifically for the Advanced Language Programming course.

The teaching model utilizes scientific design for activities before, during, and after class to fully optimize the allocation of online and offline teaching resources while maximizing the effectiveness of instruction. Additionally, it integrates curriculum materials throughout the entire teaching process to enhance students' interest in learning as well as their overall quality and competitiveness.

Before class, course resources and a preview effect test are shared through the QQ group. Among these resources, ideological and political teaching materials (especially those related to current affairs in students' daily lives) can effectively enhance students' interest in learning. Students acquire the course content by utilizing these teaching resources and assess their understanding through completing the preview effect test questions. By leveraging the work function of QQ groups and background data from MOOCs platforms, teachers collect information on students' completion of previews as well as their performance on the preview effect test. This enables them to grasp an overview of students' preparation and comprehension of key knowledge points covered in the current course, facilitating targeted instructional design. For instance, different levels of difficulty for teaching content should be tailored based on individual students' cognitive abilities regarding specific knowledge points. Furthermore, diverse teaching strategies are formulated according to variations in students' learning attitudes.
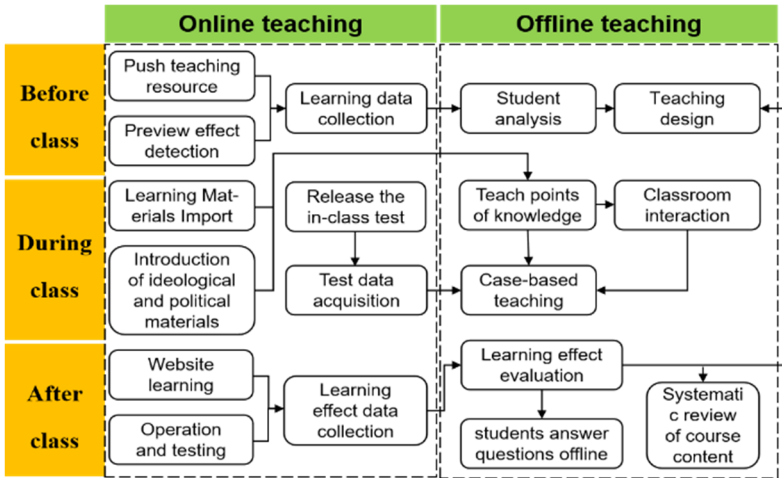
Fig. 1. Design of online and offline mixed teaching mode.

During class, the integration of online learning resources will enhance the instructional content, foster students' engagement in learning, and seamlessly incorporate ideological and political materials into knowledge dissemination, thereby subtly enhancing students' ideological and moral development.

After class, students can utilize the website to review the knowledge points covered in class, while teachers employ the online platform to disseminate both theoretical and practical assignments. Some of these assignments necessitate teamwork, thereby fostering not only problem-solving skills but also enhancing students' collaborative abilities. The teacher collects data on students' task completion and homework through the online platform, subsequently evaluating their learning outcomes based on data analysis results.

3   Construction of Ideological and Political Resources in the Curriculum

The construction of curriculum ideological and political resources serves as a crucial pillar for curriculum ideological and political teaching. The research group delved deeply into the incorporation of ideological and political education elements within professional courses, while also amassing external materials pertaining to curriculum ideological and political components, with the ultimate goal of establishing an extensive repository of ideological and political elements.

3.1   Exploring Ways of Ideological and Political Elements in Courses

In order to achieve the organic integration of ideological and political education with professional knowledge education, the research group delved deeply into the internal connections between course knowledge points and ideological and political elements,

identified optimal combination points between course content and ideological and political education, naturally integrated curriculum-based ideological and political elements into teaching, and four main approaches for exploring relevant ideological and political factors were also summarized.

The Great Practice of Socialism with Chinese Characteristics.

In order to facilitate students' comprehensive comprehension of the superiority of socialism with Chinese characteristics and foster their national pride and cultural confidence, the research group adopts the great practice of socialism with Chinese characteristics as a primary avenue for exploring ideological and political elements. The research group conducts in-depth studies on the historical development of this great practice, unearths practical achievements relevant to course content and professional fields, and employs this approach to gather pertinent online and offline resources.

Discipline and Professional Field.

The research team takes the subjects and professional fields of courses as one of the main approaches to explore ideological and political elements, delving into the background, historical development, current situation, and future trends in disciplinary areas. By excavating key projects, developmental accomplishments, exemplary figures, and notable deeds within the field, we can seamlessly integrate professional knowledge with ideological and political education. Through studying historical figures and events in the profession, students can identify role models within their respective fields while gradually cultivating a scientific mindset. Simultaneously, this fosters a stronger sense of identity towards their major and enhances students' interest in course learning.

Professional Quality of Students' Future Employment.

The knowledge points of each course encompass ideological and political elements that are pertinent to the professional competence of students in their respective majors for future employment. For instance, the programming thinking embedded within the content of Advanced Language Programming plays a guiding role in shaping career-oriented thinking among science and engineering students post-employment. The course team will prioritize the future employability of students by exploring components such as professional ethics, skills, behavior, style, and awareness within the course material. This approach aims to enhance the relevance of ideological and political education while fostering students' capacity for career development from a perspective centered on professional accomplishment cultivation.

International and Domestic Current Affairs.

The curriculum group regards international and domestic current affairs as one of the ways to explore ideological education. It aims to uncover hot topics related to course content and professional fields, cultivate students' scientific thinking methods and abilities, enhance their sense of social responsibility and civic consciousness, and provide

strong support for nurturing well-rounded socialist builders and successors in moral, intellectual, physical, aesthetic, and labor development.

3.2 Integration of Online and Offline Ideological and Political Resources

Before class, various types of resources are provided for the same ideological and political elements, enabling students to select learning materials based on their individual interests, thereby enhancing preview enthusiasm and the effectiveness of ideological and political education. During class, teachers utilize an updated and optimized library of ideological and political resources to refresh teaching content and courseware continuously. This approach ensures real-time relevance and freshness of ideological and political resources, thus fostering student engagement in both course material and ideological aspects. In the post-class stage, practice cases and homework assignments are revised and enhanced to reinforce course content as well as strengthen understanding of ideological and political elements through practical application.

4 Conclusion

This paper conducts research on the design and integration of curriculum ideology and politics in the online and offline hybrid teaching mode, aiming to achieve an organic combination of online and offline teaching modes as well as the integration of ideological and political content. The entire teaching process is designed to enhance curriculum content learning and improve the quality of ideological and political education. This study explores methods for identifying ideological and political elements within professional courses, specifically focusing on Advanced Language Programming. By collecting and integrating online and offline ideological resources, a library of course-specific ideological resources is established to provide comprehensive support for all aspects of course instruction. The online-offline mixed teaching mode expands both the depth and breadth of curriculum-based ideological education, facilitating a more profound integration between curriculum ideology, political education, and course content.

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