

Ideological and Political Theories teaching in All Courses of "Android Mobile Application Development" Based on the Design and Practice of "Three-implicit & Three-fusional Paradigm"

Min Sun^a, Yuemin Teng^b

Shanghai Publishing and Printing Advanced Vocational School, Shanghai, 200093, China

^ass_mm@126.com, ^btyymm981@163.com

Keywords: The ideological and moral education in the curriculum; Android Mobile Application Development; Three-implicit & Three-fusional Paradigm

Abstract: In the course of "Android Mobile Application Development", it is very important to integrate ideological construction into teaching design to cultivate students' moral ethics, social responsibility and innovation ability. "Three-implicit & Three-fusional Paradigm" focuses on curriculum education, practical education and cultural education. The ideological and moral education in the curriculum (IMEC for short) of university specialized courses realizes the common improvement of morality, intelligence and technology through the multiple paths of "Three-fusional Paradigm". IMEC is an important way to realize moral education in the teaching process of professional courses. This paper takes IMEC in the course of Android Mobile Application Development as an example, introduces the teaching mode of "Three-implicit & Three-fusional Paradigm" into the course of Android Mobile Application Development, and explores the educational path of IMEC with its own characteristics by drawing lessons from advanced experience. We aim to cultivate a group of high-quality skilled talents who are willing to stay, stay and have innovation and creativity. This will be achieved by improving students' political theory quality, ideological understanding level, and ideological and moral cultivation through the IMEC reform.

1. Introduction

Comprehensively promoting the construction of The ideological and moral education in the curriculum (IMEC for short) in universities is an important task to comprehensively improve the quality of personnel training, and it is also an inevitable requirement to implement the fundamental task of "cultivating people by virtue". IMEC requires teachers to dig deep into the ideological elements in the content of professional courses in the process of teaching professional courses, so as to achieve the purpose of "moral cultivation" [1]. However, the promotion of IMEC in science and engineering courses is slower than that in liberal arts courses. This is because liberal arts courses focus on humanities, and the course content focuses on the ideological views of the country and people, with ideological attributes. The main purpose of science and engineering courses is to understand the laws of nature, with nature as the core, and it is more difficult to integrate into ideology.

College students are in an important period of forming their world outlook, outlook on life and values, and their social life experience is not rich enough and their thoughts are not mature enough, which makes it even more necessary for schools to strengthen ideological education [2]. In this paper, taking the IMEC of the "Android Mobile Application Development" course as an example, the teaching mode of "Three-implicit & Three-fusional Paradigm" IMEC is introduced into the "Android Mobile Application Development" course, and the advanced experience is used for reference to explore the IMEC education path with its own characteristics.

2. Connotation of "Three-implicit & Three-fusional Paradigm"

"Three-implicit & Three-fusional Paradigm" paradigm is an innovative teaching system, which aims to organically integrate ideological elements into the teaching process of professional and practical courses. This teaching mode combines professional education with ideological education, and combines systematic teaching with thematic education [3-4]. It is based on "three micro-integration" (micro-points, micro-behaviors and micro-literacy) and "class in class", and makes full use of professional classroom as the main way to cultivate students' ideological and political literacy, focusing on two aspects: methods and means.

"Three-implicit " includes three methods, namely, "teaching with Taoism", "teaching with morality" and "teaching with fun", which are used to integrate the knowledge points of professional courses and ideological courses [5].

"Three-fusional Paradigm" refers to the concrete integration means of IMEC (a framework of ideological courses, including input, processing, discussion, thinking, application and examination) and professional teaching, including "thematic embedding", "finishing touch" and "element combination".

This teaching mode can be flexibly applied to IMEC teaching by teachers, aiming at imparting professional knowledge and helping students to shape correct values. In a word, the paradigm of "Three-implicit & Three-fusional Paradigm" is not only a research framework of IMEC teaching, but also an efficient teaching research tool, which provides professional teachers with an IMEC teaching method system adapted to local conditions and guided by the situation [6].

2.1. Thoughts on IMEC teaching design

According to our school's mission of "based on Shanghai, leading China, relying on industries and serving the society", the curriculum team has built an ideological work pattern and goal orientation of "three-round education" for all staff, whole process and all directions, and it is imperative to run ideological education through the teaching of Web Application Development, a key professional basic course in the big data technology professional group. Taking the cultivation of computer programming ability as the starting point, this paper explores and practices the teaching content, teaching mode and teaching resource construction [7]. During the epidemic period, the teaching mode of "two-way cloud class for teachers and students" was carried out, and good teaching results were achieved. Six major ideological elements are integrated into more than 60 knowledge points and skills points: the whole course is designed around six core values: patriotism, professionalism, honesty, civilization, equality and self-confidence.

Through the organic integration of ideological elements and teaching content, the aim is to stimulate students' internal motivation to learn, so that students can learn and master the curriculum knowledge, and at the same time, realize the ideological curriculum and curriculum ideology in the same direction, forming a synergistic effect. The training plan of big data technology specialty is a comprehensive applied technical talent with "1+X" Web front-end development skills. Web application development is a key course connecting the preceding with the following, connecting with many professional courses such as Web page design and production, PHP programming and microprogramming.

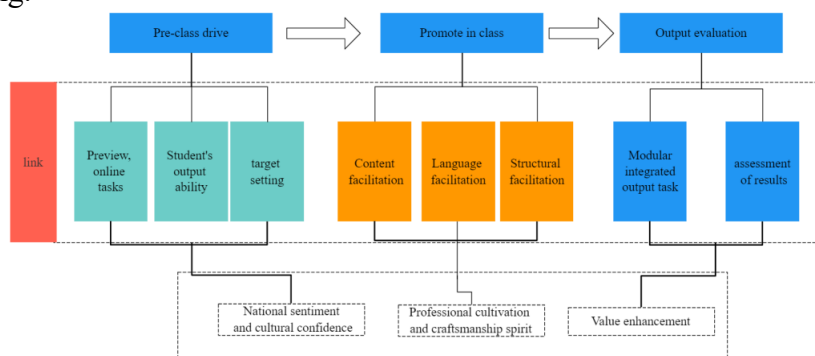


Figure 1 The specific teaching process

The specific teaching process is shown in Figure 1.

2.2. Teaching process contains morality in teaching

In the course of "Android Mobile Application Development", it is very important to integrate ideological construction into teaching design to cultivate students' moral ethics, social responsibility and innovation ability [8]. The discussion of ethics and social responsibility is introduced into the course, so that students can understand the ethical and social issues that may be involved in application development, such as user privacy, information security and social impact. We should encourage students to think about how to make ethical and socially responsible decisions in application development. Furthermore, it is essential to design projects that motivate students to create applications aimed at solving or alleviating social problems, such as environmental protection and social welfare, with the aim of cultivating students' sense of social responsibility through practical projects. Additionally, we should introduce real cases, such as data leakage and false information dissemination, so that students can analyze cases and engage in discussions related to ethical issues, thereby deepening their understanding of ethical challenges. Moreover, students should be encouraged to abide by a code of conduct that includes values such as respect for others, cooperation, and knowledge sharing. This will help in cultivating students' social skills and moral quality through team projects and collaboration. By integrating ideological construction into the course design of "Android Mobile Application Development", we can cultivate application developers with high technical level and good ethics, who can better cope with social ethical challenges and make positive contributions to society.

2.3. The teaching process combines teaching with pleasure

Integrating "entertaining" into "Android Mobile Application Development" can increase students' learning enthusiasm and participation [9]. Gamification elements are introduced into the curriculum, such as achievement system, leaderboards, virtual awards, etc., to encourage students to complete their homework, participate in discussions and challenge their technical level. Organize programming competitions, application development challenges or code marathons regularly, so that students can improve their skills in friendly competition. This way helps to stimulate students' interest in learning. We should encourage students to choose their own topics of interest for developing applications, allowing them to realize their creativity in practical projects and thereby increasing the enjoyment of learning.

Additionally, it's important to establish laboratory courses that enable students to conduct experiments and application tests in actual environments. This kind of personal practice helps students to better understand and enjoy the application development process. Instructors should organize technical exhibitions for students to showcase their applications and projects, as well as the technical achievements they have learned. This can inspire a sense of pride among the students. Additionally, it is important to introduce engaging interactive elements in the classroom, such as small games, question-answering contests, and impromptu programming challenges, to increase classroom engagement and activity. By integrating fun elements into curriculum design, students' learning motivation can be stimulated and they can enjoy the learning process of Android application development more. This is helpful to improve the learning effect and cultivate a positive learning attitude.

2.4. The teaching process contains truth in teaching

"Android mobile application development" is a highly technical and practical course. Therefore, some ideological education elements can be incorporated into the design of IMEC to help students better understand and use knowledge and cultivate good moral quality and social responsibility. It is emphasized that ethics and legal norms should be observed in the application development process, and malicious software or applications that infringe others' privacy should not be developed. We should encourage students to follow the professional ethics of programmers, which includes protecting user data and information security [10]. Furthermore, we should guide students to analyze the social, economic, and cultural impacts of mobile applications and engage in discussions

about the positive and negative effects of technological innovation on society. It is also important to remind students to be mindful of ethical and social issues in technological development, such as privacy, data abuse, and social inequality.

Additionally, we should emphasize the relationship between technological innovation and environmental protection and aim to cultivate students' awareness of sustainable development. Academic integrity should also be stressed, with measures in place to prevent plagiarism and to encourage students to correctly cite materials and think independently. Guidance should be provided to ensure students understand academic integrity policies and standards. Lastly, students should be encouraged to develop applications that address social problems, such as those related to health, education, and environmental protection, and to utilize technology to solve these issues. By integrating these ideological elements into the course of "Android Mobile Application Development", students can be helped to cultivate comprehensive literacy, not only with technical skills, but also with moral and social responsibility, so that they can better cope with increasingly complex technical and social challenges.

3. Application and reflection

The software platform of "Educating App" is divided into various chapters, so that students can imperceptibly penetrate the ideological education and educational ideas contained in the project itself into the whole process of Android teaching under the premise of learning the programming language development of the project, and combine professional knowledge education with educational education to stimulate students' learning initiative and comprehensively improve learning efficiency and quality. Not only let students learn the knowledge of Android language automatically, but also pay attention to cultivating the education and ideological and moral level, laying the foundation for cultivating high-quality innovative talents.

On the basis of existing teaching, the course "Android Mobile Application Development" optimizes the original teaching scheme, sorts out the teaching content, re-integrates the design task points, and excavates the ideological education elements related to the knowledge points of the course content, so as to realize the skill training for students and the smooth implementation of moral education. In the class where the practice of IMEC was carried out, all the students reached the standard in the knowledge evaluation, and the average score of each unit test exceeded 80 points, indicating that IMEC effectively promoted the students' mastery of knowledge. Judging from the task completion rate, the task completion rate of the class carrying out IMEC practice reached 100%, indicating that students' learning initiative was stimulated.

As the main implementer of the teaching process, the course instructor must have high ideological literacy and political consciousness, be good at seeing problems politically, and combine professional knowledge to lead students positively in thought. We should give full play to the role of the internet and emphasize the role of students as the main contributors to their learning process. This approach allows students to integrate ideological elements into pre-class preparation, in-class implementation, and after-class feedback. Additionally, it is crucial to enhance the evaluation mechanism by incorporating socialist core values, a sense of responsibility, and teamwork into the comprehensive evaluation criteria for the 'Android Mobile Application Development' course. This will encourage students to actively engage in learning and achieve the goals of ideological education.

4. Conclusions

IMEC requires teachers to dig deep into the ideological elements in the content of professional courses in the process of teaching professional courses, so as to achieve the goal of "moral cultivation". In the course of "Android Mobile Application Development", ideological construction is very important, which aims to cultivate students' ideological and moral quality, social responsibility and innovative spirit. The teaching reform measures that seamlessly integrate the training content of "Three-implicit & Three-fusional Paradigm" into the course "Android Mobile

Application Development" have injected ideological soul into the specialized courses that originally only focused on coding and skills, truly achieved the purpose of value guidance in specialized courses, and achieved certain teaching effects in teaching practice. In the process of design and implementation, it is necessary to meet the technical standards and norms of the industry, carry forward the craftsman spirit, strengthen the education of engineering ethics, cultivate students' ingenuity and craftsmanship, and realize the professional course teaching and ideological education in the same direction.

References

- [1] He Miao. (2021). "android Basic Application Development "Ideological and Political Theories Teaching in All Courses Construction and Practice. *modern business trade industry*, 42(35), 2.
- [2] He Guilan, Zhang Chunyang, Zhang Haomiao, Zhao Shili. (2020). Exploration and practice of integrating ideological and political elements into professional courses in higher vocational colleges-taking the course of android Application Development as an example. *Scientific Consulting*, 000(031), 85.
- [3] Liu Lei. (2019). Research on Teaching Reform and Practice of android Mobile Development Based on Ideological and Political Education Project. *Knowledge Economy* (23), 2.
- [4] Zhou Bing, &Cao Dayou. (2013). Discussion and Practice on the Course Construction of Android Application Development. *Modern Computer* (16), 4.
- [5] Zhang Jia, & Heying. (2015). Design of Mobile Teaching System of Ideological and Political Course Based on andriod System. *Electronic Test* (1), 3.
- [6] Ren Jie, Lu Yuming, Cheng Nuo. (2020). Teaching Design and Practice of Android Application Development. *Modern Vocational Education*, 000(009), 36-37.
- [7] Dai Shujiao, & Zeng Zhen. (2019). The design and practice of "ideological and political theories teaching in all courses" for specialized courses-taking the course "Brand Clothing Commodity Planning" as an example. *Textile Industry and Technology*, 48(1), 2.
- [8] Wang Yanjie. (2023). Research on the Reform and Practice of Mathematics Teaching in Higher Vocational Colleges: Exploration and Application from the Perspective of Ideological and Political Theories Teaching in All Courses. *Educational Progress*, 13(9), 5.
- [9] Wang Zhen, & Teng Yuemin. (2021). Instructional design of ideological and political theories teaching in all courses based on "Three-implicit & Three-fusional Paradigm" mode-taking "publication distribution practice" as an example. *Science and education guide* (26), 3.
- [10] Zhu Qing, & Shen Li. (2021). Research on the ways of educating people in the humanistic quality course "Three-implicit & Three-fusional Paradigm" in vocational colleges from the perspective of ideological and political theories teaching in all courses. *Science and Technology Information*, 19(10), 3.