Design and Practice of Ideological and Political Education in Computer Application Fundamentals Course for Vocational Undergraduate Students

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Abstract: This article explores the integration of ideological and political education within vocational undergraduate computer application foundation courses. It emphasizes the importance of such education in the broader context of vocational undergraduate education. The article proposes a design and the practice of this integration, aiming to enhance the ideological and moral qualities as well as the comprehensive abilities of vocational undergraduate students. The goal is to cultivate a large number of high-quality talents.

With the rapid development of undergraduate vocational education and new computer technology always coming out, Basic courses on computer applications have become more important in teaching for undergraduates. The ideological and political education in computer application foundation courses is the top priority, however, it has been neglected. It difficult to enhance systematically the quality of students for a long time on ideology, morality and professional learning as well This requires more in-depth study and exploration of ideological political education status quo in foundation courses on computer applications under the background of vocational undergraduates, to establish an applicable system for them, strengthen human principal thoughts and cultivate their professional literacy.

1. Design of Ideological and Political Education for Computer Application Fundamentals Course in Vocational Undergraduate Education

1.1 The Importance of Ideological and Political Education in the Basic Computer Application Course of Vocational Undergraduate Education

The purpose of the basic course in computer application is to build a foundation on which students can acquire both theoretical and practical knowledge for working in computer science. Ideological political education, aimed at cultivating students' ideological and moral qualities, humanistic literacy and a high social responsibility^[1]. Ideological and political education is the key link in educating people in China, which is also an important way to comprehensively improve personnel training quality. In this respect, incorporating ideological and political content into the course "Fundamentals of Computer Applications" is an effective means. Ideological and Political

Education in Higher Vocational Computer Application Foundation Courses: It not only enhances the comprehensive qualities of students but also guides them to build emotional and moral values. This approach aims to create more outstanding talents for society^[2]. From this, it is not difficult to find that ideological and political education in vocational undergraduate computer application basic course has its essential importance. Through the integration of ideological and political education with computer application basic courses throughout the teaching process, students can achieve all-round development and good progress, conscientious practice in social life based on a high sense of social responsibility and legal consciousness thus serving for ensuring efforts to make steady progressive technology advancement while guaranteeing society is more secure stable.

1.2 Objectives and Implementation Methods of Ideological and Political Education in Computer Application Fundamentals Course

The core requirement of the ideological and political education goal is to educate students as ambitious "newcomers of socialist era" with perfect computer knowledge and skills, nationalistic revitalization consciousness as well as sense responsibilities. We adopt case organization, team practice, on-site display, and system development to meet the above goals, we implements MOOC video teaching and mini-lessons. Another critical role in the teaching process is that of a teacher, Centralized explanation, group advisory, on-site guiding help in-depth students to understand the essence of experiments and focus their attention from asking for experimental results reports (experimental defense assignment report) review experiential motivation that student centering selfteaching co-exploration teaching mode enables. At the same time, students' ability on curriculum ideological and political is required to be trained, namely training of ideology teaching capability as well as education construction capacity. On this basis, the ideological and political education of computer basic courses in addition to standard compliance with centralized deployment should also infiltrate patriotism, professional ethics cultivation, scientific and moral literacy training as well universally humanistic quality into all aspects throughout its whole process such as elaboration of training programs, drawing up teaching syllabus, setting objectives for class hours. As a result, the overall educational integration and parallel operation can be carried out, and students' quality and ability will also receive comprehensive improvement.

1.3 Design principles for ideological and political education in vocational undergraduate computer application foundation courses

(1) Student centered principle

Integrating the content that we are supposed to teach with what students really need. According to the professional characteristics and future employment direction, design ideological education content which meets students' needs in order to stimulate their run for learning. For example, students majoring in computer application, can explain the development history of the Internet industry and national policies for supporting the internet industry. At the same time, we should pay attention to teaching methods that suit students according to their learning characteristics. Taking all kinds of teaching methods such as case analysis, discussion questions, practical operation, and so on and moving from reality to stimulate students' interest in learning enhance their ability and improve efficiency. They may, for example, use the case of Chinese corporations like Alibaba and Tencent to see how they have developed aided by national policy.

(2) The principle of cultivating virtue and nurturing people

To enhance the guiding function in Ideological and Political Education with values. He argued that students were instilled with a sense of social responsibility, and national pride during the process of teaching, urging them to also develop correct worldviews and outlooks on life. About the

development history of China's Internet industry, on one hand it helps students to recognize that national policies are important support for enterprise development and improve their sense of identity with our country. Teachers and schools should attach great importance to moral education in high school students. In the process of teaching, key points in developing moral qualities such as honesty and law abiding and interest advocacy should be to guide students correct professional ethics. For example, through investigating online fraud and intellectual property rights infringement, people can be aware of the significance of abiding by laws & regulations and maintaining righteousness in operation.

(3) Highlight the principle of professional characteristics

The design of the course should reflect professional characteristics, and focus on organically integrating ideological education with computer basic courses' knowledge points in English teaching content. This can not only complete educational function but also make students learn to understand easily. The second is to build more practical teaching links, who combined with project practice and case analysis other means of education, improve their professional competence from work experience for the preparation of full employment capacity required undergraduate exit. Query the backend US system at the same time we should create a comprehensive demonstration and utilize modern educational technology to deliver interactive and flexible learning experiences. This will enable students to understand the industry of computer development and its current status. On this basis, we can guide students to develop creative, innovative, and practical abilities.

(4) Practice oriented principle

Students should enhance practical exercises to improve their skills and understanding. Practical operation demo department is set up in the teaching process to orientate students towards mastering computer application through practical operations and enhancing their operational ability. For instance, programming students are thoroughly trained in the fundamental workings as well as uses of Python and Java.

(5) Principles of Innovative Education

During teaching, encourage students to put forward new views and ways of solving problems, broaden their horizons in scientific research with bold imaginative thinking. Stimulate innovation awareness and entrepreneurial enthusiasm. For example, by organizing various types of contests in terms of innovation creation and entrepreneurship, the initiative to be creative among students can facilitate. At the same time, you also want to focus on teaching your students about teamwork and how it is done. In the teaching process, we highlight the training of students' teamwork skills to learn how to use their strength in a team and help each other complete tasks. For instance, group tasks that are related to building projects can be effective in developing students' teamwork skills.

2. Practice of Ideological and Political Education in Computer Application Fundamentals Course for Vocational Undergraduate Students

2.1 Integrated design of ideological and political education throughout the curriculum

In the teaching of vocational undergraduate computer application basics courses, ideological and political education is an indispensable part. It is also that the in an all-round way to let students understand and feel important of moral ethics, ideological view and value concept in life, person-insociety's sense social responsibility, opt behavior awareness, morally blame. In order to achieve the integration of ideological and political education in class, we will first incorporate socialist core values into teaching materials at the beginning stage and then formulate specific outline including concrete educational content as well prepare plans on how to teach. Based on the whole curriculum, it is necessary to establish an ideological and political education knowledge system and a teaching framework that can allow students into the connotation of all parts.

2.2 Implementation of Ideological and Political Education in Classroom Teaching

Therefore, teachers should pay attention to combining ideological and political education with professional knowledge in the teaching process. Not only do they need to teach their specialisms in technology, but also make them part and parcel of ideological and political theory. Teachers should be in traditional teaching, combined with the use of different teaching methods (such as problem-based instruction, case analysis and seminar courses) to improve the initiative in their thoughts so that students have a new understanding. Educators and institutions should strengthen the cultivation of students' innovative awareness and creative ability. They should guide students to develop an innovative spirit through the promotion and education of national and social policies, regulations, and moral standards. During teaching, teachers may also design open-ended questions, thus guiding students to explore problems and think. Teachers especially in the classroom for some typical cases or topics can be more students to discuss, so as to better achieve the ideological and Political education of teaching goals.

3. Evaluation of the effectiveness of ideological and political education in the computer application foundation course for vocational undergraduate students

3.1 Indicator system for evaluating teaching effectiveness

The knowledge level of students is the most important part in teaching evaluation system. It can be assessed through exam scores, daily assignments and self-paced learning for example. The second is to see the quality of ideology and politics in students from another design angle. All these can be effectively assessed are moral expression, social morality and neutralize the mainly through student ideology. What's more, teaching methods advance applied to channel for the setting of a school itself it does not be neglect in building an indicator system about evaluating. To construct the evaluation index system of teaching effectiveness, we need to take into account both the characteristics in vocational undergraduate computer-application basic courses and learning needs as a scientific testing category. Meanwhile, in the indicator system of teaching performance measurement we should carry out the education concept for people first and give full play to comprehensive quality training function carried thereby accompany with practice ability cultivation so that they can use what have been learnt.

3.2 Methods for Evaluating Teaching Effectiveness

For the vocational undergraduate computer application foundation courses, with respect to evaluating the teaching effectiveness, schools should pay attention to introducing and using various types of advanced/scientific evaluation methods as well as giving a hand in promoting ideological & political education in course arrangement. The teaching effect evaluation methods can be selectively applied according to the purpose and content of each teaching task. Common evaluation methods are test score, practice performance evaluation, comprehensive achievement level assessment academic diary. Finally, in exam performance evaluation regular assessment methods can be employed to assess from time-to-time the proficiency of students with respect to courses. The practical performance evaluation can be divided into independent and collaborative tasks in a tree structure corresponding to the actual hands-on operations of students and themselves capable of independently solving syllabus problems scrutinised by C++ experts. On the whole, students' test scores, practical operations and class performance as well also study notes are multi - exposed calculated to give an overall objective evaluation comment under the premise of not being unfair. It can incorporate a specific set of writings or report forms linked to student content and mastery on

the learning notes while also including some very useful feedback for improvement.

3.3 Analysis of Teaching Effectiveness Evaluation Results

This course has made remarkable achievements in the ideological and political education of students, which is obtained through data collection. The content and methods of ideological and political education design in the course are widely praised by students, teachers, this is a simple implementation effect^[3]. In the ideological and political education curriculum, data on moral, intellectual and physical quality level of students have been transformed into digital such as knowledge structure ability in ideology & polity, culture literacy for thought & politics. Measure the results of each dimension, ideological and political education is that students averagely rated high, achieved more than anticipated goals. The promotion of the college students' ideological and political education depends mainly on the pertinency layout between knowledge content unlocked, methods unfolded, and application oriented in curriculum designed for characteristic of vocational undergraduate. Curriculum ideology and politics is an ideological and political education, which not only absorbs theory knowledge but more pay attention to guidance consciousness shaping of students values system professional moral space life attitude. At the same time, teachers in teaching with a variety of interactive educational methods which will allow students to have their own views and ways of thinking.

3.4 Improvement measures for teaching effectiveness evaluation

(1) In terms of indicator system, strengthen the evaluation of specific application capabilities Improving the effectiveness of instruction requires that we reinforce the examination, in practice specific to pupils from application. Although conventional teaching evaluations primarily focus on students' knowledge acquisition, they often neglect to cultivate their practical work capabilities. In order to evaluate the teaching effectiveness more fully and reasonably, we need to add evaluation indicators of application scenarios. In the future, more evaluation indicators of application scenarios can be added for students to train their hands-on ability and solve complex problems in order to provide sufficient evidence. This method of evaluation is likely more in line with real work needs and allows students to use what they learn appropriately. For example, in the foundation course of computer application for vocational undergraduate, practical projects or tasks can be defined to ask students to use their learned knowledge to solve practical problems. We evaluate students' practice performance that allows us to have a realistic perception of their practical applications. Furthermore, students are taught to handle complicated situations through interactive scenarios simulating realworld circumstances. Such as the presenting of difficult cases or problems in teacheing and then requiring students for its analysis, to be suggested way (SGetMapping). Students' comprehensive ability and adaptability in handling complex situations can be more directly reflected through observation.

(2) In terms of evaluation methods, strengthen consideration of personalized differences among students

Teachers should use a variety of methods to evaluate differences between students in personalized responses. The traditional assessment method often only compares the overall, but does not judge on each kind of work, so it is difficult to reflect a student's ability in various perspectives. To assuage the various talent suppliers, evaluation methods such as one-on-one skill showcase and group performance are included to give a more precise view on where students lie in terms of strengths & weaknesses. Individual competence displays can demonstrate that students are able to write or speak reports on particular types of competences and strengths, speeches as well as perform tasks. This can be a way for students to show their individual qualities and characteristics,

& at the same time develop strengths about talking comfortably in front of others with confidence. Group Performance Evaluation - Do tasks related to teamwork, communication and problem solving (end line: demonstrates ability for working in a group) By doing so, it can gain a more comprehensive understanding of the students' ability to communicate and work with others in order to help them build up teamwork spirit and team dignity. However, you can also introduce other forms of evaluation methods such as project assignments/practical tasks besides individual ability display and group performance. Finally, they could adapt such evaluation methods to the interests and special conditions of some students to enhance their motivation in learning and development opportunities.

(3) In terms of improvement measures, strengthen attention to student feedback

Instructors should assess teaching effectiveness by adopting a student-centered approach rather than relying on a one-sided caveat. To enhance the effectiveness of teaching, a feedback system may be set up to solicit suggestions and comments from students which are then used in developing specific solutions for the issues raised. The educational institution should carry out the student satisfaction survey periodically to understand students' recognition of the teaching content, method of instruction, or space. It should receive a complete outline of students' satisfaction and learning needs or expectations through the use of questionnaire surveys or group discussions. The institution must set up feedback channels, such as suggestion boxes or online forums, for students to provide information about their experiences. It is crucial to respond quickly to student feedback, communicate that their opinions are valued, and explain what changes are being implemented based on their input. Furthermore, teachers are able to conduct face-to-face interviews with students in the course of their learning needs and confusion and targeted help and guidance. It can make the above situation very good so that teachers and students build a better relationship in class NESS. At the same time teachers should monitor carefully students classroom performance and learning outcome, identify problems quickly, make adjustments. If, for example, a student is struggling with a particular teaching point teachers can react more quickly by responding to individual students inperson or supplying extra learning resources.

General Principles and Theoretical Education of Ideology and Politics is an indispensable aspect in Vocational College Computer Application Basic Course, it cannot be replaced by anything else. The course is taught by means of classroom teaching, off-campus practice and extracurricular activities to increase the influence of students' ideological work in their comprehensive quality. On the one hand, in classroom teaching, according to the characteristics of course content and students' needs, we pay attention to combining theory with practice by integrating ideological and political education contents such as professional ethics, healthy psychology and cultural literacy. Reasonable case study, discussion and question answer design can effectively stimulate students' enthusiasm for participation, so as to deepen their understanding of the course content objectively improve ideological and political education. At the same time, greater attention should be paid to participating in extracurricular practical activities and student clubs, competitions, volunteer services and other programs are actively advocated so as to enhance contact with classmates by expanding social interaction among students, promoting ideological literacy of Marxism through such means, enhancing career development ability amongst them whilst fostering their competitive edge.

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References

- [1] Zhao Shuhan. Research on Ideological and Political Education in High School Music Classes under the Framework of Core Literacy [D]. Yangzhou University, 2023.
- [2] Tan Kexin. The Application of Ideological and Political Education in High School English Teaching [D]. Liaoning Normal University, 2021.
- [3] Li Z. The Study of the Ideological and Political Path in the Teaching of Higher Mathematics[C]// Institute of Management Science and Industrial Engineering. Proceedings of 2019 Asia-Pacific Conference on Advance in Education, Learning and Teaching (ACAELT 2019). Chongqing Vocational College of Transportation; 2019: 6.