Research Article

Model Construction of Moral Education Teaching System in Colleges and Universities under the Background of Information Technology

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With the rapid development of modern computer technology, traditional classroom teaching has undergone tremendous changes in teaching concepts, teaching methods, and teaching environment. Web technology is an important part of the integration of information technology and classroom teaching, and the auxiliary teaching tools for subject courses provide an effective way for the reform of traditional education. This research constructs a web-based moral education based on the analysis of the current situation of the development of teaching curriculum models. There is a new model of instruction for the curriculum teaching system. A detailed teaching design was carried out, and the teaching effect was given timely feedback. Through teaching practice, it is found that the average score of students in the pretest has increased by about 15%, and the standard deviation and variance of the students’ scores in the posttest show a downward trend. The curriculum-based teaching system is not only conducive to improving students’ interest in learning and self-determination, learning ability, and classroom participation, and the teaching effect is significantly better than that of traditional classroom teaching based on paper textbooks.

1. Introduction

The integration of information technology and curriculum in basic education has already begun, and a lot of theoretical research and practical exploration have been carried out. Studying the integration of information technology and moral education courses in colleges and universities is to apply the integration experience in general education to college education, make full use of information technology, change traditional teaching methods, and improve teaching quality. For the objective selection of new talents in society, this research further expands the scope of research on the teaching concept of moral education. Under today’s information technology conditions, distance and open education emphasizes learner-centered learning under the guidance of the teachers [1]. The reform of model of instruction emphasizes improving the learning effect and learning value of learners and emphasizes the specific teaching situations, under the guidance of the teachers, with learners as the core, through necessary interpersonal collaboration and conversation, to carry out knowledge meaning construction, then to achieve learners’ learning value, and to promote quality education for the whole people. Teachers become learners’ mentors and navigators, providing learning environment, conditions, resources, and corresponding management and communication conditions [2]. A teaching mode based on constructivism and learning value management service system has been formed, and the operation of this mode is also the main problem explored by this research.

At present, although the reform of education and teaching in colleges and universities has been implemented for many years, the concept of teaching reform has been effectively implemented, and the problem of single classroom teaching methods in colleges and universities has been effectively improved. However, in actual classroom teaching, some teachers pay too much attention to the diversity of teaching modes. It cannot guide students to study actively, and the innovative education of students’ thinking is only a shallow taste, which is seriously out of touch with the development of the times. Therefore, educators in colleges and
universities should keep pace with the times, strengthen their own quality level, scientifically and effectively handle the relationship between teaching and learning, and realize diversified teaching methods. Classroom is a stage for teachers to impart knowledge and a palace for students to learn knowledge. Effective classroom teaching means that teachers can complete teaching tasks efficiently and with high quality within effective classroom time. Effective classroom is an important indicator of teachers' teaching ability. It formulates teaching goals based on students' development. It not only pays attention to students' knowledge goals but also pays attention to students' quality goals and ability goals [3]. Effective teaching is a harmonious and dialectical unity of presupposition and generation; the effect of effective teaching depends on the amount of effective knowledge in teaching, not the amount of knowledge imparted by teaching and the length of teaching time; the teaching environment of an effective classroom should be comfortable, harmonious, and balanced. Effective classroom is to teach with teaching materials, not teaching materials. Teachers must change teaching materials into teaching materials to teach with teaching materials, in order to meet the learning needs of students and promote students' progress and development. Classroom teaching is the main front of talent training and teachers' teaching ability. Therefore, colleges and universities should take improving teaching ability and improving the teaching effect of courses as the first direction of efforts [4]. However, for a long time, most teachers only understand the basic content and basic process of teaching and pay little attention to their own teaching effect and students' learning effect. The students they cultivate are difficult to adapt to the needs of society and the country's demand for technical and skilled talents. With the continuous growth, as the main base for talent training, colleges and universities urgently need to strengthen the exploration of effective classroom model of instruction [5].

With the continuous advancement of information-based teaching reform, the reform of classroom model of instruction in colleges and universities has achieved certain results, but the teaching effect has not been obvious [6]. It is mainly reflected in the following aspects: first, the teaching concept of teachers has not changed. Most of the courses are still dominated by teachers' lectures and students' listening. Students in the classroom are not highly motivated, especially the large-class teaching of public courses. The teaching effect is even more worrying; secondly, there is not enough research on the learning situation, the design of the course content is not highly targeted, and the teaching objectives are not formulated in accordance with the actual situation of the students, resulting in boring and uninteractive classrooms; thirdly, teachers do not pay much attention to students. Although it is said that students' learning is mainly conscious, teachers still need to pay more attention to supervise their learning in order to complete their learning tasks; fourth, the assessment and evaluation system is not perfect, and the assessment of students and teachers is subjective and lacks fairness and impartiality. The theoretical basis of the integration of information technology and subject teaching is constructivism, and the learning method provided by the constructivist learning theory is student-centered learning under the guidance of teachers. The new educational concept increasingly emphasizes the transformation of students' learning styles, actively advocates independent, cooperative, and exploratory learning styles, and attaches importance to students' active participation awareness and spirit. The transformation of students' learning styles requires the transformation of teachers' concepts and teaching functions and the transformation of model of instruction [7]. Therefore, based on information technology, creating an inquiry-based learning environment of teacher-student collaboration and encouraging students to take ownership of learning, consciously participate in the teaching process, and participate in the process of knowledge acquisition are another effective ways to integrate information technology and college moral education courses. It is a higher level of integration of information technology and moral education courses in colleges and universities [8].

The innovation of this paper is as follows: the information technology-based moral education course teaching system in this study is designed based on the characteristics of college students, making full use of the characteristics of information technology. It is not only conducive to the realization of educational fairness and the maximization of resource utilization but also injects information technology elements into traditional classroom teaching, which fully stimulates the autonomy of students, changes the problems existing in traditional classroom teaching, and improves the teaching effect and teaching quality.

The chapter arrangement of this paper is as follows: the first chapter rewards the related research on the construction of the model of instruction of information technology; the second chapter gives an overview of the moral education curriculum based on information technology proposed in this paper, the third chapter combines the web technology to design the moral education curriculum process; the fourth chapter is the teaching practice analysis of moral education courses based on web technology; the fifth chapter is the summary of the full text.

2. Related Work

In modern teaching practice, the theory and practice of situational teaching are gradually developed systematically. Yang pushes situational teaching to a new stage with richer operation methods and meanings. The root of the implied teaching method he created is situational teaching, that is, through careful design of the teaching environment, music, games, etc. help to create a relaxed classroom environment, so that students can give full play to their potential and actively complete learning tasks under the combined drive of three factors such as emotion and interest [9]. Zhang built a course management system Moodle based on constructivist learning theory. Moodle, as a free source code software, has been widely used in the world, and Moodle provides the application objects with the introduction of many courses and application. Subjects can choose corresponding courses to learn according to their own needs [10]. Shen pointed out that when students leave school, they should...
be confident, creative, and innovative users of new technologies. The research on the integration of information technology and curriculum is based on higher education, focusing on the preservice training of future teachers and the timeliness of integrated research [11]. Qin Lina proposed that every classroom and every library should be connected to the internetwork to form a nationwide information superhighway. Zhao and Feiyan discuss the orientation of teaching value, whose purpose is to promote the subjectivity of students. In the research of teaching purpose view, Zhao and Feiyan believe that the purpose of teaching is to promote the all-round development of students’ personality [12]. Furong believes that the purpose of teaching is the common understanding between teachers and students [13]. Li and Yanglin, who wrote “Guidelines for Social Science Learning”, require that in the teaching of morality, schools should divide the content of moral education into different levels and depths according to the characteristics of students in different grades and conduct moral education for students, trapped in the study of the teaching process view [14]. Haixia believes that the process of teaching can be regarded as the process of knowledge dissemination and generation, the process of life growth and formation, the process of interaction between teachers and students and between students and students, and the spiritual game that teachers and students participate in together. In the research of teaching content, some scholars believe that teaching content should pay attention to both knowledge and ability, the coexistence of science and humanities, the integration of knowledge and emotion, and the integration of knowledge and life [15]. In the study of curriculum concept, Fang proposed that teachers should be good at handling textbooks and turn the process of imparting knowledge to students into a process of students’ active development [16]. Regarding the research on moral education, Kang and Xia believe that it includes two aspects: one is to take the Internet as a new way of moral education, and the other is to strengthen the education of network ethics and morality while educating students on network information technology, to carry out moral education. Cultivate students’ moral awareness, strengthen moral self-cultivation, and form good moral behavior [17]. Starting from the first aspect, Fei comprehensively pointed out the problems brought by the Internet to the moral development of college students and school moral education, made a multilevel and multidisciplinary analysis of the causes of these problems, and proposed corresponding solutions, and study the second aspect as a part of moral education. This has great reference significance for the discussion of moral education in colleges and universities based on network learning resources [18]. Throughout the history of the development of classroom teaching, every change is to meet the requirements of the times and provide excellent talents for the times. Only when we know the development direction of classroom teaching can we combine the existing experience with the development of the times and provide an effective and scientific basis for the new classroom teaching reform. The laws of history tell us that the purpose of classroom teaching has changed from focusing on knowledge to focusing on both knowledge and ability. The organization of classroom teaching has shifted from unified large-class teaching to collective teaching, supplemented by group teaching and individual teaching. The teacher-student relationship in classroom teaching has been developed. The development of classroom teaching methods from teacher-centered to “dual-teaching” is from a single teaching method to an organic combination of various methods.

3. Overview of Moral Education Model of Instruction Based on Information Technology

The model of instruction based on information technology is the large-scale open online course, which is a relatively large-scale open online course based on the Internet and aimed at the public. It is regarded as a subversive innovation in the traditional education field, which originated in the stage of the open educational resources movement [19]. The information technology model of instruction has the characteristics of large scale: the scale of students is relatively large, there are more secondary vocational schools involved, teachers are involved in the teaching of the information technology model of instruction more, the number of courses is huge, and the investment is also relatively large, followed by the information technology model of instruction. The openness of the information technology model of instruction is not only incomparable with other courses; the openness of the information technology model of instruction not only truly realizes Confucius’ educational thought of “there is no class” but also has openness in terms of educational content, curriculum resources, and learning methods; in addition, information technology model of instruction is an online course. People can study anytime and anywhere, learn at their own pace according to their own time and study habits, record the learning process at any time, and get timely feedback, as shown in Figure 1.

Through the interpretation of the model of instruction in Figure 1, it can be seen that the model of instruction includes not only the learning environment but also the teaching behavior of teachers when using the model of instruction. In the use of model of instruction, creating a good learning environment is at the core of the teaching process. Only by creating a good learning environment, teachers teach students how to learn independently, and students can integrate into this environment, in order to improve their own ability.

Whether it is a model study based on teaching concepts or a model study for a certain type of curriculum, researchers always focus on four stages: project determination, project design, project implementation, and evaluation and reflection [20]. However, as the information technology teaching model has become a model and a learning method, its drawbacks have gradually emerged. For example, the dropout rate is relatively high, the effect is not satisfactory, and the communication and interaction between teachers and students in the information technology teaching model...
are less. The inability to mobilize the initiative of students to persist in learning also makes people reflect on the teaching mode of information technology.

As a kind of individualized teaching, the moral education teaching based on information technology can let students set their own pace and learn the teaching materials according to their own speed and level [21]. The principle of positive response mainly emphasizes that teachers should pay attention to observation in the teaching process. As long as students react, they should give students reinforcement in time, so that students are always in a positive state and make further responses; the principle of small steps is to decompose teaching materials into multiple steps, the previous step provides a foundation for the next step, and after the previous step is learned, the next step is learned, and finally, let the students learn; the principle of timely feedback requires timely feedback on the students’ answers, so as to maintain the effectiveness of student behavior. The principle of self-paced allows students to determine the time and speed of mastering learning materials according to their actual situation, so that all students can learn at their most suitable time and speed, so as to ensure learning efficiency [22].

4. Design of the Teaching Process of Moral Education Courses Based on Web Technology

The completion of cooperative learning activities under the web technology environment is marked by the completion of group tasks. In the process of completing tasks, students need to analyze problems, collect information, and present works and other activities. Different knowledge and skills are required at each stage, such as language and writing, intelligence, mathematical logic intelligence, and information literacy [23]. At the same time, in the process of completing the task, the learning activities are also affected by the nonintellectual factors of each member of the group. Cooperative learning activities will be affected by many factors, which means that “heterogeneity” cannot be determined by a single student achievement. For students’ evaluation, it is not simple to distinguish between good students and poor students. Fuzzy comprehensive evaluation method can be introduced to distinguish the qualitative changes of students. The division of labor between students and teachers under web technology is shown in Figure 2.

College students are highly independent, have certain critical thinking, and can analyze and grasp problems from multiple perspectives. Therefore, it is necessary to fully realize that classroom teaching in colleges and universities is an interactive learning between teachers and students. Only with a clear understanding of students’ learning psychology can scientific teaching strategies be formulated and the level of classroom teaching be promoted. For students trained under the background of the new curriculum reform, teachers need to innovate and build new classrooms to meet the actual needs of students’ learning and cultivate more high-quality talents for society and enterprises. It is necessary to actively explore the heuristic and innovative model of instruction and make it adapt to the physical and mental development of students, strengthen the main role and status of students, and promote students’ development and
Science and technology are the primary productive forces. As an important base for teaching and scientific research, colleges and universities should actively invest in scientific research. However, at present, many colleges and universities and teachers put more energy on scientific research, not enough attention to teaching, and insufficient reflection of teachers’ main role in teaching. The main task of colleges and universities is education and teaching, so it is necessary to put teaching at the top of all work, seriously perform the functions of teachers, and correctly treat the relationship between teaching and scientific research, which can not only cultivate high-quality talents but also promote scientific research and smooth progress of the work. At present, higher education has gradually achieved popularization, and the educational objects have shown a diversified development trend. Classroom education in colleges and universities should also focus on realizing individualized education based on the actual situation of students and their own characteristics, teaching students in accordance with their aptitude, paying attention to the dominant position of students in classroom teaching, and constantly adjusting the methods and methods of classroom teaching in colleges and universities, focusing on innovation and application and cultivation of talents. The teaching process is shown in Figure 3.

As shown in Figure 3, the web teaching of moral education should follow the developmental principle and promote the free and comprehensive development of students, which is not only the inherent requirement of moral education but also the goal of moral education. This principle first requires teachers to change their teaching concepts, constantly update their teaching methods, and use the latest teaching methods to fully stimulate the enthusiasm of students, so that students can acquire knowledge, develop their abilities, expand their horizons, and improve their comprehensive abilities through participation and inquiry. Secondly, the traditional relationship between teachers and students should be changed, and teachers and students should achieve teaching goals and promote students’ development through online and offline classroom interaction.

5. Analysis of the Teaching Practice of Moral Education under the Background of Web Technology

Before using the web-based moral education course teaching system for auxiliary teaching, understand the situation that the teaching practice of the web-based course-aided teaching system achieves the expected teaching objectives and teaching effects, and conduct a questionnaire survey on the students on the current teaching effect. The results of the survey are shown in Figure 4.

In the process of recording, adapting, and selecting learning resources, although teachers spent a lot of time and experience, the results of students’ satisfaction survey on learning resources did not achieve our expected results, as shown in Table 1. The survey results show that most students feel that the knowledge of learning resources provided by teachers is average. In the course, teachers provide students with very rich learning activities, which stimulates students’ interest in learning and creates a relaxed and pleasant classroom teaching atmosphere. The vast majority of students are satisfied with the design and organization of learning activities. It is found that many students think that although the learning provided by teachers is very rich, the degree of difficulty is not well mastered. How to choose.

This paper investigates the learning effect from many aspects, including mastery of basic knowledge, practical operation ability, self-learning ability, problem analysis ability, problem solving ability, and learning interest and motivation. The survey results show that some students think this learning mode improves their practical operation ability,
The teaching process of moral education based on web technology.

Preparation phase

- Teachers publish learning resources
- Open a Q&A discussion area in the class

Pre-class stage

- Students learn online, communicate and interact in the discussion area

Mid-class

- Classroom activities
- Show reviews
- Summarize

After school period

- Classroom knowledge test
- Teacher-student interactive Q&A
- Teachers explain the difficult points
- Summary and analysis of class teaching report

Figure 3: The teaching process of moral education based on web technology.

Figure 4: Analysis of students’ adaptability.

Table 1: Learning effect questionnaire.

<table>
<thead>
<tr>
<th></th>
<th>Very helpful</th>
<th>Helpful</th>
<th>Generally</th>
<th>Little help</th>
<th>Totally not helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic knowledge</td>
<td>16.29%</td>
<td>49%</td>
<td>29.95%</td>
<td>4.76%</td>
<td>0%</td>
</tr>
<tr>
<td>Practical operational skills</td>
<td>20.43%</td>
<td>48.62%</td>
<td>29.57%</td>
<td>1.38%</td>
<td>0%</td>
</tr>
<tr>
<td>Self-learning ability</td>
<td>29.95%</td>
<td>41.48%</td>
<td>28.57%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Analytical problem solving skills</td>
<td>13.29%</td>
<td>70.05%</td>
<td>10.52%</td>
<td>3.76%</td>
<td>2.38%</td>
</tr>
<tr>
<td>Learning interest and motivation</td>
<td>19.05%</td>
<td>40.86%</td>
<td>40.10%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
and some students think it helps them master basic knowledge. Some students felt that this model of instruction improved their learning interest and motivation. The specific data of the teaching effect evaluation is shown in Figure 5.

To sum up, the vast majority of students are quite satisfied with the model of instruction of web-based moral education courses. The course-assisted teaching system allows students to have a certain degree of freedom in the time and space of learning, allowing students to arrange their own learning. Rhythm. Various learning resources uploaded by teachers on the course-assisted teaching system can improve students’ learning attitude and increase students’ interest in learning to a certain extent.
Based on web technology, real-time classroom performance analysis can be generated in the postclass summary stage. The summary is shown in Figure 6.

From Figures 6 and 7, it can be seen that students’ performance in moral education courses is based on stable and high average scores, and they are basically actively participating in various classroom activities, but the completion of homework is not high. Next, there are problems that need to be solved in the moral education classroom based on web technology. Based on this question, a survey was conducted on the degree of homework completion, and the survey results are shown in Figure 8.

It can be seen from Figure 8 that students can accept the difficulty of homework in the moral education course based on web technology, but the homework completion time is too long, so some students feel that the time is not enough and the homework is not completed. This is what needs to be paid attention to next. In some cases, the amount of work...
should be adjusted appropriately, and the difficulty of the work should be slightly increased to ensure the quality of the work completed.

Figures 9 and 10 show the impact of web technology-based moral education courses on students’ performance.

It can be seen from the figure that there are obvious changes in the students’ scores in the moral education courses based on web technology. The average score of post-test students is about 15% higher than that of pretest students, and the standard deviation and variance of posttest students’ scores show a downward trend. This shows that the achievement gap between students is getting smaller and smaller. This shows that the web-based moral education curriculum model of instruction has a certain teaching effect.

To sum up, the vast majority of students are quite satisfied with the model of instruction of web-based moral education courses. The course-assisted teaching system allows students to have a certain degree of freedom in the time and space of learning, allowing students to arrange their own learning. Rhythm. Various learning resources uploaded by teachers on the course-assisted teaching system can improve students’ learning attitude to a certain extent, increase students’ interest in learning, and significantly improve students’ autonomous learning ability and classroom participation. Through group collaborative learning, the interactive atmosphere in the classroom has been greatly improved, the classroom atmosphere has been activated, and the communication and exchange ability of students have been improved, the learning efficiency has been ensured, the students’ academic performance has been significantly improved, and the teaching effect has been improved.

6. Conclusions

The moral education course model of instruction in this research is designed based on the character characteristics of college students. It has not only been successfully applied to the specific teaching process but also achieved remarkable teaching effects. This paper also makes a detailed design of the application process of the model of instruction under
the model of instruction of moral education courses in the classroom. Teachers carefully record or select teaching resources before class, so that students can conduct autonomous learning before class, organize teaching activities in class reasonably and efficiently, and summarize comment in time after class. Enable students to study efficiently in limited time. The moral education course model of instruction provides students with abundant resources and sets up a variety of evaluation methods, so as to support students in autonomous learning and collaborative learning. The application of the model of instruction of moral education courses based on the web has higher requirements for teachers. Teachers must have higher information literacy, and teachers are required to understand the characteristics of students. According to the characteristics of the subject, the teaching design should be carefully designed, and the students’ interest and learning motivation should be stimulated in the teaching process. Practice has proved that the moral education course model of instruction can provide good support for classroom teaching.

Due to the lack of relevant teaching experience and the lack of experience in the research process, it is inevitable that some loopholes will appear in the specific implementation. In the whole research process, the teaching design and guidance of the teaching process may not be perfect. Due to the limitation of course time, the entire practice process lasts for a short time, and there is not enough time to analyze and formulate solutions for the problems reflected in the practice process. The control and elimination of some possible interference factors and influencing factors cannot be completely solved. To a certain extent, it has a certain impact on the practical effect. This research only takes moral education courses as the research object, and the scope of regions and subjects is relatively narrow. In the future, it is necessary to expand the geographical scope and subject scope of the application of the new teaching model in classroom teaching and integrate the auxiliary teaching system with other disciplines and apply it to specific teaching to obtain better teaching effects and deal with the means to actively and effectively promote educational reform.

Data Availability

The data used to support the findings of this study are included within the article.

Conflicts of Interest

No competing interests exist concerning this study.

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