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Original Research Article

On the teaching reform of radio and television editing and directing major under the mode of cultivating applied talents

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Abstract: Radio and television director is an applied subject compared to the basic subject, and its teaching content is often adjusted with the development of mainstream media. However, there is still a serious mismatch between the form and content of professional teaching and the demand for social work posts, which leads to the students' professional knowledge can't be perfectly adapted to the needs of their social work. Therefore, how to fully carry out the teaching innovation of radio and television editing and directing major under the application-oriented talent training mode becomes very critical. This paper analyzes the problems existing in the teaching process of radio and television editing and directing major, and puts forward the corresponding teaching reform plan.

Keywords: Radio and television director; applied talents; teaching innovation

1. Introduction

The major of radio and television editing and directing is closely combined with the development of social media. At the present stage, under the influence of the mode of training applied talents, the radio and television editing and directing specialty is facing the structural adjustment caused by the brand new media such as live broadcast and short video. This new challenge to the rapid development of its many professional teaching methods also usher in an unprecedented great test. So as far as the present stage is concerned, the teaching reform of the major should be further strengthened under the mode of combining the cultivation of applied talents, so that students can really find their own jobs after graduation, which is the current professional need to explore in-depth issues. Therefore, this paper will analyze the problems existing in the current curriculum teaching of radio and television editing and directing industry, and give the corresponding solutions.

2. Analysis of the problems existing in the current curriculum of radio and television editing and directing major

As long as the content of the current course for the major of radio and television editing and directing includes two aspects, one is the professional program editing and directing, and the other is the related basic theory, at the same time, we also need to further strengthen the professional direction of the applied professional skills in a continuous way. Through a deep understanding of the current stage of radio and television editing and directing professional curriculum arrangements, it can be found (**Table 1** and **Table 2** respectively for a university radio and television editing and directing professional education and practical class curriculum).

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Course code	Course title	Total credits	Total hours	Timetable hours
FT100	History of Chinese and foreign film and television	4.0	64	64
FT210	Audio-visual Language	2.0	34	34
FT205	Screenplay Foundation	3.0	51	51
FT217	Film theory and criticism	2.0	34	34
FT224	Film editing	3.0	51	51
FT340	Introduction to Western Art	2.0	32	32
FT219	Special effects and packaging	3.0	51	51
FT220	Post production of film and television programs	4.0	68	68
FT321	Fundamentals of film and television performance	2.0	34	34
FT323	TV art director	2.0	34	34
FT327	Film marketing	3.0	51	51
FT328	Documentary director	3.0	51	51
FT329	Film and television director	3.0	51	51
JC322	Video advertising	2.0	34	34

Table 1. Teaching courses of radio and television director major in university

Course code	Course title	Total credits	Total hours	Timetable hours
FT104	Hong Kong and Taiwan film and television research	2.0	34	34
AD901	Art Foundation	2.0	34	34
FT009	Research on film masters	2.0	34	34
FT221	Hollywood film research	2.0	34	34
FT332	TV host art	2.0	34	43
PU356	Introduction to Chinese culture	2.0	34	34

Table 2. Practice courses of radio and television director

At present, there are some differences in the curriculum arrangement and teaching objectives of applied talents cultivation. The main reasons for this problem include the following aspects.

2.1 Emphasis more on theoretical inculcation and serious neglect of practical development

With the reform and development of media field in our country, the demand of professional talents is increasing year by year. In the teaching process of radio and television editing and directing major in many colleges and universities, there is still a situation where more attention is paid to theory inculcation but less attention is paid to practice. This directly leads to the development of teaching and the current stage of social post demand can't effectively match, resulting in the final training of professional graduates can't be competent for the professional post. In recent years, in order to solve this problem well, many colleges and universities' radio and television editing and directing majors have gradually increased the weight of practical teaching, however, there is still a gap between the demand for skills and the demand for relevant talents in the actual field of industry.

2.2 Focus on imitation over creativity

In recent years, many colleges and universities' radio and television director majors take "fully enhancing the

application talented person to cultivate the quality, further strengthening the student comprehensive specialized accomplishment" as the basic principle. Through the current teaching development present situation, we should carry out appropriate teaching innovation system. However, in the process of teaching transition, professional students have a relatively strong ability to imitate but a serious lack of self-innovation. In a word, the basic ability of students' major is relatively good, but the comprehensive ability of practical application is relatively weak. In the teaching process, the actual performance is: in the course practice, the students can produce the related works according to the teacher's guidance, but when they need to create independently, they are often unable to do so. The core reason of this problem is that the whole knowledge structure of students is relatively narrow, their vision is not open enough while the comprehensive quality of specialty is relatively weak, and the teachers have not effectively guided students to participate in the teaching practice. As a result, there are often a lot of finished products having the problem of relatively poor creativity.

3. Analysis on the reform of teaching content of radio and television editing and directing specialty

According to the universal problems existing in the teaching of radio and television editing and directing in many colleges and universities at present, we can fully develop the teaching mode of "foundation + ability", so that students' comprehensive quality can be promoted in an all-round way. The concrete reform measures mainly include the following aspects:

3.1 Improvement of the competency-based curriculum framework

In order to further improve the curriculum structure of radio and television editing and directing major, all kinds of professional courses should insist on ability-based comprehensive curriculum design reform. At the same time, according to the requirements of professional curriculum design, the individual courses should be effectively connected to each practical training link. For example, in Standard Chinese, a basic course for students, many students only have a preliminary understanding of the theory of the Chinese language in the course of study, but in the actual practice application process, the students have not really achieved and the professional knowledge in-depth combination. This shows that such courses are not suitable for the application of the professional requirements, so schools can make appropriate adjustments in the proportion of teaching.

3.2 Create a new teaching system that combines both

Through the creation of a new teaching system, we can effectively integrate the various professional courses in an in-depth way. For example, in a course design, we can effectively integrate the skills of many disciplines, thus creating a diversified form of training. Such a new teaching system can better show the ability of teaching assistance and educational application, and further deepen the students' enthusiasm for learning and the ability to explore and create. Students are better able to combine their practice with their major effectively. At the same time, in order to further enhance the quality of the graduation design, the school can set up the whole practical training in the early stage of the graduation design, so as to further enhance the combination of the students' graduation work and social practice.

4. Conclusion

With the rapid change of the times, the media industry has also undergone a tremendous transformation. At the present stage, the professional demand of media talents is also different from the past. Although the professional skills of radio and television directors in the past are also the essential basic qualities of many posts in the media industry at the present stage, the media industry is more in need of new talents with multi-disciplinary integration. Therefore, the radio and television editing and directing major needs to carry out the reform of teaching under the training mode of application-oriented talents, increase the proportion of practical teaching courses, so as to effectively train the professional talents who match the professional positions of the market.

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Original Research Article

Strengthening practical English teaching to improve college students' comprehensive English ability

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Abstract: With the increasingly frequent economic and cultural exchanges between countries, in order to better promote the exchange between China and the world, it is necessary to improve the practicality of English teaching, so as to better meet the needs of daily communication. English using ability plays an irreplaceable role in national construction, however, as Chinese universities are still affected by exam-oriented education in English teaching, they are more inclined to use professional terms in English knowledge teaching which are rarely used in real life. As a result, it is difficult for students to understand and use English. Therefore, this paper mainly discusses the optimization strategies based on the current situation of college English teaching, so as to provide better guarantee for the improvement of college students' comprehensive English ability.

Keywords: English; comprehensive ability; practical

1. Introduction

With the rapid development of globalization, China is still short of comprehensive talents. Therefore, English course has become an extremely important content in college curriculum setting, so as to better train compound professional talents. Under the teaching requirements of English majors, students are not only required to understand the theoretical content of English courses, but also need to strengthen the application of knowledge theory, so as to better improve the subsequent employment advantages. At present, the education system is constantly changing and developing, and all sectors of society have higher and higher requirements on its practicability. Therefore, colleges and universities should speed up the pace of teaching mode reform in the process of teaching, so as to better train practical English talents to better meet the development needs of modern society. However, there are still many shortcomings in the current English teaching process, so in order to better solve the existing problems, it is necessary to innovate its teaching model to better train students with higher comprehensive quality and make them adapt to the social employment demand.

2. Strategies to improve the quality of English teaching

2.1 Innovative English course teaching mode

In different times, the international English environment is different, so college teachers need to improve the timeliness of teaching content, so that students can better improve their interest in learning English courses, and strengthen their practical ability, so as to improve the practicability of English. The traditional teaching mode of English course is mainly based on teacher's explanation and exercise consolidation. Just because the traditional teaching mode

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restricts students' thinking direction, the defects in the traditional teaching plan also reduce the overall teaching efficiency. The new model of English classroom teaching integrates more knowledge systems into one another to form a complete knowledge system and strengthen the connection between knowledge. For example, from the current English learning environment, from simple daily oral English extension to very high-level business English, in this way, teachers will instruct the whole process of international contract negotiation in depth to better improve students' practical knowledge of English. As shown in **Figure 1**:

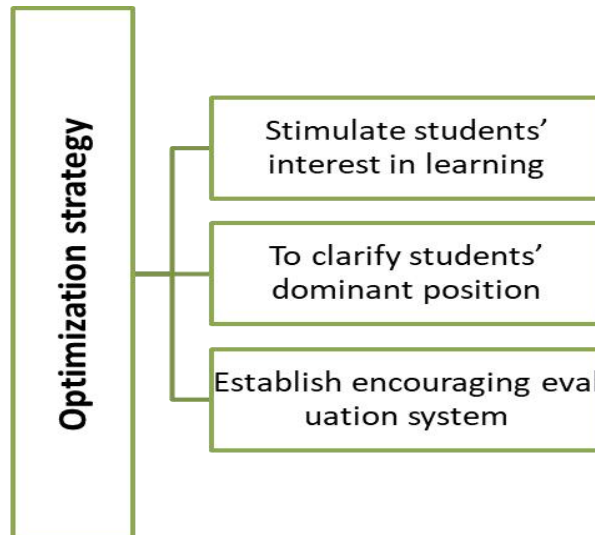


Figure 1. Lifting strategy

2.2 Speed up the construction of English teachers to meet the requirements of modern higher education teaching ability

In the current college education process, the comprehensive quality and ability of English teachers will have a direct impact on the teaching quality, so the innovation of teaching mode should also be carried out to improve the professional quality and ability of English teachers. In this process, schools should give professional training to English teachers to improve their teaching ability. Secondly, they also need to use modern network theory to simplify the teaching workload and increase the frequency of the academic exchanges and professional training, in order to be accord with modern social development of new theory applied talents. Moreover, they can also accumulate teaching experience in specific teaching practice, improve their teaching level, in order to achieve the optimal teaching effect. As shown in **Figure 2**:



Figure 2. Classroom teaching

Moreover, it is needed to actively cultivate double-type English teachers, using the combination of Chinese and English in the process of classroom teaching in order to better improve students' learning of import and export business. Thus, students can improve the perception of English transaction in the osmosis, arouse the enthusiasm of learning English, to better realize the goal of college English teaching.

2.3 Improve the English evaluation system

In the actual teaching evaluation, summative evaluation is the evaluation form of testing students' learning achievements in a certain period of time. Therefore, it is necessary to consider the comprehensiveness of testing in the construction process so as to achieve better teaching evaluation purposes. Summative evaluation puts more emphasis on students' final learning results. Therefore, teachers should fully understand and analyze each student's performance in class during the evaluation, so as to combine the general performance with the written test results during the evaluation and improve the comprehensiveness of the evaluation. For example, in the process of college education, the design scheme of the formative evaluation mechanism for students of college English audio-visual speaking course includes: the scheme of combining the usual score with the final oral examination is adopted for the evaluation of students' performance. The score ratio is 6:4, 60% for ordinary exams and 40% for final oral exams. The final oral examination is in the form of short passage recitation, question and answer, thematic speech, thematic dialogue and so on. Therefore, in the final summative evaluation process, it is necessary to combine the content of formative evaluation with the final evaluation index, so as to make a more comprehensive evaluation of students' comprehensive performance and improve the fairness of evaluation.

3. Conclusion

In a word, in higher education, teachers train more theoretical talents. People need carry on the teaching innovation, which is not only to undertake to the student theoretical knowledge popularization, and to strengthen the student's ability to use English. Under the new background of the times, only by actively reforming the teaching mode can we better meet the needs of college English teaching. In the teaching process, students should fully understand and use various English skills, and independently complete the daily English communication, so as to improve the practicality of English courses, arouse students' interest in learning English courses from the bottom of their hearts and ultimately improve the overall teaching quality. In the current trend of globalization, the frequency of using English is also increasing. Therefore, in order to better promote China's economic and trade, it is necessary to train the students of

English majors in theory and practice, so as to better improve the ability to deal with the use of English, improve the practicability of the use of English, and comprehensively improve the comprehensive quality of students.

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Original Research Article

Research on the numerical solution and dynamic properties of nonlinear fractional differential equations

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Abstract: Fractional calculus is an important branch of mathematical analysis, which is specialized in the study of the mathematical properties and applications of arbitrary order integral and differential, and is the extension of the traditional integral calculus. At present, fractional integral and derivative operators are mainly used to calculate fractional calculus, among which the most famous ones are Riemann-Liouville fractional integral and derivative, Caputo fractional derivative, Grünwald-Letnikov fractional integral and derivative, etc. At present, the numerical algorithm of finite difference scheme is mainly used to solve the approximate solution of the equation, to solve the fractional differential equation. Through the finite difference of time fractional order or space fractional order, the approximate solution of the equation is obtained, and the stability, convergence and compatibility of the scheme are checked, and the convergence order and estimation error are calculated. At present, the theory and method of nonlinear fractional differential equation are widely used in the study of various intermediate processes and critical phenomena in finance, physics and mechanics, which can better fit some natural physical processes and dynamic system processes.

Keywords: Fractional calculus; numerical solution of nonlinear fractional differential equations; Grünwald-Letnikov, Riemann-Liouville, Caputo, Dynamics

1. Introduction

The theory of fractional calculus is an important branch of mathematical analysis. It is specialized in the study of the mathematical properties and applications of arbitrary order integrals and differential calculus. It is the extension of traditional integral order calculus.

Compared with the development of integral calculus, the development of fractional calculus also consumes a lot of research energy, the theory of fractional calculus has experienced a long and tortuous development process for many years. At present, fractional integral and derivative operators are mainly used to calculate fractional calculus, among which the most famous ones are Riemann-Liouville fractional integral and derivative, Caputo fractional derivative, Grünwald-Letnikov fractional integral and derivative, etc. At present, the numerical algorithm of finite difference scheme is mainly used to solve the approximate solution of the equation, to solve the fractional differential equation. Through the finite difference of time fractional order or space fractional order, the approximate solution of the equation is obtained, and the stability, convergence and compatibility of the scheme are checked, and the convergence order and estimation error are calculated.

In recent years, many professional scholars for numerical solution of fractional differential equations for various research, makes the fractional order differential equation of related research is increasingly mature, fractional

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differential equation in biology, materials science, chemical kinetics, diffusion of electromagnetism, transmission, automatic control, etc. Also more and more widely applied in many fields of science.

2. Basic definition of fractional differential equation

Since the birth of fractional calculus in the 17th century, mathematicians have been exploring the theoretical system of fractional operators. After the efforts of many mathematicians, from different angles, we have established a variety of different forms of fractional order operator definitions. Now the main three kinds of definitions are as follows.

2.1 Definition of Grünwald-Letnikov fractional

For any real number α , the integral part $[\alpha]$ ($[\alpha]$ is the largest integer less than α).

If the function $f(t)$ has $m+1$ -order continuous reciprocal on the interval $[\alpha, t]$, when $\alpha > 0$, m is at least $[\alpha]$, then the fractional derivative α is defined as:

$${}_a^G D_t^\alpha f(t) \triangleq \lim_{h \rightarrow 0} h^{-\alpha} \sum_{i=0}^n [{}_i^{-\alpha}] f(t - ih)$$

Among them, $[{}_i^{-\alpha}] = \frac{(-\alpha)(-\alpha+1)(-\alpha+2)\cdots(-\alpha+i-1)}{i!}$, so the above formula can be changed into:

$${}_a^G D_t^\alpha f(t) \triangleq \sum_{k=0}^n \frac{f^{(k)}(\alpha) (t-\alpha)^{-\alpha+k}}{\Gamma(-\alpha+k+1)} + \frac{1}{\Gamma(-\alpha+m+1)} \int_0^t (t-\tau)^{-\alpha+m} f^{(m+1)}(\tau) d\tau$$

This definition is derived from looking for the unity of n derivative and n integral. The n can be extended to a negative integer.

2.2 Definition of Riemann-Liouville fractional

The fractional derivative of function definition is:

$${}_a^R D_t^\alpha f(t) = \begin{cases} \frac{d^n f}{dt^n}, \alpha = n \in N \\ \frac{d^n}{dt^n} \frac{1}{\Gamma(n-\alpha)} \int_0^t \frac{f(\tau)}{(t-\tau)^{\alpha-n+1}} d\tau, 0 \leq n-1 < \alpha < n \end{cases}$$

Similarly, the fractional integral of Riemann-Liouville fractional definition is:

$${}_a^R D_t^\alpha f(t) = \frac{1}{\Gamma(-\alpha)} \int_0^t (t-\tau)^{-\alpha-1} f(\tau) d\tau, (\alpha < 0)$$

Under the condition that the function has $m+1$ order continuous derivative and m is at least $[\alpha]=n-1$, the definition of Grünwald-Letnikov fractional is equivalent to that of Riemann-Liouville fractional. But without the above conditions, the definition of Riemann-Liouville fractional is an extension of the definition of Grünwald-Letnikov fractional, and its application range is more extensive.

2.3 Definition of Caputo fractional

For positive non integer α , (the rest is the same as the definition of Riemann-Liouville fractional),

$${}_a^C D_t^\alpha f(t) \triangleq \frac{1}{\Gamma(-\alpha)} \int_0^t (t-\tau)^{-\alpha-1} f^{(n)}(\tau) d\tau$$

$$0 \leq n-1 < \alpha < n, n \in N$$

Both the definition of Caputo fractional and the Riemann-Liouville fractional are improvements to the definition of Grünwald-Letnikov fractional.

Under the condition:

(1) if $f(t)$ has $m+1$ order continuous derivative, and m is at least $[\alpha]=n-1$;

(2) $f^{(k)}(a) = 0, k = 0, 1, 2, \dots, n-1$, the definition of Caputo fractional is equivalent to that of Riemann-Liouville fractional.

3. Numerical solution of nonlinear fractional differential equation

In recent years, the numerical solutions of nonlinear fractional differential equations can be divided into two directions, one is for fractional ordinary differential equations, the other is for fractional partial differential equations. In time or space, the derivative of the original integer order is replaced by fractional order, and the fractional order differential equation of time or space is obtained, which is used to describe the physical and mechanical motion that the integral order differential equation cannot describe.

At present, the solution of fractional order differential equation mainly uses the numerical algorithm of finite difference scheme to solve the approximate solution of the equation. Through the finite difference of time fractional order or space fractional order, the approximate solution of the equation is obtained, and the stability, convergence and compatibility of the scheme are checked, and the convergence order and estimation error are calculated.

For one-dimensional space fractional differential equation, Vincent J. Ervin *et al.* Discussed a finite element numerical approximation method for solving time-dependent quadratic nonlinear fractional diffusion equation. First, the theoretical hypothesis was given, then the correctness was proved by numerical examples, and the convergence and prior error estimates of the approximate values were given. Bois baeume *et al.* Developed a practical method for solving fractional order reaction-diffusion equations. The method is based on operator splitting, and the results are shown by images, and its application in biology is discussed.

Tadjeran *et al.* proposed an accurate and effective numerical method for the solution of two-dimensional spatial fractional differential equations, combining alternating direction implicit approximation, C-N discretization and Richardson extrapolation, and finally obtained a finite difference method with stability and compatibility, and achieved a relatively stable degree of second-order accuracy.

Space of fractional order ordinary differential equation solution, Kai Diethelm and other professional scholars have adopted an Adams model forecast - correction methods to solve the fractional order differential equation, analyses the existence of nonlinear fractional differential equations, uniqueness and stability of structure, and by adopting Caputo differential form, a detailed estimate of error, the error of gradual expansion has carried on the simple instructions Liu Fawang *et al.* Considered the simplest fractional order ordinary differential equation, introduced the fractional order linear multistep method, derived the higher order approximation of the initial value problem of fractional order ordinary differential equation, proved the consistency and convergence of the method, and gave the stability analysis, considered the fractional order relaxation operation equation, proved the existence and uniqueness of the solution of the equation, and gave the solution by using Green's function Its analytical solution is given, and an effective fractional order predictor corrector method is proposed.

4. Dynamics of nonlinear fractional differential equations

In recent years, with the development of computer, the improvement of computer technology and its application, as well as the vigorous development of modern mathematical technology, the rich steady motion and complex mixed motion in nonlinear system are constantly revealed, which attracts more and more theoretical and application workers' extensive attention. However, the spatial structure of the system hybrid attractor and its related graphics is extremely complex, rich in connotation and many changes in form, which has also attracted extensive attention and more and more in-depth research in various fields. It has become a research hotspot not only in theory, but also in application. With the continuous development of scientific visualization technology, chaos attractor and its related graphics have begun to attract attention in the fields of advertising, printing, arts and crafts. Textile pattern design belongs to the traditional field of Arts and crafts, also belongs to the category of visual arts.

In 2006, Chen *et al.* Studied parallel bar chaotic attractors based on integer order Rossler dynamical systems. Then they show that the same phenomenon exists in other continuous power systems. In 2009, Wu Jianxin *et al.* Obtained the

general method of generating parallel strip chaotic attractors and rectangular chaotic attractors for general integer order nonlinear dynamical systems.

5. Conclusions

The development of fractional calculus has a history of more than 300 years. It is actually an extension of the concept of integral calculus. In the early stage, on the one hand, it is different from the classical integer system in physics, on the other hand, it has no application background in physics and mechanics, so the development is very slow. Until the middle and late of the century, fractional calculus, as a basic concept of fractal geometry and fractal dimension, developed rapidly. Because of its nonlocality, fractional calculus operators were used to describe the transport dynamics of materials with memory and genetic properties and complex systems controlled by anomalous diffusion in the real world. In recent decades, fractional calculus and fractional differential equations have been applied in many fields, such as oil seepage, groundwater pollution control, viscoelastic materials, signal and image processing, control, quantum mechanics, viscoelastic dynamics, random walk, finance, life science and so on. Because most of the analytical solutions of fractional order differential equations are difficult to be obtained by analytical methods, the study of approximate solutions of fractional order differential equations becomes particularly important.

Acknowledgements

An Analysis of the Present Situation and Countermeasures of the Application of the Mathematics Examination and Research of the University of the University of China - with the Case of Shanxi Technology and Business College (No.:201951).

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Original Research Article

Discussion on experimental teaching and cultivation of innovation ability

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Abstract: With the continuous progress of the society, China's demand for comprehensive high-quality talents is also increasing, so the reform and optimization of the new curriculum is an inevitable trend. The society has higher and higher requirements for experimental teaching. Because there are still many problems in experimental teaching, these problems also restrict the great cause of education in our country, so that students can't really receive better education. Therefore, this paper will further analyze the problems existing in the experimental teaching, and put forward some targeted experimental teaching and innovative ability cultivation strategies, in order to improve the teaching quality and students' comprehensive quality ability in China.

Keywords: Experiment; teaching; ability to innovate; cultivate

1. Introduction

Because the experimental course is a subject that students must learn, and its proportion of the score value is relatively large, so teachers and students should pay great attention to it. The implementation of the experimental teaching method into the experimental teaching has a good teaching effect, because it can not only better consolidate students' theoretical knowledge of the textbook, but also improve students' practical ability, and make students' innovative thinking have better exercise. Therefore, in order to ensure that the experimental teaching effect can be improved and students' innovative thinking can be developed more comprehensively, teachers must innovate experimental teaching methods.

2. Experimental teaching method and innovation strategy

2.1 Introduce multimedia teaching methods

Thanks to the rapid development of science and technology, multimedia teaching has been widely used in the experimental teaching of junior high school, and has achieved good results. As the knowledge in the textbook is abstract words and some simple pictures, students need to carefully read and then imagine, so it is very difficult for students to understand and grasp the knowledge. However, after the introduction of multimedia teaching method, teachers can play some videos of others doing experiments, which is conducive to students' direct observation and learning. At the same time, they can deepen their impression of the experimental operation process in this way, thus reducing students' mistakes in experiments as far as possible. The traditional teaching method is combined with today's multimedia teaching method, which can reproduce the experiment scene, supplement each other, and let students know more operation methods before the experiment. As shown in **Table 1**:

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Innovation strategy
Introducing multimedia teaching
Emphasis on increasing student experience
Applying the teaching model of group cooperation
Design experiments scientifically

Table 1. Innovation strategy

2.2 Emphasis on increasing student experience

Junior middle school is the time when students are in their teenage years, which is also an important period to cultivate their practical ability and develop their intelligence. Therefore, teachers should pay more attention to students' learning characteristics and take different ways to guide them. During the experiment, because the students lack the experience, so they will choose to imitate the practice of teachers, so the teacher must show detailed preparation, actively encourage them to do on their own, and be patient to guide each student to do experiments, which can increase students' experience, at the same time improve the quality of experimental teaching.

2.3 Apply the teaching mode of group cooperation

In experimental teaching, teachers should not only cultivate students' individual ability, but also pay attention to cultivate their team spirit, which can be applied to the teaching model of group cooperation. In the face of students' questions, teachers should first encourage them to discuss with the team members, at the same time, they should give some necessary hints, and finally correct and supplement the answers of their team. This kind of teaching mode can make every student participate in the discussion, stimulate their interest in experimental subjects and consolidate the knowledge they have learned better, and cultivate their independent learning habits and spirit of continuous exploration.

2.4 Design experiments scientifically

Students have to study several independent subjects, so students learn how heavy the learning task is. Teachers should give full consideration to the actual situation of students when assigning homework after class, and then scientifically and reasonably design experimental homework, so as to achieve the essence and discard dregs. Moreover, the difficulty should be appropriate to ensure students to complete the task on their own, which can increase students' confidence to improve the learning efficiency.

3. Suggestions on developing students' innovation ability

3.1 Make full use of the learned knowledge system and common sense of life to experiment

In daily life, students often get some experience. Moreover, the teaching of knowledge content in experimental courses can also help students to guess and assume the phenomenon of new experimental content. For example, when learning "Joule's Law", it is necessary to analyze the understanding of electricity in daily life. Through the application of experimental knowledge, it is possible to conjecture and assume the influencing factors that lead to the generation of heat in conductors, so as to realize in-depth discussion on the subject of experimental content. As shown in **Figure 1**:



Figure 1. Electrification experiment of college students

Secondly, teachers can also introduce research questions based on the phenomenon of the heat generated by light bulbs used for a long time in students' lives and the heat generated by the electrification of the microwave oven, and ask students to think and communicate about the research based on this phenomenon, and make reasonable assumptions about the influencing factors.

3.2 Good at using analogy

The method of analogy can better materialize abstract things, so that the possibility of conjecture and hypothesis can be realized to a greater extent. Therefore, in the teaching process of experimental courses, teachers can introduce the familiar things to students and ask students to make analogies with the research objects, so as to guess and assume the unknown features of things on the basis of what they already know. For example, when learning “electric potential and electric potential energy”, due to the abstractness of its concept of electricity, it is difficult to prove whether the charge has energy in the electric field. Therefore, the teachers will need to guide students to gravitational potential energy and electric potential energy the analogy, so as to improve students' understanding of the work of electrostatic force, and then put forward the reasonable hypothesis.

4. Conclusion

To sum up, in order to better improve students' practical ability, schools should give students more experimental space, so that students' innovative thinking can be cultivated. Therefore, when teaching experimental courses, teachers should clarify students' subjectivity, let them give full play to their creativity for experimental innovation, so as to enhance students' enthusiasm to participate in experiments. At the same time, attention should be paid to cultivating students' innovation ability in the process of experimental teaching, so as to improve students' comprehensive quality and ability and better meet the subsequent employment needs.

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Original Research Article

Brief analysis of new media and ideological and political education for college students

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Abstract: With the development of information technology, new media platforms are ubiquitous in people's daily life, providing effective channels for the dissemination of information. New media is widely popular in the current network as a new communication carrier appears in the public view. Even though the Internet brings more convenience to people, it does not exclude that the Internet also makes some negative energy penetrate into the hearts of netizens, leading to the distortion of their values. Faced with this situation, colleges and universities should carry out healthy ideological and political education for students, so as to make Chinese students better aware of their social responsibilities and form a sound personality. Based on the current development trend of new media, this paper discusses the optimization strategy of ideological and political education for college students, so as to better provide correct value orientation for students.

Keywords: New media; college students; ideological politics; education

1. Introduction

As the trend of the times continues to advance, students receive increasingly diversified information through new media platforms. Therefore, in order to make students set up the correct values, colleges and universities need to strengthen the management of ideological and political education to guide them to a correct life path. Under the influence of a variety of factors, the ideological and political education in our country is often difficult to get the attention of students, and because of the impact of foreign culture, students are more likely to produce bad ideas. Therefore, this paper mainly carries out targeted countermeasures research based on the current ideological and political education management in China's colleges and universities in order to provide reference for the follow-up ideological and political education work.

2. Problem of ideological and political education management in universities in the new media era

2.1 Empty ideological and political teaching content

The exam-oriented thinking of students also affects the cultural atmosphere of learning ideological and political content to a certain extent. Teachers talk a lot in class through ideological and political content, but for students, the teaching content cannot meet their inner needs. In fact, the teaching content is divorced from the actual needs of students, so it is impossible to improve the learning atmosphere of students. Secondly, many teachers only teach ideological and political content for teaching tasks, which is difficult to promote students' enthusiasm for learning. For

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example, teachers do not make full use of new media to select time-sensitive news for knowledge teaching when selecting contents of current politics. Therefore, students often show low interest in old topics, which affects the quality of ideological and political teaching. As shown in **Figure 1**:

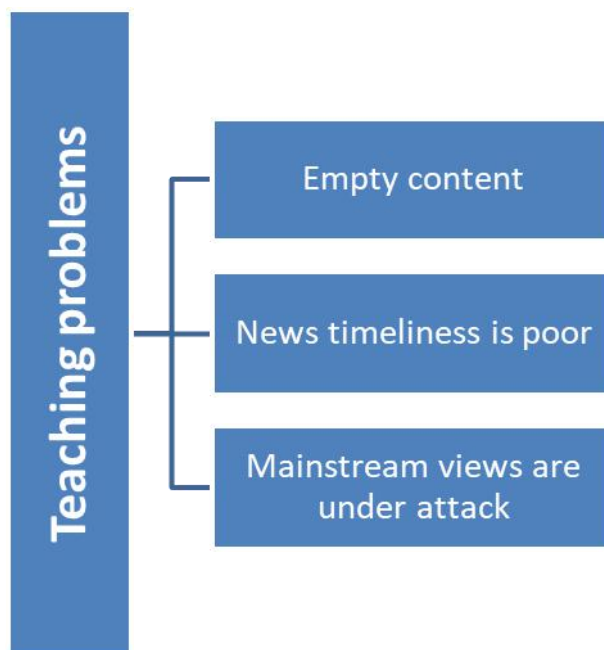


Figure 1. Teaching problems

2.2 New media information affects students' values

The essential nature of ideological and political courses is relatively dull, and the requirements of ideological and political courses for students are not high. Moreover, its existence is relatively low, compared with other disciplines. Therefore, it can be inferred that ideological and political content has limited influence on college students, which affects students' interest in ideological and political content and ideological and political teaching to a certain extent. The teaching methods without innovative elements not only affect the teaching quality, but also make students more interested in foreign cultures. Diversified information on new media platforms tends to be more attractive to students. Therefore, in ideological and political courses in universities, most people often play with their mobile phones, which affects the practical effect of ideological and political education. Therefore, it is imperative to improve the ideological and political education system.

3. Optimization strategy of ideological and political education in universities in the new media era

3.1 Use new media resources to enrich the teaching content

In the era of convergence media, diversified information is often transmitted through a variety of ways. Therefore, when conducting ideological and political education, teachers should also make full use of online education to improve students' ideological and political literacy through the explanation of current events, so that students can form good values in study, work and life, and improve their comprehensive quality and ability. Teachers can let students elaborate their views through the characteristics of a current event, so that they can form the correct tone of political theory and derive political positions, political attitudes, political thoughts and political arguments, so as to achieve the goal of ideological and political teaching. Secondly, because the news in the society has more extensive reading audience and the credibility of news is higher, once the news with wrong political ideas and arguments spreads in the society, the negative public opinion with serious orientation is not conducive to the development of a healthy social climate and the people's unity and struggle. Therefore, teachers should always adhere to a higher level of political literacy, guide

students to improve the ability to identify information, adhere to the correct ideals and beliefs, and make correct behavioral decisions. As shown in **Table 1**:

Optimization strategy
Using new media resources to enrich the teaching content
To improve the practicality of ideological and political education

Table 1. Optimization strategy

3.2 Improve the practicality of ideological and political education

Ideological and political educators in undergraduate colleges should reasonably introduce ideological and political education in the process of practical training according to the content of students' professional skills. Especially at present, many undergraduate colleges and universities have the opportunity to train students in a school-enterprise way, so that students can directly contact with the society and the future work content. The practical training has authenticity and practical significance. In this case, we can introduce the application of new media platform in work during the practical training, so as to make students more impressed. In fact, all the things we have come into contact with in the job field are the important guarantees for their subsequent employment. Ideological and political teachers should correctly guide students' new media application concepts and make it clear what kind of information transmission means they have. As long as they can promote social development, they are superior auxiliary tools. In the actual ideological and political study, students should make clear the superior learning resources provided by the new media platform and set up the correct values. In this way, students can make clear the significance of ideological and political education in practice, at the same time, they can set up a correct value concept, take every step right in life to realize their dreams, and strive for the realization of the Chinese dream.

4. Conclusion

It is impossible to measure the value of ideological and political education to Chinese college students. For college students in a confused period, the application of new media in ideological and political teaching actually provides a clearer direction for the development of innovative education, so that it can closely link students' own improvement with the development of the country, so as to better promote the prosperity of China. New media platform is an important symbol of the rapid development of modern science and technology. Ideological and political teachers in colleges and universities should make full use of its advantages, so that students can better establish a correct outlook on life and improve their comprehensive quality and ability.

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