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Research on the Path of Improving Students' Scientific Research Ability through Biological Competition under the Background of "Innovation and Entrepreneurship"

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Abstract: ***Innovation is the soul of a nation, and entrepreneurship is the foundation of development. Under the background of "innovation and entrepreneurship", the research object is the students of the Henan University Life Science Competition, and based on the National University Life Science Competition, the current research ability status of participating students is investigated and analyzed. In response to the four "heavy" and four "little" issues, the research ability of college students is improved through the four "one" innovation models, and innovative builders and successors are cultivated for the development of the new era. our country's traditional handicrafts are not only the product of art, but also the inheritance of excellent traditional culture. Before entering the industrial era, they have been playing a great role in social life. However, in modern times, large-scale mechanical production has replaced traditional handicrafts, and the development of traditional handicrafts is not optimistic. This paper analyzes the limitations of traditional handicrafts in the development of modern society, and studies how college education should realize the inheritance and innovative development of traditional handicrafts through the value of traditional handicrafts entering colleges and universities.***

Keywords: "Mass entrepreneurship and innovation"; College Student Life Science Competition; Scientific research ability.

1. INTRODUCTION

Subject competitions enable college students to understand the significance of scientific research activities and truly engage in scientific research work. As students majoring in biology in the new era, participating in subject competitions is one of the effective ways to promote students' professional development. The National College Student Life Science Competition has gained widespread attention from teachers and students due to its strong professionalism and profound influence. Traditional handicrafts predated the industrial era and were created by the working masses and social life. Through long-term experience, they summarized the realization of process and technical specifications. Traditional handicrafts are the combination of aesthetic ideas, traditional handicrafts technology, the times, the display of craftsman skills and the ingenious transmission of aesthetic ideas. Traditional handicrafts are often not only the simple inheritance of craftsman's skills and ideas, but also the expression of culture in a specific environment at that time, but also the embodiment of a nation. It is more likely to be the inheritance witnessed by the exchange of multiple regions and the integration of multiple nationalities. the development and inheritance of our country traditional handicrafts is to continuously absorb the essence, improve the dross and become rich and colorful. Our country traditional handicrafts have become an indispensable part of our country culture and have had a profound impact on our society. Even now, we can still feel the traditional artistic charm and exquisite technicality and scientificity in excellent handicrafts. In order to realize the effective dissemination and in-depth protection of traditional handicrafts in modern society, college education, as the cradle of social talent training, is the most potential and effective way. Most handicrafts in China are inherited by the method of "oral and personal transmission". Due to the different ability of individuals to accept knowledge, the effect of inheritance varies greatly among individuals, which objectively depends on the art knowledge used by the dominant heirs, as well as the art tradition and practice as local knowledge. Subjectively, it depends on the "wisdom" of the successor. Therefore, without more systematic study of art theory, it is difficult to achieve the accurate and complete inheritance goal and lack of innovation. the implementation of traditional handicraft teaching in colleges and universities is conducive to improving students' aesthetic taste. College students learn to use the basic laws of folk art aesthetics to study the theory of traditional handicraft evaluation. Second, colleges should stimulate students' innovative thinking to the greatest extent. So the students can learn the cultural knowledge related to folk customs, feel the charm of traditional handicrafts, combine the characteristics of the times, use new technologies and new ideas, stimulate creative thinking, and create craft products with the integration of disciplines.

2. INTRODUCTION TO THE LIFE SCIENCE COMPETITION FOR COLLEGE STUDENTS

The predecessor of the College Student Life Science Competition (hereinafter referred to as the "Biology Competition") was the Zhejiang Provincial College Student Life Science Competition, which was launched in 2007 at the call of the Zhejiang Provincial Department of Education, In 2009, it was officially named the Zhejiang Provincial College Student Life Science Competition, and in 2017, it was upgraded to the National College Student Life Science Competition Family level competitions are promoted to multiple provinces across the country. This competition activity adopts online registration and uploading materials, experimental records, reviews, and papers of participating teams from various provinces and schools; The final stage after the online preliminary selection is the on-site defense stage. In the first National College Student Life Science Competition in 2017, there were 28 provinces and cities, 263 universities, and more than 2300 teachers participating in the guidance. 8754 biology major college students participated, forming a 2006 participating team, making great contributions to students' mastery of life science theory and skills. In order to deeply explore and optimize the path of improving the scientific research ability of college students through "biology competition", a questionnaire survey and interviews were designed. Questionnaires were distributed to multiple universities in Henan Province, with a total of 400 questionnaires distributed A total of 391 valid questionnaires were collected, with an effective response rate of 97.75%. Eight people were interviewed.

Specific Situation of Improving College Students' Scientific Research Ability through the Life Science Competition for College Students. This study refers to the research ability measurement table designed by Kadashi of the University of Missouri. Based on the research content, a questionnaire was modified and designed for college students to assess their own research ability after participating in university life science competitions. The questionnaire mainly includes mastering knowledge, applying research literature, setting survey questions, formulating research hypotheses, designing experimental plans, collecting data and statistical analysis, independent thinking 15 questions on evaluating the improvement of scientific research ability, including experimental operations, were answered at five levels: "no improvement", "little improvement", "average", "significant improvement", and "significant improvement". The impact of competition on various aspects of their scientific research ability was presented from low to high. Data analysis was conducted using Likert's five point integration method, and 1-5 were assigned to them from low to high based on the degree of impact.

The score is set at 3 as the neutral value, and those who score above 3 are considered to have improved their abilities, For those who score below 3, it indicates that the ability is ineffective or has not improved. According to statistical data, by participating in college life science competitions, students themselves. The average evaluation value for improving scientific research ability is 3.75, which is closest to the value of "significant improvement" in self-defined scientific research ability, indicating that participating in the "biology competition" is generally believed to have a significant improvement in their scientific research ability. Research has shown that the ability to collect data, statistically analyze, and report research results has shown the most significant improvement in speech expression, oral expression, and experimental operations, with an average of 3.89, 3.87, and 3.87. The survey mean indicates that respondents generally believe that participating in college life science competitions has improved their abilities in data collection, statistical analysis, speech expression, oral expression, and experimental operation.

2.1 internal causes

The most traditional handicraft skills in our country are transmitted in the form of father and son, master and apprentice. the main technology is confidential and will not be transmitted outside. the apprenticeship learning cycle is very long, and it will be longer and longer over time. Although the foundation of inheritors is solid, it takes several or even more years from entry to complete their apprenticeship in most cases. the time cost is too high, which will inevitably lead to difficulties in the dissemination and development of skills. At the same time, many popular technologies, such as low temperature cofired ceramic and wicker weaving, are strongly dependent on local climate, raw materials and other factors. Most experienced craftsmen have lived in their hometown for a long time, living far away from contemporary cities, and their teaching and education level and way of thinking are relatively limited, which makes it difficult to upgrade the aesthetic and creative level of their works. Many works are only the imitation and repetition of traditional culture, which is divorced from the interests and hobbies of contemporary young people. the supply of handicrafts cannot adapt to the changes of aesthetics and needs of modern consumers. At the same time, it is also faced with the lack of national educational support for arts and crafts projects. the arts and crafts education units enjoying state subsidies account for only 14.7% of all state

subsidies, which leads to the lack of educational resources and low level of education. After the reform and opening-up, the teaching contents and methods of arts and crafts colleges have been separated from those of foreign countries, especially in the stage of arts and crafts education.

2.2 External causes

Nowadays, the main tourist attractions in society have become one of the main sales methods of folk handicrafts. Many scenic spots blindly sell handicrafts. In order to attract tourists' attention and enhance their purchase desire, they even engrave tourist souvenir labels on handicrafts, breaking the characteristics of handicrafts, ignoring the cultural connotation of traditional handicrafts and damaging the cultural value and aesthetic taste of traditional handicrafts. Because of the existence of illegal hawkers, the handicraft market is in disorder; imitations can be seen everywhere; the pricing mechanism is chaotic; the product quality supervision is weak, and the market situation urgently needs to be effectively improved. Secondly, with the process of globalization, the concept of modern people is deeply influenced by western culture, and aesthetics has long been "industrialized". the production efficiency of traditional handicrafts is lower than that of products; the production cost is high, and the market competitiveness is relatively weak. Even if the aesthetic value of some goods changes, it is difficult to stimulate more and more extensive market demand because it is divorced from public life. With the change of market structure, some inheritors of handicrafts have increased profits in order to open up and expand the market, and set their eyes on foreign markets. However, such a business model will directly lead to the foreign consumers who meet the product design and lose the local flavor. Although the number of products has expanded, it is not conducive to the inheritance and development of our country traditional culture.

2.3 Reform of the times

Folk crafts originated from ordinary people's daily life and can be regarded as a work of art. However, they have very unique practical value. With the changes of the times and the development of science and technology, people's way of life has changed completely, and many arts active in people's life quietly disappear in people's vision. For example, we often see blessing forms on the wedding day. With the changes of contemporary life and customs, great changes have taken place in new rooms and sacrifices. Many young people begin to choose western-style wedding celebrations. In addition, the acceleration of urbanization and the expansion of industrialization have also brought great changes to the natural environment, and the source of natural resources relied on by folk handicrafts is shrinking. With the decline in the demand for handicrafts in some areas, villagers who used to rely on handicrafts entered the city to work and gave up manual production. the shortage of professionals and raw materials directly leads to the difficulties of manual production and finished product production, which is the biggest threat to the industrial development of competitors. In addition, in the tide of commercialization, various types of challenges inevitably make many works lose their originality in compromise and the opportunity to expand the core values of traditional handicrafts.

3. ANALYSIS OF THE CURRENT SITUATION AND CAUSES OF COLLEGE STUDENT LIFE SCIENCE COMPETITION

In the context of innovation and entrepreneurship, participating in life science competitions for college students is beneficial for improving their scientific research abilities, and the survey results also support this viewpoint. However, the problems in the life science competition for college students are also reflected from the four levels of the country, schools, teachers, and students, mainly focusing on the four "heavy" and four "few" aspects. Colleges and universities are the birthplace of cultivating comprehensive talents. First, colleges should expand the network education platform, collect more information about traditional crafts, establish a special research information database, provide first-hand information for the study of traditional handicraft culture, and give full play to the role of protecting and inheriting traditional culture. Second, colleges can provide an academic communication platform for multi dimensional exploration, excavation, sorting, protection and inheritance of traditional handicrafts, and provide constructive suggestions, so as to promote the standardization and systematization of academic research. Third, colleges can establish a special research platform, establish a fund to support the scientific research of traditional handicrafts, explore the continuous integration with contemporary cultural and artistic factors, and seek a specific intersection resource with the reality of contemporary life and traditional handicrafts, so as to transform it into the competitiveness of cultural and creative industries. Fourth, colleges can establish a school local cooperation platform, build a new model for universities, local governments, enterprises and successors, integrate four forces and advantageous resources, and fully mobilize the positive factors. Local governments recognize and fund traditional handicrafts. Colleges and universities conduct academic research and establish a research base of

traditional handicrafts in combination with traditional handicrafts culture in cultural education. [4] With the renewal of the company's concept and innovation, we need to expand the scope of the joint development of the company's tradition and technology, so as to promote the joint development of the successor. College education is an effective way to improve the quality of traditional handicrafts.

3.1 National level: Emphasize the competition process and reduce policy promotion

College students are mainly aware of the launch of the Life Science Competition for College Students through the school's promotional documents. Based on the current situation of the event, the scale of the competition is increasing from provincial to national, and the popularity and recognition should also be increased. However, there are still many students in the questionnaire who do not understand what scientific research is before participating in the competition, and there is a certain phenomenon of following the trend. It is only during the process of participating in the competition that they gradually appreciate the charm of scientific research.

3.2 School level: increase the number of participating teams and reduce the investment in participating costs

Schools generally attach great importance to life science competitions for college students; More than 75% of participating schools can meet the funding needs of the "biology competition"; 7.16% of students believe that the expenses reimbursed by the school are less than the actual expenses. However, during the competition process, advance payments or fees need to be made in advance, and due to the complex reimbursement process of the school, especially in the later stages of the competition, most participating teams have insufficient research funding and labor costs, resulting in actual expenses that cannot be balanced. This result is consistent with the questions raised by the interviewees in the interview.

3.3 Teacher level: valuing fame and fortune, lacking enthusiasm

With the expansion of the scale of life science competitions for college students, their value is gradually increasing. Most universities list it as a basic content of professional title evaluation. In order to increase the chances of students winning awards, guidance teachers may directly give their research projects or achievements to students. Moreover, due to the small investment of the school's funds in this field, some teachers' enthusiasm for participation is not high.

3.4 Student level: emphasis on awards and less experience

The purpose of college students participating in life science competitions varies, mainly to gain scientific research experience
The starting point for verifying and enriching personal experience. In order to encourage students to participate in competitions, most universities provide encouragement in areas such as comprehensive evaluation, excellence evaluation, and graduate promotion, attracting students to actively register. However, due to the fact that most of the participating students are freshmen and sophomores, their professional abilities and knowledge reserves are insufficient, and they lack communication experience and team cooperation. During the competition, they enter the role slowly and are difficult to operate, requiring the guidance of professional mentors.

4. "ONE" INNOVATIVE MODELS TO HELP ENHANCE RESEARCH CAPABILITIES

College education plays an irreplaceable role in protecting the heritage of traditional handicrafts. First, the protection function of colleges and universities should be given play. Colleges and universities are the birthplace of cultivating talents for the society. Only cultivating excellent seeds in the hearts of young people and realizing the inheritance of traditional handicrafts through a lasting mechanism is the best way to protect traditional handicrafts. the second is the role of inheritance. Colleges and universities also have a unique source of cultural capital. They can incorporate traditional handicrafts into the construction of courses in different disciplines of the university, improve the essence of traditional national culture in the region by extracting and integrating indigenous educational resources, and enrich and improve the teaching of characteristic handicrafts. the third is the guiding role. College professionals go deep into folk customs, carry out extensive and comprehensive research, and carry out targeted research on the protection of traditional handicrafts. the fourth is to play the role of a bridge. Traditional handicrafts have a special nature. Colleges and universities save traditional handicrafts, protect and

promote the inheritance and development of traditional handicrafts by collecting, preserving, organizing and disseminating relevant cultures.

4.1 National level: Building a publicity and management platform

The starting point for participating in the life science competition for college students is relatively low. As long as the number of mentors and team members is sufficient, they can register to participate. The purpose of its organization is to enhance the research enthusiasm of college students and cultivate their research spirit. Strengthen the management of the national competition official website platform, raise funds from multiple sources, actively promote, increase investment, create a publicity effect that attracts universities, motivates teachers, and encourages students, and further enhance the enthusiasm of teachers and students for participating in the competition.

4.2 At the university level: improving a mechanism for cultivating students

While actively organizing and participating in competitions, universities can also organize and host provincial and national competitions, increase competition investment, and improve the mechanism for cultivating students' scientific research ability through multiple identity experiences of organizers, implementers, and participants. Encourage students to explore and practice, innovate their thinking, and create a "de utilitarian" relaxed competition environment from both classroom and extracurricular aspects, so that teachers and students can maintain their research interest and return to the purpose of the competition.

4.3 Teacher level: inspiring a spirit of scientific research craftsmanship

The improvement of college students' scientific research ability requires a combination of both in and out of class, the guidance of teachers in class, and the encouragement of students to actively participate in scientific research practice outside of class. Teachers should clarify their educational identity, integrate scientific research into the classroom, unleash the spirit of craftsmanship, cultivate students' interest in scientific research, and explore their subjects Research potential. At the same time, design a reasonable training plan based on grades and groups, and form a comprehensive training model for college students throughout the entire process. As a teacher of the people, we should maintain our original aspiration, set an example, enhance our sense of responsibility, fulfill our mission of educating people, and strive to cultivate socialist builders and successors.

4.4 Student level: cultivating a passion for scientific research and innovation

Students should have a positive attitude, be proactive, down-to-earth, and hardworking. Participating in life science competitions for college students is a test and challenge to their own abilities, and improving their overall quality during the competition process. The cycle of college student life science competitions is long, time-consuming and labor-intensive, and the activity process involves considerable investment from both the government and the school. Students need to persevere, forge ahead, fully tap into the scientific research potential of contemporary college students, motivate each other, unite and collaborate, challenge themselves, integrate their youth dreams into the realization of the Chinese Dream, and verify the power of youth with a down-to-earth approach.

5. CONCLUSION AND OUTLOOK

In the context of the new era of "innovation and entrepreneurship" and the rapid development of the economy and society, improving the scientific research ability of college students is conducive to cultivating more innovative scientific research talents. Through the innovative approach of promoting learning and training through competitions, we aim to create a group of research reserves in the field of biology, achieving improvement from classroom to extracurricular activities, from passivity to initiative, from individuals to groups, and from interest to action. Youth is prosperous, the country is prosperous. Youth is strong, the country is strong, and the younger generation has ideals and aspirations. Ability and responsibility are the key to a country's future and a nation's hope. As outstanding young people, college students shoulder the historical responsibility of national prosperity, national rejuvenation, and people's happiness. They take on the baton of the new era and continuously strengthen the cultivation of their scientific research abilities through various measures, so that every student can contribute to the realization of the Chinese Dream of the great rejuvenation of the Chinese nation.

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