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The Training Mode of Agricultural Innovation Talents in Colleges and Universities in the New Century

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Abstract: In the new century, the cultivation of top-notch innovative talents in colleges and universities should focus on the special requirements of agricultural undergraduate majors in the new century, and explore new models for the cultivation of top-notch innovative talents in agriculture, aiming at cultivating academic top talents in the agricultural field with “thick foundation, wide caliber, strong ability and high quality”. Strengthen the cultivation of top-notch innovative talents in agriculture by optimizing the theoretical teaching system, enhancing the practical teaching system, innovating teaching mode, “one-on-one” professional tutor system and establishing a scientific performance appraisal system. At the same time, we will create a learning and research atmosphere that is conducive to the cultivation of top-notch talents, and provide reference for the cultivation of top-notch talents in the new century.

1. Introduction

In the 21st century, where the agricultural science and technology revolution and the knowledge economy are developing rapidly, it is crucial to cultivate innovative talents. Agricultural science and technology is the fundamental way out for agricultural development, the basic support for ensuring national food security, the inevitable choice to break through the constraints of resources and environment, and the decision-making power to accelerate the construction of modern agriculture. The key to solving the "three rural issues" is agricultural science and technology, the core is agricultural talents, and the foundation is higher education. Agricultural colleges should reform the way of running schools, strengthen professional ideal education, change educational concepts, establish new educational values, strengthen the combination of production, study and research. Constructing an effective model for training agricultural innovative talents cultivating innovative talents is a systematic project that requires the joint efforts of society, families, and schools. Among them, higher agricultural colleges are the main body and important base for cultivating higher agricultural innovation talents. In the process of cultivating innovative talents, we must firstly change educational thoughts and concepts, cultivate students' scientific world outlook and

methodology, and combine comprehensive training with students' individualized development in the process of education. Innovative teaching content, methods, means, excellent teachers with innovative spirit and innovative ability, advanced teaching equipment, open teaching mode and strong academic atmosphere constitute the subsystems of the system of training innovative talents.

2. Problems in the Current Training of Talents in Colleges and Universities

1) The goal of talent training in colleges and universities is not clear enough. In the past, China's institutions of higher learning were single-person training targets. Under the national unified plan, schools were run, and the talents that were cultivated were also distributed by the state. What kind of talents should be cultivated at this time? How to cultivate talents? These should be clearly defined. However, with the full development of the market economy, it has seriously affected the training of talents in Chinese universities. The previous methods of employing people and talent evaluation methods have been changed. The market directly demands talents, and the market has strong pertinence. Therefore, colleges and universities follow the consistent method of talent training and are far from being able to adapt to the development of society. In addition, when major changes took place in society, the reform of higher education was relatively lagging behind, which led to the loss of the foundation for talent training in colleges and universities. In the end, what kind of talents should be cultivated in colleges and universities, and how to train talents has no rules to follow. Schools that can carry out reforms are looking for ways to establish a school-running model in which their schools can adapt to the needs of society. Some schools only watch and watch, and some schools copy and copy. Due to the large differences in the actual situation of colleges and universities, many universities have their own talent training method, but there is no talent training model suitable for the development of their own schools. Therefore, the talent training model of colleges and universities is still not clear and clear.

2) The quality of talent training in colleges and universities cannot be guaranteed. The expansion of enrollment in colleges and universities, the huge increase in the number of students, has a greater obstacle to the cultivation of talents in universities, that is, how to ensure the quality improvement based on the increase in the number of students. Many colleges and universities have carried out profound reflections on this issue. However, due to the rapid changes in the number of students, the level of students is uneven. For classroom teaching, the learning effect of students is difficult to guarantee. In addition, for teachers, the quantity and quality cannot be improved too fast, and it is difficult to keep up with the increase in the number of students. In contrast, teachers have to bear twice or even times the workload, and barely complete the basic tasks, it is not easy to improve the quality of teaching.

3) The content of college personnel training is not effective. The main reasons for the poor effectiveness of the content of talent training in colleges and universities are as follows. Firstly, attach importance to the transfer of knowledge and neglect the cultivation of ability. Knowledge is very important for cultivating talents in colleges and universities. Without solid theoretical knowledge, it is difficult to form outstanding practical ability. However, the formation of abilities will not be formed naturally with the richness of knowledge, nor will it change smoothly with the changes in social requirements. Systematic training and practice are required. Because colleges and universities pay too much attention to books and classrooms, many knowledge and practice are out of touch. As a result, students do not have good abilities in school. Therefore, after entering the society and work, they will not be able to adapt or be competent for a long time. Secondly, attach importance to learning outcomes and ignore the learning process. For the training of talents in

colleges and universities, only paying attention to the learning results, measuring the quality of students and taking the students' performance as indicators, such lack of monitoring of the students' learning process is not only not conducive to the comprehensive evaluation of talents, but also not conducive to the effective advising of students' study. At present, when students choose knowledge, they have greater blindness. When a certain result has been reached, it indicates that the stage of learning has ended. At this point, if good results and poor results are a foregone conclusion, and you want to change and need to re-select, this will not only waste time, but also combat positive learning.

3. Defects in the Cultivation of Innovative Spirit in China's University Education System

First of all, the model of the unification education has not been completely changed, and it is essentially separated from the embarrassment of the industrial age. In other words, current university education often leaves the cultivation of students' creativity, and is accustomed to flooding students' minds with established ready-made cultural knowledge, treating students as a kind of cognitive object rather than treating them as full of vitality and vitality, objects that need to be constantly updated and developed. Secondly, in class teaching, the same thinking is serious, and teachers rarely encourage students to ask themselves why. Most teachers think rarely about how to inspire students' curiosity, curiosity and interest, and rarely encourage students to ask questions. So far, our teaching methods are still full and crammed in most teachers. This kind of classroom teaching lacks information feedback and democratic atmosphere. Students lack the thought of diligent thinking, suspicion and innovation. It makes many original and lively, young college students that full of imagination and enthusiasm in the course of life have become dull and occluded, and their creative ability has been killed in this educational model.

The problems in the cultivation of students' practical ability in modern university education in China are manifested by the shackles of traditional educational thoughts, following the "closed" education system with the transfer of theoretical knowledge as the main body, ignoring the ability to cultivate, attaching importance to the improvement of academic standards, and ignoring practice. This has caused the theoretical knowledge and practical ability of the cultivated college students to be seriously out of touch. At present, according to the situation of social feedback after college students go to the society, most of the students lack practical ability. They can neither do anything nor do it, they can't do big things, they don't do small things, their performance is average, and they don't achieve anything.

4. Investigation on the Status Quo of the Training Mode of Agricultural Innovation and Entrepreneurship Talents

4.1. Purpose of the Survey

Investigate the current situation of the training model for innovative and entrepreneurial agricultural talents through questionnaires, mainly centering on the satisfaction of the current training model and the suggestions for the current training model, and analyze the results to reform the training model for agricultural innovative and entrepreneurial talents. Provide relevant information basis.

4.2. Questionnaire Survey Development Steps

(1) Establishment of the survey site

This survey is aimed at the status quo of the cultivation model of innovative and entrepreneurial talents in agricultural sciences. In order to reduce the difficulty of carrying out survey activities, this survey is mainly carried out in this city, in order to facilitate the development of survey activities and ensure that the survey results have enough data. As a support, the location of the survey was determined to be the agricultural major of the university in this city, and three universities with different reputations were randomly selected for the survey. Since this activity was mainly aimed at universities in this city, the results were not universal, so this The second results can not explain the current situation of the training model of agricultural innovative and entrepreneurial talents in other regions.

(2) Determination of relevant parameters

The establishment of the number of questionnaires is the most basic step of the survey activity, because the number of questionnaires is related to the validity of the survey results. If the number of questionnaires is set too low, the results of this survey will be questioned because the base of the data is not large enough, and the results of the survey are not large enough. It is universal. The number of questionnaires is set too high, and the difficulty of the questionnaire survey activity increases. Therefore, the number of questionnaires this time is set to 200 according to the minimum sample size proposed by the experts and the technical conditions of this survey.

(3) The distribution process of the questionnaire

The issuance of this questionnaire is mainly divided into two stages. The first is the issuance of the questionnaire, and the second is the recovery of the questionnaire. In order to ensure that the results of this survey have greater authenticity, the recovery of the questionnaire will be completed after the questionnaire is issued. Recovered in the next six days, given time to fill out the questionnaire completely. 189 questionnaires were recovered, and the recovery rate this time was 95%.

4.3. Data Processing

(1) When performing correlation analysis on the collected data, the data must be classified and sorted. This will not only increase the utilization rate of the data, but also promote cross-data analysis. Therefore, the main consideration is the completeness and accuracy of the data. First of all, about data integrity. When the questionnaire is delivered to the sample subject for completion and collection, some sample items are arbitrarily completed, or their selection cannot be completed, which will cause some data sorting problems, but because the retrieved data accounts for the majority, So deleting the lost data means deleting the lost data. Secondly, the precision and accuracy of the data. When conducting an audit, the main consideration is to check whether these data are inconsistent with other choices, or the principle that conflicts with it should be selectively removed but retained as much as possible.

(2) The main meaning of a correlation relationship in the objective correlation analysis method is to generally refer to a certain relationship between various objective phenomena, but they are not strictly corresponding to each other in quantity. There are two main forms of determining the relevant properties of objective phenomena here: qualitative analysis and quantitative analysis. The main purpose of qualitative analysis is to rely on the scientific theoretical knowledge and practical experience of the researcher to accurately determine whether there are correlations between various objective phenomena. Or what kind of factor, the subjectivity of this analysis method is relatively

strong. Among them, the commonly used calculation formula is expressed as:

$$r = \frac{S\text{^}2\,xy}{Sx\,Sy} = \frac{\Sigma(x - \bar{x})(y - \bar{y})/n}{\sqrt{\Sigma(x - \bar{x})\ \text{^}2/n}\sqrt{\Sigma(y - \bar{y})\ \text{^}2/n}} \quad (1)$$

$$r = \frac{n\ \Sigma xy - \Sigma x\ \Sigma y}{\sqrt{n\ \Sigma x\text{^}2 - (\Sigma\bar{x})\ \text{^}2}\sqrt{(n\ \Sigma y\text{^}2 - (\Sigma\bar{y})\ \text{^}2)}} \quad (2)$$

5. Analysis of Survey Results

5.1. Satisfaction with the Current Training Model

The questionnaire is used to investigate students' satisfaction with the current training model. The results of the survey are shown in Table 1:

Table 1. Satisfaction with the current training model

	A college	B college	C college
Dissatisfied	42%	44%	43%
general	33%	32%	34%
satisfaction	25%	24%	23%

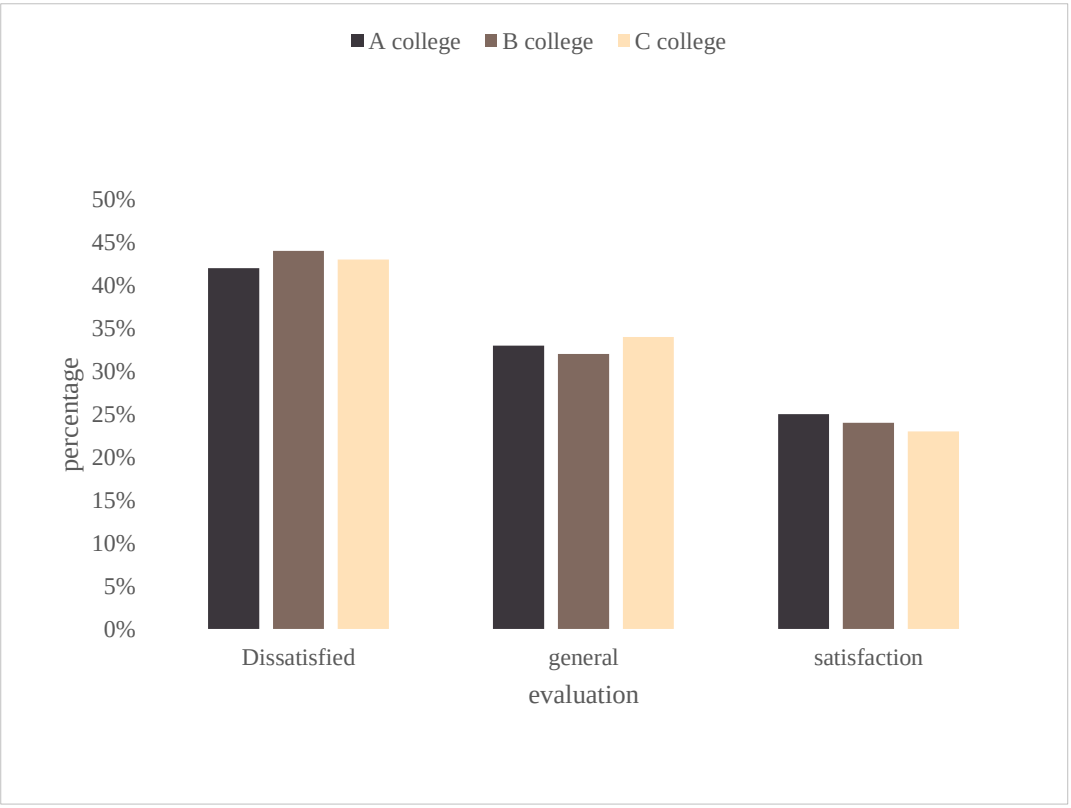

Figure 1. Satisfaction with the current training model

It can be seen from Figure 1 that the students are not satisfied with the current agricultural innovation and entrepreneurship talent training model. Those who are dissatisfied with it account for more than 42%, and those who think it is average account for about 32%. From this it seems necessary to reform the current training model

5.2. Suggestions for the Current Training Model

Through the questionnaire survey of students and teachers' suggestions on the reform of the training model, the results of the survey are shown in Table 2:

Table 2. Suggestions for the current training model

	A college	B college	C college
Teaching is determined by post, academic work alternates	45 %	46%	48%
Cooperation effectiveness needs to be improved	36%	33%	32%
Guidance to students in a timely manner	19%	21%	20%

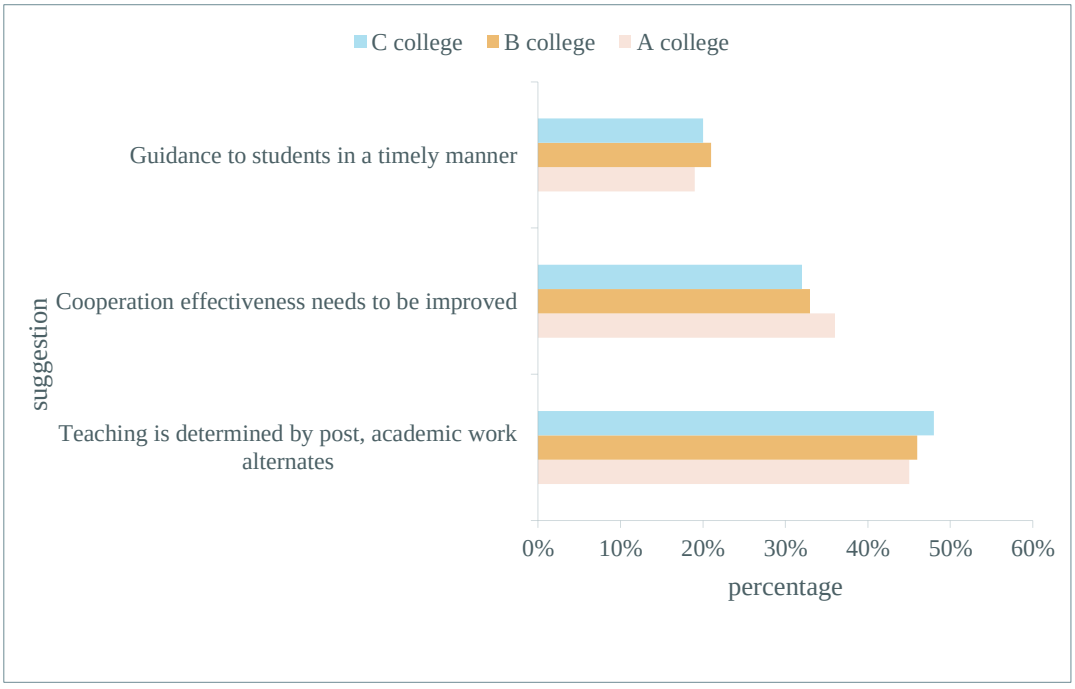

Figure 2. Suggestions for the current training model

It can be seen from Figure 2 that more than 45% of students and teachers in the suggestions given believe that schools should train talents based on the needs of the enterprise, rather than

divorce the actual talent needs and emphasize theory rather than practice.

6. Strategies for the Cultivation of Agricultural Innovative Talents

1) Reform the way of running schools and improve the reputation and influence of agricultural institutions. Under the background of the current society's misunderstanding of agriculture and agricultural colleges, agricultural colleges must reform the existing way of running schools, firmly grasp the main line of service for the "three rural", based on "agriculture", all strategies for running schools must be based on services for agricultural modernization, services for rural social progress and economic development, and prosperity for farmers. Using the school's education and training resources, we will carry out large-scale, multi-level and multi-form rural practical talent training, which can serve the local economy and enhance the social influence of the school. Some documents put forward, "further improve the per capita funding standards for agriculture-related disciplines (professionals), increase the national motivational scholarships and bursaries to tilt the agricultural students of higher education institutions, improve the quality of students involved in agriculture, and increase the number of higher education institutions in rural areas. The orientation of enrollment in poverty-stricken areas is conducive to attracting a large number of outstanding talents to aspire to learn from agriculture. The professors and researchers of the Agricultural College took the initiative to participate in such gatherings, publicize agricultural knowledge, introduce new products, carry out competitions for improved varieties, improve national awareness of ensuring agricultural resources and environment, and make the whole society understand agriculture, attach importance to agriculture, and respect agriculture. Professors of agricultural colleges in China can also use national, provincial and municipal agricultural fairs or various campus cultural activities to open agricultural science and technology achievements report meetings or lectures, carry out agricultural skill competitions, widely publicize agricultural achievements, and let the whole society care and value the development of agriculture.

2) Strengthen the education of professional ideals, and consolidate the idea of studying agriculture, loving agriculture and farming. The key to professional ideal education is the process of achieving harmony and unity between individual desires and social needs. In this process, the teacher is the key to guiding students to think about the meaning of life and values. The teacher is not only the imparter of knowledge, but also the life tutor who helps students establish their career ideals and reasonably plan the four-year study life of the university. It guides the college students to establish their career goals for the agricultural cause, and plans a reasonable realization path to help the realization of professional ideals. It is necessary to actively carry out the campus cultural activities with the theme of “Study Agriculture, Love Farming, Farming”, and to carry out professional ideal education through all aspects of education. Make full use of campus radio, newspapers, online and other media to widely publicize the "three support and one support" plan, "college student village official", "college student volunteer service western plan" and other activities, and publicize the spirit of " Encourage and guide graduates of higher education institutions to work at the grassroots level in rural areas, and implement tuition compensation and national student loan compensation policies for eligible applicants”. Let more people understand, more unit support, more college students yearn for the rural grassroots, and truly sing the main theme of “going to the countryside, going to the grassroots, going to the place where the motherland needs it most”. Every year, we organize agricultural science and technology innovation activities and agricultural knowledge competitions. The “Challenge Cup” extracurricular science and technology competitions and entrepreneurial competitions held by the state and the provinces are

used as a platform to encourage students to actively participate in scientific and technological innovation activities to further enhance their professional interests, helping students form a firm career ideal.

3) Transform educational concepts and establish new educational values. The goal of talent training in agricultural colleges is to train senior professionals in the first line of agricultural technology promotion, agricultural management, agricultural research and agricultural production. Many schools have problems in the understanding and practice of this goal, such as fuzzy professional positioning, alienation of scientific research and teaching, contradiction between general education and professional education, and emphasis on the teaching of knowledge, neglecting the development of students' personality; Students' knowledge is narrow, and the school-running model and training norms are assimilated. Therefore, we must change the concept of education, establish the concept of "wide-caliber, thick foundation, strong ability, emphasis on practice, and wide adaptation", implement an excellent agricultural and forestry education training plan, run a number of agriculture-related disciplines, and establish a group of personnel training base. Strengthen professional knowledge, open up professional barriers to disciplines, strengthen the integration of agricultural science and education, build a platform for individual development, and cultivate composite high-quality innovative talents for agricultural development. The new values of agricultural higher education should be both for agriculture and for educated people. This requires that in the process of education, on the one hand, according to the needs of agricultural development, educators should conduct in-depth research on agricultural science and technology, and constantly develop new products and new theories applicable to agriculture. It is necessary to require agricultural researchers to conduct regular experiments. Bases and even rural guidance practice. On the other hand, according to the needs of students, educators should provide opportunities for students to develop in an all-round way, encourage students' creative activities, and educate students about quality as a whole. By doing this, we can achieve the same development between agriculture, education and talents, thus promoting the cultivation of innovative agricultural talents.

7. Summary

China's agricultural modernization construction requires a large number of innovative agricultural talents. This is a realistic need and a mission of history. Extensively strengthening the cultivation of top-notch innovative talents can not only promote the rapid development of socialist modernization, accelerate the process of building a new socialist countryside, but also enhance China's international status and international competitiveness. As long as we change our concepts and accelerate the reform of higher education, we will be able to cultivate high-quality and innovative talents with the ability to adapt to the development of the 21st century with modern scientific and technological knowledge, agricultural practices, agricultural development and technological innovation.

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Data Availability

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Conflict of Interest

The author states that this article has no conflict of interest.

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