



Research Article

ISSN : 0975-7384
CODEN(USA) : JCPRC5

Study on the innovating cultivation of agricultural and forestry postgraduates

Jian Zhou¹, Songlin Chen^{2*}, Zusheng Tan³, Huaide Zen⁴ and Shenglin Qiu⁵

¹Centre South University of Forestry and Technology, Changsha, P. R. China

²Hunan Dizhi Middle School, Changsha, P. R. China

³Hunan Office of Beijing NGV Center, Changsha, P. R. China

⁴Zhuzhou Central Hospital, Zhuzhou, P. R. China

⁵Sunrise Auto Mould & Die Co., Ltd., Changsha, China

ABSTRACT

To train a large number of innovative talents, we should have a good mechanism for the education of postgraduates. The research on the operating mechanism of the graduate education depended on the training program, the academic environment and the incentive mechanism of subsystems. Through a lot of investigation, this paper found the solving ways which included that the basic knowledge and the practice, application courses should be paid attention, the structure of the curriculum comprehensive assessment system should ensure the quality of the course teaching, etc.

Keywords: Agricultural and forestry postgraduates; Knowledge and practice; Innovation assessment system.

INTRODUCTION

Japanese scholar Eunda Shiaki pointed out: "Innovative talent is able to design and create valuable things, who has the ability to create surprising." American psychologist Gilford said: "the human intelligence is the embodiment of the human intelligence, which is the development of integrity, integrity and non suppression of outstanding talent." In the UK, a gentleman's leader and scholar was cultivated as the goal of College education. They thought that the gentleman type leader and scholar should be "to learn, to think, to compare, to identify and analyze" ,also had the open field of vision. So, two classical universities Oxford and Cambridge regarded " explore, tap and develop the potential ability of students, and inspire the creative spirit of the individual" as the guiding ideology of the universities. The German universities were affected by the Humboldt idea. Humboldt University believed that the purpose of education was to cultivate perfect personality, who was harmonious and all-round development of people. He not only had the rich imagination, but also had deep meticulous thinking ability; Human, ability were not repressed and they grew naturally, they recognized their behavior could not damage the interests of others; They were not only distinctive, but also actively engaged in the society and made contributions to the society^[1].

In 1996, World 21 century education commission also proposed innovative talents of the seven standards: First, there had a positive enterprising spirit; Second and third, there had a high moral quality and the sense of responsibility for human beings; Fourth, a strong ability to adapt and create ability; Fifth, a lifelong learning ability, to adapt to the development of Science and technology integration trends; Sixth, a variety of personality; Seventh, the ability to coordinate with others and to carry out international exchanges^[2].

Innovative talents have the following characteristics: The combination of the special, full knowledge skills, as the subject of the knowledge itself is closely integrated, all branches of knowledge are interrelated, and constitute a complete knowledge as a whole together, so a famous British educator said, "there is no scientific or two science or a subject, and even all the secular science may constitute the whole truth." Therefore, innovative talents should have the full knowledge skills and strategic mind, which can control the whole situation in this field, and can also open up

new areas. Regarding the innovation consciousness and innovation thinking as the center of the free development of personality. The first consideration of the provisional Education Council of Japan said: "there is a close connection between creativity and individuality. Only by giving full play to the personality, can we cultivate the creative ability." From the development of Apple Corp in the United States, we can see the role of personality in the innovative ability, no clever design is not out of the ordinary Wozniak apple computer. Therefore, creative talents must be truly free, with individual independence, rather than as a tool for people and the mode of people, people with all kinds of restrictions and fetters quilt. Then there are a highly developed intelligence and ability with the characteristic of innovation ability. Innovative talents have a keen sense of perception, memory, imagination, thinking, and other intelligent features in general. They have a strong ability to explore, innovation needs have a keen sense of the ability to predict and correctly grasp. Cultivating high level of innovative postgraduates through scientific research activities, as the leader of former US President of Scientific Advisory Committee, Green pointed out. Seaborg report also pointed out: "Basic research and postgraduate education is the key and core of the scientific development, thirty years of experience shows it is an important way that the United States vigorously carry out scientific research to cultivate graduate practice to make the United States leading science and technology, the rapid growth of senior personnel." British University of Oxford, Cambridge students are required to participate in the school per week, they must be associated with a variety of professional academic lectures and seminars in various forms, also requested at the conference to submit their own systematic thoughts and opinions, every week or every two weeks they need submitting articles to the supervisor, and equal communication with mentors, learning from each other. In addition, the emphasis on the combination of scientific research and production practice is a very important aspect of the teaching plan. They insist on combining teaching with scientific research, and unifying the theory and practice. Foreign postgraduate education required that postgraduates should carry out scientific research work during the whole study period, and improve the ability of postgraduates' innovation ability and analyze and solve practical problems. At the same time, it is necessary to study the social reality, to participate in social practice, to achieve the unity of theory and practice.

EXPERIMENTAL SECTION

The number of full time academic master's degree students had an increase of 8.6 times from 1992 to 2004 in China, the average annual growth was 20.8%;The number of doctoral students had an increase of 9.7 times from 1992 to 2004, the average annual increase was 21.8%. By 2004, Chinese national full-time academic graduate students in the school scale had reached the year on year growth scale of 27.1%, 21.1%,which indicted the masters, doctoral students respectively^[3].

In the early 1990's,Chinese explored the cultivation of Applied Talents in forestry and agriculture, and pilot was commissioned by the Huazhong Agricultural University, it carried out research and experiment research of agriculture and forestry training application of oriented students. In 1997, jointly organized by the office of the State Council, the Academic Degrees Committee of the Education Department of the Ministry of agriculture, National Agricultural Technology Extension and service center, research work of agriculture and forestry setting professional degree background was carried out.

In January 2000, professional degree education steering committee of the national agriculture and forestry extension master was established under the Secretariat affiliated to the Postgraduate School of China Agricultural University. In September 2005, the National Committee of the master of landscape architecture education was established under the Secretariat at the Postgraduate School of Beijing Forestry University. Under the guidance of Education Committee, after several years of exploration, a preliminary study of agriculture and forestry training mode of professional master degree students was established in forestry and agriculture universities.

Agriculture and forestry extension master's degree is mainly " for the promotion of agriculture, forestry technology, rural development and cultivation of high level applications, compound talents." here's "agriculture" is the concept of "big agriculture", which covers a wider area, including agriculture, forestry, animal husbandry, aquaculture and other industries.

The statistical results showed that employees chose to pursue professional degree, the main purpose was to expand the knowledge accounted for 40%, higher degree accounted for 28%, for the assessment of professional titles and promotion to the utilitarian purpose only accounted for 6%; the main reason was to take forestry science master's degree education that they didn't leave the form of learning, it could not affect the work ensuring up to 77.2%;The overall evaluation of the professional degree education met the need of staff to continue learning accounted for 64%, which showed that the choice of studying for a master's degree was the first professional degree education as a high-level form of continuing education, it might also pursue a higher degree (PhD) opportunities^[4].

The statistical results also showed that the first teacher played a big role in the training process of Forestry Postgraduates, but the second teacher's role was not really played out. The statistical results showed that the postgraduate course examination of forestry professional degree mainly took the course paper form (70%), the current examination was strict relatively (87.3%). Professional degree postgraduate courses were consisted by public courses, professional courses and elective courses, and it was not appropriate to take the form of curriculum assessment all time. Otherwise, 11% people thought courses were not too strict or into the form, but also because the minority teachers considered students' ability to accept in short-term, they took a relatively loose form. Through interviews, a considerable part of postgraduates hoped to use the open book examination. Although professional degree graduates should be based on the work practice, the problem should be solved combined with their own (95.2%), but the actual topics were more from the tutor recommendation (51.2%). As a result of the second supervisors had not been effective, and the training of academic degree graduates could be carried out strictly (63.6%), and the main part of the thesis was that it was considered to be blind-recommended. In the form of academic degree thesis, although the research reports and the form of the project design completed a half (51.2%), but the preparation of scientific research papers were in the form of the first (44.4%), it showed that the professional degree graduates had not yet be out of the academic degree postgraduate training mode. And the present study of the degree thesis work was only to help (78%) those who thought to help a lot were only a small number (15.6%), there were a few people thinking that help was little (accounted for 6.4%), the requirements of the course was not closely related to the degree thesis requirements^[5-7].

RESULTS AND DISCUSSION

The main problems of training mode of forestry professional degree students in china were:

Firstly, graduate training objectives of forestry professional degree were not well reflected. High level talents of forestry professional degree students met the forestry sector, but from the understanding of forestry professional degree students, they just put the professional degree education as a high level of continuing education, to expand the knowledge as the main target, rather than to meet the actual needs. From a practical point of view, the professional degree education was just meeting the need for in-service personnel continuing education, the existing curriculum system did not meet the need for talents in the knowledge structure and ability of industry.

Secondly, enrollment form of forestry professional degree graduates should be further adjusted. The existence of Vocational Education in the understanding of the existence of vocational education was only regarded as a continuing education, and the employment of vocational education was neglected, which led to the selection of students on the main limitations of the staff, the objective of the fresh graduates were restricted. Although a creative way was introduced to the GCT entrance examination, but the comprehensive assessment of the professional knowledge of the basic knowledge was flowing of the form, substantially it reduced the postgraduate admission criteria for professional degree. In the entrance examination time, they were separated by the academic degree postgraduates, the influence of the society to the degree of professional degree postgraduate education was obviously, the degree of recognition of professional degree postgraduate education was reduced.

Thirdly, the research of forestry professional degree graduate training mode needed to be further improved. One was the use of a single non-all-day learning form, because of the outstanding work of engineering, it led that the teaching task could not be completed in accordance with the teaching plan, and weakening the course teaching and training. The other was the curriculum setting, although the composite knowledge structure was emphasized, the professional knowledge and practical knowledge and training were neglected, the characteristics of the field training was also not reflected. The dual tutorial system didn't play fully in the role of the two instructors.

Fourthly, quality control of forestry professional degree graduate was still inadequate, the curriculum assessment of the curriculum was in the form, and comprehensive evaluation system could not be effectively gotten for grasping the professional knowledge of the postgraduates. The academic degree graduate students still did not get rid of cultivating the tradition of heavy degree thesis, they focused on scientific research, but the paper was not closely related to the actual work.

Since 1999, Chinese agricultural professional degree was set, Post Graduate Education of agricultural professional degree had been greatly developed. On the one hand, the types of agricultural professional degree were enriched, training areas were further expansion, enrollment had increased dramatically. On the other hand, development of agriculture professional degree graduates were continuously adjusted in order to achieve the training objectives. The graduate education of agricultural professional degree was from scratch, and then to the development, the fundamental reason laid in the adaptation of the current state and society of agricultural high-level applied talents of practical needs. At the same time, as a kind of postgraduate education, the training mode should be able to meet the

requirements of social and economic development. Therefore, in the construction pattern of postgraduate cultivation of agricultural professional degree, the reality needs were not only considered, but also it needed certain forward-looking, realistic and forward-looking principle of combining should be insisted on, it could ensure the training model to adapt to the social and economic development in a certain period of time required.

CONCLUSION

Firstly, the enrollment target should change mainly from the service staff with the working experience to the service personnel and the fresh graduates, the type also should be from the emphasis on the industry background to pay attention to the cultivation of the talents of the industry. Secondly, it was also necessary to separate the examination admission exam from the enrollment, that is the score has universal, the entrance examination candidates could also apply for different college without the first examination, thus the reexamination could be accepted; Thirdly, for the curriculum set and taught, we should not only pay attention to the basic knowledge, but also highlight the practice and application courses, especially emphasizing on the importance of practice. Fourthly, the degree awarding standards changed from pure attention degree thesis to the main attention to the curriculum training, with the degree thesis, in other words, the degree thesis should not be a measure of the degree of the main criteria. Fifthly, degree thesis evaluation standard of the agriculture professional degree postgraduates should be put forward. The sixth is that the structure of the curriculum comprehensive assessment system should ensure the quality of the course teaching.

Acknowledgements

Research project of postgraduate teaching innovation of Hunan province in China (JG2015B064); Aid program for Science and Technology Innovative Research Team in Higher Educational Institutions of Hunan Province; Research project of Hunan situation and decision-making advice (2015ZZ157).

REFERENCES

- [1] TAN Xiao-feng, MA Lü-yi, LI Fang-dong, etc. *Nonwood Forest Research*, **2012**, 30, 1-5.
- [2] TAN Xiao-feng. *Conference Exchange Papers on Grain and edible oil*, **2013**, 1-6.
- [3] Xiao Zhihong, Chen Yongzhong. *China Forestry Science and Technology*, **2005**, 19, 10-13.
- [4] Han Xuewen. *Degree paper of Chinese Academy of Forestry*, **2008**.
- [5] Fang Fang. *Journal of Changchun University of Science and Technology*, **2013**, 26, 114-117.
- [6] Jian Zhou, Zhimin Yang, Songlin Chen. *Journal of Chemical and Pharmaceutical Research*, **2014**, 6, 669-673.
- [7] Tu Juncai. *Degree paper of Huazhong Agricultural University*, **2006**.
- [8] Huazhong. *Degree paper of Chinese Agricultural University*, **2011**.