Research on the Cultivation Mode of Graduate Students of Architecture and Civil Engineering Based on Team Guidance

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Abstract. With the accelerating process of economic globalization, the graduate student in architecture and civil engineering has become more and more important in the process of building an innovation oriented country, which has a solid theoretical basis and in line with the actual needs of the industry. However, at present, the definition of the cultivation mode of professional graduate students and academic graduate students is vague, and it is difficult to achieve the desired effect of the establishment of the professional graduate students. Based on this, this paper puts forward the Mode of Cultivation by Tutor Teams, and elaborates it from the following three aspects: the necessity of the cultivation by the tutor team, the composition of the tutor team and the auxiliary measures implemented by the tutor team cultivation mode. The cultivation model can achieve the overall improvement of the theoretical knowledge and professional skills of professional graduate students by fully integrating the multi-resources, and for the cultivation of application-oriented talents to add ways.

Introduction

Professional degree graduate education has increasingly become the focus of today's postgraduate education. It should be said that the professional degree graduate education is an effective supplement to the current single academic graduate education, and it will be able to better meet the practical needs of specific industries or occupations for high-level application-oriented talents. Especially with the increasing demand of the society for professional degree graduate students, how to build an effective professional degree graduate cultivation model has become an important problem to be solved urgently in postgraduate education [1].

The education of graduate degree in architecture and civil engineering aims at cultivating high-level applied personnel in the field of civil engineering, which with a solid foundation of the theory and broad professional knowledge, has a strong ability to solve practical problems, can take professional or management work, and has a good professional quality[2]. More concretely, it requires students to have a solid foundation of theoretical and professional knowledge, understand the architectural engineering theory and development trends, understand and be familiar with the construction guidelines, policies and regulations of all types of construction, with the comprehensive ability to master certain language, have a good ability of scientific research; at the same time also requires students to have the ability to analyze and solve the practical engineering problems, such as project investment analysis and control, project planning, decision-making, management, and control of construction cost etc.. There is a big difference between the professional degree graduate students of architecture and civil engineering, and the traditional academic talents with the emphasis on theory and the ability of academic research. Professional graduate students should be applied practice-oriented, and clearly positioning their cultivation objectives, cultivation methods and cultivation content, therefore, the graduate students majoring in architecture and civil engineering also put forward higher requirements for the cultivation mode, and pay special attention to the cultivation of the application ability in the cultivation methods and cultivation contents. In the context of collaborative innovation, according to the characteristics of
the professional field and the specific requirements of the special technical ability of high level talents, puts forward the cultivation mode of professional innovative talents based on the co-cultivation mode of the tutor team.

The Necessity of the Cultivation by the Tutor Team

The education of professional degree graduate students majoring in engineering is taking professional demand as cultivation objective, cultivating the postgraduates' ability of logical thinking, analyzing and solving practical problems; at the same time, we should strengthen exchanges and cooperation with international and domestic schools, guide and cultivate the innovative thinking, international vision, professional spirit and field work ability of graduate students.

Architectural and civil engineering is a broad and comprehensive application of disciplines, the disciplines of engineering theory, technology, methods of rapid development, comprehensive knowledge and practical ability of talent to demand higher[2]. Study members of tutors' team can give full play to their professional advantages, complementary form of academic background, academic level and teaching experience can give students more efficient and more comprehensive guidance; in addition, the main and assistant tutors in the tutor team can help the graduate students to have a broader practical training and scientific research platform.

The mode of cultivation by tutor team can make the work of graduate education more targeted, can realize the personal responsibility and guidance for practical ability training, scientific research, academic moral cultivation and personal life and other aspects of graduate students; and it also can fully mobilize the enthusiasm of the members of the tutor, to achieve a more comprehensive guidance for graduate students, broaden the graduate academic horizons and knowledge. This model can make graduate students to be reflected in personality differences, so that it is possible to teach in accordance with their aptitude.

The mode of cultivation by tutor team can realize the communication of the practical work and the academic aspects between the tutor and the tutor in the school, realize the sharing of teaching resources, and improve the level of graduate guidance. The cooperative training mode between these disciplines is helpful to the sharing of teachers and laboratory resources, and also helpful for teachers to gain more favorable platform in the direction of research and the transformation of scientific research achievements, so that the level of scientific research and postgraduate teaching can be improved continuously.

The mode of cultivation by tutor team can also help to guide the diversity of the team and guide the relationship of harmony by attracting excellent young teachers into the team of graduate tutors. Young teachers have obvious advantages in mastering new discipline knowledge and methods and exploring the technological development, and in the forefront of scientific research practice and engineering applications. They can give guidance to graduate students in the respects of new thinking, new ideas, new technology and new methods of practice, and can easily communicate and cooperation with graduate students [3].

Overall, the mode of cultivation by tutor team can further cultivate postgraduate innovative thinking consciousness, strengthen the practical ability of graduate students, and the trained high-level personnel is more consistent with the actual requirement of the characteristics of the standardization work and the development of the knowledge economy age. As a result, the mode of cultivation by tutor team has become a necessity for the development of the professional degree graduate education which focuses on the academic ability and practical skills.

The Composition of the Tutor Team

The mode of cultivation by tutor team is the deep-level, close and high-level training mode which is in accordance with the characteristics of postgraduate education of architecture and civil engineering in the process of graduate cultivation. It is committed to the development of the society to the needs of innovative high-level comprehensive talents, and through the interdisciplinary
integration and synergies between the initiative and enthusiasm to achieve teaching and learning and related disciplines of communication and integration, for postgraduate growth to create a good training environment, and effectively improve the comprehensive quality of graduate student training [4]. As a result, the graduate instructor team is composed of professional instructors and assistant instructors. The professional instructors should bear the main responsibility for the training process and the training quality of the graduate student, and assistant instructors are to participate in the training of graduate students, assist the master to make the training plan and complete the graduate guidance work. The specific composition of the team members should be based on the specific circumstances of the graduate students to develop. In the professional structure, the tutor team should emphasize to the subject of professional teachers, related to the professional teachers supplement. On the composition of personnel structure, we should pay attention to the combination of professors, lecturers and industry experts, and should focus on the teacher age gap, strive for the perfect realization of the theory and practice of integration, thinking collision of experience and forward.

The Auxiliary Measures of Building the Tutor Team Cultivation Model for Graduate Students in Architecture and Civil Engineering

The Perfecting of Management System

A sound management system of graduate tutor team is the guarantee of its effective operation. First of all, we should improve the relevant provisions of cultivation of graduate students from the model, such as the number of tutor team composition, the selection criteria of tutors, title requirements, age and academic level. At the same time, to develop the implementation mode, examination and evaluation system of the postgraduate tutor team cultivation model, and to establish the job responsibilities, rights, obligations, appointment assessment methods of the tutor team members. Then, in order to ensure the quality of graduate education, we should make clear the responsibility of the team members and implement the target management. Tutor team members should actively participate in the guidance of graduate students in accordance with the objectives of management, so as to avoid the mentor team training program is a mere formality. Finally, the main tutor should be responsible for the overall direction of the team, not only to ensure the coordination of team resources and the mobilization of the enthusiasm of the team members, but also to urge the implementation of the specific work of graduate cultivation.

The Strengthening of Process Management

First of all, the tutor should pay more attention to the enhancement of their ability in the process of postgraduate cultivation. The cultivation of graduate students in architecture and civil engineering has corresponding requirements in the aspects of training plan, assessment methods, and assessment procedures and so on. What teachers should do is based on the above cultivation requirements clear their responsibilities and tasks, give full play to their subjective initiative.

Furthermore, in the aspect of student education, the graduate tutor guidance team should guide, supervise, check and evaluate the tasks of each stage of the graduate student. The main contents of the postgraduate cultivation include the study of theoretical courses, the training of professional skills and the completion of scientific research. Tutors should master the situation of postgraduate study, research and practical work in a timely manner, strictly regulate the work of graduate students in all aspects of cultivation, so as not to omit the link and reduce the standard. Schools should also be carried out in the process of graduate education in the stage of inspection work. In the school examination, for the existence of incomplete training records or practical skills training is not up to the situation, the tutor team needs to be carried out to ensure the quality of professional degree graduate training.
Cultivation of Practical Ability of Graduate Students

First of all, according to the graduate's own career pursuit and the school's training program to develop training programs that meet the needs of graduate students. And through the combination of professional norms, the evaluation index system of graduate students in the actual project has been improved. Furthermore, in the process of graduate practice ability training, tutor team should be held monthly work schedule meetings, and actively carry out the construction projects in various stages of the common technical issues of special discussion, to train graduate students ability to analyze and solve problems. Finally, through the quantitative analysis of the actual workload, problem analysis ability, practical operation ability and professional ethics, we can get a comprehensive consideration of the practical ability of graduate students. For the graduate students who have good performance in practical ability cultivation, the necessary incentive measures should be taken to ensure the continuous operation of the practice system.

The Perfecting of Tutor Evaluation Mechanism

Tutor evaluation mechanism mainly from the graduate cultivation process and training performance of graduate students to give the corresponding assessment of team tutor. In the process of postgraduate cultivation, tutor team assessment focuses on the quality of graduate students, through the comprehensive evaluation of graduate students’ practical skills assessment, scientific research work and occupation moral situation, to reflect the graduate teaching achievements and shortcomings of tutor team members. The establishment of an annual report on the work of team tutor cultivation graduate students to report on the tutor's own training performance. The instructors of the graduate guidance team summarize their graduate guidance in the past year, especially the graduating students, and report back at the postgraduate guidance work conference. In the end, the graduate instructor team will summarize the annual teaching work of all the members and form a report to the competent department of the college for examination and record. All in all, in the assessment of postgraduates’ supervisors, we should pay attention to the combination of the annual assessment and the engagement assessment, especially to strengthen the post employment performance and responsibility management of the supervisors, which is of positive role in ensuring the quality of postgraduates.

Enhance the Ability of the Tutor Team

According to the evaluation results of the tutor's guidance, the university carries out regular training to the members of the graduate tutor team. The contents of the training are presented in the form of special reports, exchange questions and assessments, and evaluation of graduate students. It aims to introduce the latest trends of the national graduate education policy, the new requirements of postgraduate training and the requirements of postgraduate training work. At the same time, strengthen the communication between tutors and schools and tutors. Through communication, a good way of teaching methods to be advocated, postgraduate teaching and management has been improved, the graduate training process to be standardized, and enhance the tutor group policy sensitivity and operational capacity.

Summary

With the continuous progress of globalization, the demand of talents in architecture and civil engineering tends to be applied and compound and high level, based on this, this paper puts forward the mode of cultivation by tutor team for the promotion of postgraduate cultivation. At the same time, based on the analysis of the cultivation requirements of postgraduates majoring in architecture and civil engineering, this paper starts with the necessity of the cultivation by the tutor team, and expounds the personnel composition of the tutor team and the guarantee measures. The development of this kind of cultivation model not only for the community to cultivate much-needed professionals, but also developed its own professional construction and mentoring team. The realization of it has added a way for the cultivation of professional talents.
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References


