The Teaching Mode of Combining Industry, University and Research Promotes the Reform and Development of Landscape Architecture

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Keywords: Industry-university-research, Teaching mode, Reform and development.

Abstract: Taking the cultivation of landscape professionals as an example, the problems existing in the current teaching mode were discussed in this paper. In order to promote the reform and development of landscape specialty, the teaching mode of combining industry, university and research was adopted to train practical skilled talents, to build a high level of teachers, and to solve the problems of teaching funds and experimental sites.

1. Introduction

The goal of cultivating talents in landscape architecture of colleges and universities is to cultivate talents with practical skills, However, there is a big problem in the teaching mode of many colleges and universities, and we firstly need to solve how to enable the students to combine the knowledge of the landscape and the practical application. The practice teaching is an important part of the professional teaching of the garden, and the related problems in the teaching of practice are properly solved, which will help to improve the teaching level of the garden specialty, enhance the students’ practical skills and professional quality, and also can greatly improve the employment rate of the students. The model of industry-university-research cooperative education is regarded as the model to promote the successful teaching of economic development.

2. Problems Existing in the Teaching Mode of Garden Specialty At the Present Stage

2.1 The Teaching Mode of Garden Specialty is Aging

At present, the cultivation mode of garden specialty in most colleges and universities is relatively old, and there is a common phenomenon that the theoretical and practical teaching is out of step and the practical teaching is weak. In the teaching process, most of them adopt the teaching mode which is mainly based on teachers’ classroom teaching knowledge and assisted by practice. This kind of training teaching mode will lead the students’ practical operation ability to become weak and can not fully cultivate students’ practical ability, innovation ability, cooperation ability and team cooperation consciousness [1]. We only pay attention to the acquisition of students’ theoretical knowledge in this kind of teaching, but ignore the improvement of students’ comprehensive ability and the ability to adapt to the society [2].

2.2 Problems in Talent Training

In the course setting of garden major in many colleges and universities, there are a few professional courses in the lower grade, while the higher-grade specialized courses are more concentrated. The students have relatively heavy learning tasks in the higher grade, which are no time between the students' postgraduate entrance examination and employment. In this way, it is difficult to meet the diversified demand of the current employment market, so that the students lack the professional characteristics during the employment process, and the competitive ability is not enough and the students’ ability to practice is weak.
2.3 Weak Faculty

Teachers are the main body of teaching and play a very important role in teaching, but now most
teachers are assigned to the school directly after they have graduated from master’s or doctor’s
degree. In addition to the theoretical knowledge learned in the school, most teachers lack practical
experience. The school also lacks the mechanism to improve the practical ability of teachers, and
the practical ability of teachers is obviously insufficient, and can not undertake the important task of
cultivating students’ innovative practical ability.

2.4 Lack of Corresponding Funds and Spaces

Most of the specialized courses of the garden are the combination of the theory and the practice,
and the practicality and the practicability are very strong, because many courses of landscape
architecture students need to buy the corresponding experimental supplies, which cost is relatively
high. Gardening skills and other courses need students to understand the cultivation of plants,
maintenance of some practical skills, such as the transplanting, trimming, grafting and the like of
the nursery stock, which requires the corresponding experimental field and experimental materials,
but the general colleges do not have the ability to provide these skills training sites, and the school
does not have enough funds to purchase the related experimental consumables, which seriously
affects the original intention of the school to train the students’ actual hands-on ability[3]. The
shortage of the practice teaching and the lack of the site are still the key problems that need to be
solved urgently.

3. The Reform and Development of the Landscape Architecture

3.1 The Teaching and Training Mode of "Industry, University and Research"

"Industry" refers to enterprises, "Learning" refers to colleges and universities, and "Research"
refers to scientific research institutions. Enterprises are the main body of technological innovation
and the core department of the system. Institutions of higher learning and scientific research
institutions have obvious advantages in scientific research, achievements, education, information
and so on. Therefore, the innovation model of the combination of the three is increasingly
promoting the development of science, technology and economy [4].

The combination of industry, university and research can promote the organic combination of
theory and practice. Through the cooperation with the enterprise, the theoretical knowledge that the
students learn can increase the opportunity of practice through the practice of the enterprise, so that
the students can better master the theoretical knowledge they have learned. It can promote the
infiltration and integration of teaching and scientific research, and scientific research is generally
the relatively cutting-edge content of some related specialties. If we can bring the research content
of academic frontier to teaching, then we can improve the teaching quality and teaching level,
 improve the students’ innovative ability and consciousness, and improve the training quality of the
students majoring in garden [5].

3.2 Train Practical and Skilled Talents

The combination of industry, university and research can better let the school understand the
needs of relevant enterprises for talents. In the aspect of cultivating students, we should take
students as the center and social needs as the guide, so as to establish the training goal of talents as
the cultivation of practical skilled talents. Pay attention to the cultivation of students’ practical
ability, the core of which is the practical teaching link, highlight the professional core knowledge
and the cultivation of core skills in the teaching process, which requires increasing the time to
cultivate students’ ability and increasing the support of funds [6]. It emphasizes the combination of
theory and practice. Students are the main body of learning and change the teaching mode with
teachers as the main body in the past teaching.

The teaching content of the course is to arrange all the professional courses in a unified way to
coordinate the content of the teaching, so as to avoid the repetition between the courses. On the
basis of this, the different curriculum content and the actual combination are combined, and the training of the students’ ability is more emphasized. In addition to the teaching of the course, we have added some practical and practical training in the course of practice, practice, professional skill training and professional practice teaching. Assessment of the theoretical knowledge, the assessment of the experimental and practical training course are increase, and the examination form has become more abundant, and the test paper, the design, the course paper, the on-site skill operation, the research report, the upper machine operation and the design reply are taken.

3.3 Building a Team of High Level Practical and Skilled Teachers

The key to the success of the talent training mode reform lies in the teacher, and in the aspect of the construction of the teaching staff, the newly introduced teachers need to have the "double-teacher type" talents, have certain out-of-school practical experience and solid theoretical foundation. For teachers who undertake garden courses, they can create opportunities to enter the enterprise in batches, improve their own practical ability, and let teachers have the opportunity to participate in garden actual combat projects, which can not only improve their practical ability, but also help enterprises broaden their horizons, so that the teaching method of teachers’ curriculum is more novel and the content is richer. The combination of industry, study and research can also achieve a win-win situation for enterprises and schools, promote the mutual exchange and mutual improvement between school teachers and enterprise technical personnel, and promote teachers engaged in theoretical teaching to more contact with practice, so as to update knowledge, enrich textbook content, improve teaching, and strengthen scientific research and practical skills [7-8]. In addition, teachers should also be encouraged to actively participate in various teaching competitions, industry skill competitions, discipline competitions and various academic activities both inside and outside the school, so as to improve teachers' practical guidance ability and innovation ability.

3.4 Using the Combination of Industry, University and Research to Solve the Problems of Teaching Funds and Experimental Sites

The combination of industry, university and research can be used. To establish a number of cooperation between production base, schools, enterprises, research institutes to establish relations of cooperation, base was provided by the enterprise need to bear garden every year of professional courses related to practice, practice, professional practice and so on, at the same time, at the time of enterprise base on busy, can arrange the student to carry on the corresponding course of practical teaching links, both to solve the lack of funds for practice teaching, also can undertake courses provide students with the field of practice, practice, can also solve the problem of lack of labor force for the enterprise.

4. Conclusion

The combination of industry, university and research is the organic matter of teaching, scientific research, production and practice in colleges and universities. They support, promote and perfect each other. The mode of "industry, university and research" has been paid more and more attention and recognition. It can not only effectively solve the decoupling between theory and practice of garden specialty, but also effectively improve the scientific research results into productivity. There is a contradiction between supply and demand of school and enterprise graduates, so that schools, students and enterprises show a benign cooperative relationship. At present, the "industry-university-research" mode is the training mode of most garden professionals in colleges and universities. The successful transformation of scientific research achievements will promote the common development of schools and enterprises, and enterprises are the base for colleges and universities to cultivate innovative and applied talents. Garden specialty plays an inestimable role in promoting the cultivation of scientific innovation and applied talents in the mode of "industry-university-research".
Acknowledgments

Funding: This research was supported by the major science and technology project of the seed industry of Tianjin committee of science and technology (17ZXZYNC00070) and Tianjin agricultural university teaching key cultivation project, Tianjin agricultural university undergraduate education teaching research and reform of (2018-b-08). Major social science project of Tianjin education commission: Research and development project of integrated practical school-based curriculum based on agricultural Internet of things.

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