Cultivation on the Practice Ability for Printing Engineering Excellent Talents

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Abstract. In the paper, some personnel training ways and practice process were introduced in detail, which involved the orientation of training objectives, cultivating jointly excellent talents, expanding of students' innovation ability, revising training program of excellence class, improving the quality assurance systems for practical teaching. At the same time, it gave a brief summary on the recent five years works for Bisheng excellence talents project.

Introduction

In February 2012, Printing Engineering, an undergraduate major of Beijing Institute of Graphic Communication, was allowed to carry out Excellent Engineer Education and Training Program (shorted as Excellence Program) as one of the second batch lists given by Ministry of Education of P.R. China. Bisheng Excellence Class, the experimental class of Excellence Program, was held firstly in December, which showed that the cultivation works for higher innovative talents have reached a new stage. At present, the students of 2011th and 2012th Bisheng Excellence Class have graduated, and then the 2013th grade students have completed the intramural professional courses and the training tasks including Graphic Information Processing Project and Color Management Project, and it also has finished production practice; The 2014th grade students have achieved the Graphic Information Processing Project (making E-Book) and a series of visiting some companies; The students of 2015th Bisheng Excellence Class have been in the stage of learning professional courses tensely [1]. In the past five years, our college has gradually reformed and explored the new mode of engineering education and talent cultivation according to creating a better learning environment and increasing the degree of practice teaching, so some remarkable performances have achieved.

The Orientation of Training Objectives and the Criteria for Talents Selection

For Bisheng Excellence Class, the orientation of training objectives and the criteria for talents selection would affect the formulation of training program [1]. In order to the industry development of printing enterprises and packaging ones, A number of high quality printing and packaging technical talents having outstanding innovative ability and being suitable for printing and packaging industry should be built up and cultivated. Its key goal was that paying attention to the ability cultivation of printing process design facing the traditional printing mode and industrial demand, which was based on the knowledge systems related to printing technology, so the course arrangement was focused on materials science and related courses [2].

The orientation of training objectives was slightly adjusted in the 2014 edition training program, and it added the demand for information reproduction industry based on information processing technology. The concept “Large Print” was wide printing applications, which was involved in the 2015 edition training program. The latest training program proposed the demand on the rapid adapting to new knowledge and technology. It refined and clarified the curriculum system, and also added the ability training on the cost and trend analysis using data technology. It could guide students to have the overall development analysis ability.
On the basis of above ideas, the curriculum knowledge system of the Bisheng excellence training program was divided into four aspects: visual information representation theory, material science theory, printing reproduction theory, data statistics and analysis theory. The recent training program extended three training objectives. They were the aims of media production technology, the coordination of material and printing process, the product surface treatment and molding processing. Students could any choose as the future career development direction for themselves.

In the 2015 edition training program, quick comprehension was looked as an important selection standard of selecting students, which was distinguished to the training objectives of higher vocational education [3]. So the final selection position of excellent class was located in the following aspects.

- Aggressive, academic excellence;
- Strong hands-on ability, with excellent engineer training potential;
- Have strong curiosity to the printing and related practice part;
- Aspire to become the high-quality talent leading industry development.

The Orientation of Practice Part and Enterprise Participation

It was the key and characteristic section about the orientation of practice part and enterprise participation. According to the current students’ interest, as well as the restructuring crisis of current printing enterprises and the actual situation of lack on high-quality talent, the 35 students of excellent engineer class were arranged to make practical exercise into certain enterprise for a long time, which wasn't an appropriate method. How to supervise and control the practice part has needed think deeply.

From the above considerations, three very distinctive practice courses were set up, and they are digital interactive media production, color management, printing technology. The theory characteristics curriculum participated by enterprises were image information processing and the principle and technology of post-press [4].

According to the curriculum named printing professional practice opened for the third grade students, the modular study mode was tried out in 2013th excellence class. During one-year professional practice, students must go through the following four modules professional training and assessment such as operating press, spot color matching, applying SHOTS simulation software, folding and binding in post-press the of the students. Because the courses as printing process and post-press technology were opened in the same period, theory and practice were well combined, and it was good for students to understand and grasp theoretical knowledge, further master their applications.

To the curriculum of enterprise special engineering practice for junior students, it improved the previous projects that teacher set clear practice goals and supervised students’ practice behavior in time. At the same time, the process of combining the graduation project with the needs of the enterprise was advanced [5].

All of these measures have provided students some opportunities to access enterprise and market, so further improved the students' practical ability.

Improving the Practical Quality Assurance Systems and Promoting Students Success through Various Channels

After summer production internship for 2011th and 2012th grade excellence class students, their internship achievements depend on the evaluations from instruction teacher and enterprise tutors and the quality of internship report submitted by the students. The internship monitoring and evaluation of the result represented truly the students’ internship performances.

The school has promoted students to participate in the declaration and research on Beijing municipality college students’ research programs, and participate in various competition such as professional design competition, innovation and entrepreneurship competition and vocational skills competition [6]. It can not only make students get exercise and improvement, but also won the
honor for the school. Besides, the school set up Innovation Print professional printing competition so as to guide students to put forward printing design and processing plan using what they learned, and then they can solve the actual problem and accept inspection and evaluation of the professionals.

The school has encouraged and promoted excellence class students to participate in the international competition as Shots printing simulation software. The organizing committee of the contest employed the previous winners to conduct professional training for students, and organized actively the students’ training processes. This international competition could test strictly and appraise the students’ abilities.

Expanding of Students’ Innovation Ability and Industry Vision

The expansion of students' vision is the source of their creative ability [7]. Teachers have organized the students to participate in various printing exhibition fair such as the Shanghai All in print, Shenzhen China International Cultural Industry Fair after 2013. Some technology lectures held by Professional company could also attract excellence class students. Those students understood the industry application and technology research, and shared with the else students in the classroom, which promoted more students to know industry trends. Teachers also pushed out the Innovation Print solutions contest and formed a digital media production group. Three goals, such as media production technology, combination of material and printing process, product surface processing and forming processing, laid a solid practice foundation for the future development of students.

Future Plans

The next key work would be the implement of new excellence program, which involved the design of 2016 training programs, the raise of the practice teaching and the improvement of the mechanism of selection and withdrawal for Bisheng excellence class. In addition, the preparation works for the evaluation and inspection of excellent engineer education would be carried out gradually.

Conclusion

From the above illustrations and analyses, the following conclusions can be obtained: Four personnel training ways and practice processes were introduced and explained in order, and the future plans and work ideas were proposed. At the same time, it had a brief summary on the recent five years works for Bisheng excellence class.

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References


