

Exploration and Innovative Research on the Construction of Practical Training Bases for Art Majors in Science and Engineering Universities from the Perspective of "Double First Class" Construction

-- Taking the Art College of Southwest Petroleum University as an Example

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Abstract: With the country's high-quality evaluation requirements for the construction of "double first-class" university majors, the construction universities have reorganized the development direction and positioning of majors to play a supporting role in the construction of "double first-class" and lay a solid foundation for high-quality talent cultivation. As an art major in a science and engineering university, how to support the "double first-class" discipline construction system through innovative education and teaching systems is a problem that needs to be solved for art majors. Practical training as an important part of practical teaching in art majors, practical training plays an important role in practical education and is an effective channel to transform knowledge into skills. Over the years, the college has attached great importance to the innovative construction of practical training bases. Through cooperation with enterprises, it has summed up successful experiences in the process of base construction, explored the collaborative education new model between schools and enterprises, innovated measures in practical teaching system reform, institutional guarantee, process supervision, assessment and evaluation system, and laid a solid foundation for the construction of "double first-class" university majors and high-quality talent cultivation.

Keywords: Double First-class; Art Majors; Major Practical Training Base; Research on Construction and Innovation.

1. Preface

"Double First Class" is a major strategic decision made by the Central Committee of the Communist Party of China and the State Council. It is also another national strategy in the field of higher education in China, following the "211 Project" and "985 Project". It helps to enhance the comprehensive strength and international competitiveness of China's higher education. In order to promote the construction of first-class disciplines with high quality and create world-class universities, each selected university will optimize and integrate the majors included in the disciplines. As an art major in a "Double First Class" science and engineering college, the purpose of the college is to serve the overall development of the school's characteristic disciplines and play a supporting role in the construction of the school's "Double First Class" disciplines. Practical art creation is not only a characteristic of art majors, but also an effective way to promote the characteristics of school education. Therefore, it is necessary to continuously improve the construction of practical education links. As an important platform for practical training, practical training bases bear the responsibility of cultivating high-quality and applied talents. Therefore, this article explores the innovation of practical education cooperation models, the improvement of collaborative education management and guarantee systems, the strengthening of practical process supervision mechanisms, and the standardization of assessment and evaluation systems in the process of school enterprise co education [9], in order to cultivate top-notch innovative art professionals who can meet market demand. [1] [2].

2. The Current Situation of the Construction of Our Art Professional Practical Training Base

Our college was established in 2010 as a second level college under the background of science and engineering universities. At the time of its establishment, it was clearly positioned to cultivate applied talents in the field of art. After more than ten years of development, the construction of professional theoretical courses has become more reasonable. However, the professional practical teaching system is not yet perfect and systematic, and the output of high-quality applied industry talents is far from expectations.

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engineering. Art colleges and universities, based on their professional practical needs and plans, collaborate in various forms with off campus cultural and creative enterprises, film and television media institutions, television stations, film and television bases, etc. to carry out practical training projects, which can effectively achieve the goal of practical training; The practical training of art majors with a background in science and engineering should not only consider professional needs, but also be integrated into the school's educational direction. It is not advisable to improvise based on one's own interests. Art creation should be integrated into the school's larger disciplinary background as much as possible and serve the school's disciplinary construction. Therefore, higher requirements are put forward for the construction of practical training bases.

Based on the above reality, the School of Art has timely adjusted the construction ideas of practical training bases, taking the school's educational characteristics as the premise, combined with the professional practical training situation of the School of Art, re evaluated the established or cooperative practical training bases, terminated a batch of practical bases that exist in name only or have insufficient practical guidance ability, inspected and introduced high-quality social resources that meet the conditions, and explored the creation of a batch of long-term and sustainable development[2][5], A training base or platform with rich industry practice guidance experience and a complete process supervision and evaluation system, effectively promoting school enterprise cooperation and helping to cultivate top-notch innovative talents[12].

3. Innovative Measures for Building High Quality Practical Training Bases Together with Enterprises in Our College

The joint construction of practical training bases by schools and enterprises is an important measure for universities to actively adapt to the needs of social development and cultivate high-quality talents. At the same time, it is also for students to understand and adapt to the social environment in advance, improve their practical ability and comprehensive quality, and enhance their employment competitiveness. This mode is conducive to promoting the common development of universities and enterprises. This article explores innovative measures for practical education in the new era in our hospital from the following aspects:

3.1. Gathering the Advantages of Both Sides and Jointly Building a "Dual Teacher" Teaching and Research Team Combination

As a combination of education, technology, and talent [12], universities gather a wealth of wisdom and knowledge, and are an important force in promoting social progress and development. Universities are mainly focused on imparting theoretical knowledge, and practical teaching conditions are relatively weak. Although they have undergone multiple educational system reforms, this main function has not substantially changed. Enterprises are an important carrier for the transformation of scientific and technological achievements, and an important place where knowledge, technology, and labor value can ultimately be reflected. Therefore, enterprises have significant advantages in practical innovation. Carry out school enterprise cooperation, fully utilize the advantages and resources of both parties,

complement each other's strengths and weaknesses, and build a "dual teacher" combination teaching and research team. Regularly conduct routine practical projects and technical exchanges in cutting-edge professional fields through academic forums, technology application discussions, on-site and off-site project training design and guidance, competitive competition training etc[4], to create a teaching and research combination that deeply participates in practical education in universities; At the same time, we will periodically enter enterprises to help alleviate specific problems such as product research and development, technological innovation, and the transformation of scientific and technological achievements, break down barriers between universities and enterprises, and build a mutually beneficial "dual teacher" combination team[2].

3.2. Exploring a Mechanism for Cultivating Practical Teaching Talents through School Enterprise Collaboration and Hierarchical Linkage

In order to efficiently promote the diversified education mechanism of school enterprise cooperation [5-8], To build a high-quality applied talent training platform, it is necessary to revise the talent training plan, optimize and strengthen the practical teaching modules of existing courses, and strengthen the construction of the practical teaching system [3]. The theoretical foundation of university teaching and research teams is solid, with a focus on theoretical teaching and research, and a weakness in practical operation and guidance. On the other hand, off campus enterprise work teams have strong practical abilities and rich project practical experience, which can effectively compensate for the shortcomings in practical teaching. After the signing of the cooperation agreement between both parties, the professional teams of both parties need to carefully discuss the existing talent training plan, especially the practical part of some professional courses. Based on the configuration of hardware facilities on campus, practical guidance teams from external enterprises can be invited to settle on campus to provide practical teaching guidance. If the practical conditions on campus are not met, students can also be arranged to the enterprise in batches, Utilizing the venue and equipment of enterprises to carry out course practice, so that practical courses can truly achieve the goal of training students, rather than being mere formality, and form a professional co construction mechanism that integrates industry and education to meet the needs of talent cultivation and industry enterprises, improving the quality of applied talent cultivation[5].

3.3. Building a Mutually Beneficial and Win-Win School Enterprise Collaborative Practice and Education Strategy Guarantee

School enterprise cooperation must be established on the basis of voluntary reciprocity, and a transparent, open, and sustainable long-term cooperation mechanism must be established. This is the fundamental guarantee for long-term cooperation between schools and enterprises. The construction of a cooperation framework needs to consider the following aspects:

(1)System guarantee for practical education through school enterprise cooperation

As the saying goes, "Without rules, no square or circle can be formed." Before signing a cooperation agreement between schools and enterprises, it is necessary to discuss and develop a comprehensive agreement plan that is recognized by both parties, including the cooperation mode, the personnel and funds invested by both parties, the rights and obligations of both parties, and clarify various reward and punishment systems. The rules can be refined to the detailed requirements of a specific practical training, The compensation plan for losses incurred by the other party due to the irreparable fault of one party. In short, the more detailed and comprehensive the agreement is, the more conducive it is to clarify the responsibilities of both parties and allow for the addition of new problems in the form of attachments during the cooperation process.

(2)The fulfillment and self realization guarantee of the vision of both parties in school enterprise cooperation

If both schools and enterprises can walk hand in hand, there must be mutual satisfaction of their needs. For universities, practical training requires the company's venue, equipment, resource platform, and experienced practical training guidance team. Universities make full use of these resources, which not only saves the cost of purchasing practical training equipment, but also improves students' practical skills, making practical training more targeted, practical, and systematic, And innovated the practical education model in universities. For enterprises, in today's rapidly developing modern high-tech world, in order to stand invincible in the fierce domestic and international market competition, they must have strong capabilities in new product research and development, product innovation, and technological achievement transformation. Therefore, enterprises need a team of senior experts from universities to participate, provide professional theoretical guidance, technical support, and even participate in scientific research in major cutting-edge fields, At the same time, enterprises can also make full use of the cheap group resources of students, carry out planned preliminary experiments for some projects, and select and reserve professional and technical talents for enterprises in advance. Only when both parties have urgent needs and are mutually satisfied, can school enterprise cooperation be sustainable and efficient.

(3)Software and hardware equipment and facilities guarantee for the practical education platform jointly built by schools and enterprises

Universities are constantly trying to go global in practical education, exploring joint training guidance with off campus enterprises. In terms of practical training, universities need strong software and hardware resources from enterprises. Enterprises have fixed infrastructure such as factories, workshops, experimental venues, and research bases, and are equipped with full process equipment for different purposes, which can be used by university students to carry out various professional teaching experiments and innovative experiments, Conducting experiments using enterprise equipment and facilities can not only greatly enhance the practical skills of college students, but also improve resource utilization.

(4)The sharing of achievements in collaborative education between schools and enterprises and the guarantee of a balanced mechanism for benefit distribution[9]

Collaborative education is carried out between schools and enterprises. In addition to fulfilling the responsibilities stipulated in the agreement, both parties also share various

achievements brought about by the cooperation, including economic income and scientific research achievements created by the cooperation. Therefore, when signing the cooperation agreement, both parties must clarify the distribution of co creation benefits and achievements, establish a fair, just, and transparent co creation benefit distribution mechanism, in order to ensure that school enterprise cooperation operates on a benign and long-term track. School enterprise cooperation not only improves the quality of applied talent training, but also helps to improve the knowledge and theoretical level and scientific research ability of team members.

3.4. Establish an Effective Supervision Mechanism for the Practical Training Process of School Enterprise Cooperation

(1)Safety supervision of students during the practical process

Safety is the premise and foundation of all production, and safety supervision in the practical process is a protective umbrella that safeguards the smooth progress of practical activities. It not only ensures the safety of the activity, but also allows participants to immerse themselves in the practical process with peace of mind.

Firstly, developing safety plans and regulations is an important part of safety supervision in the practical process. This not only clarifies safety objectives and requirements, but also provides participants with clear equipment operation guidelines. Through the constraints of rules and regulations, participants can better understand and comply with relevant regulations, thereby avoiding the potential risk of equipment damage.

Secondly, equipment safety training is an important means to enhance the safety awareness and skills of participants. Through training, participants can understand and master the operating standards of the equipment. At the same time, training can also help participants develop good safety usage habits, thereby providing security for practical activities.

Finally, in the process of practice, technical personnel need to go deep into the field, promptly correct any bad behavior in equipment operation, and prevent accidents from occurring. At the same time, safety inspections should be conducted on the equipment, tools, and equipment used. For equipment with safety hazards, timely maintenance or replacement is required to avoid potential safety risks.

(2)Supervision of guidance quality for guiding teachers in practice

The guiding teacher should adopt a rigorous and scientific attitude, strictly require every student, comprehensively inspect all aspects of the practical process, without missing any details, and carefully supervise every aspect of the practical process to ensure that the student's practical results achieve the expected goals. The level of seriousness of the guiding teacher directly affects the effectiveness of the practice. During the practice process, the mentor should provide careful guidance to students when encountering problems, help them solve difficulties effectively, not only focus on the results, but also pay attention to the practical process and methods of students, ensure that their practical results reach high quality, and help improve their practical ability and level.

3.5. The Assessment and Evaluation System for the Practical Training Process of Innovative School Enterprise Cooperation

The goal of the innovative assessment system for school enterprise cooperation practical training process is to ensure the quality and effectiveness of school enterprise cooperation practical training, improve students' learning enthusiasm and practical ability, and also provide enterprises with talents that better meet practical needs.

(1) Establish clear assessment standards: Before the start of practical training, schools and enterprises should jointly establish clear assessment standards, including assessment content, assessment methods, assessment time, etc. This can enable students to have clear learning goals and improve learning outcomes during practical training.

(2) Multiple assessment methods should be adopted: the assessment forms should be diverse, including written tests, practical operations, project results, and other forms, in order to comprehensively evaluate the practical training effectiveness of students.

(3) Emphasis on process assessment: In practical training, process assessment should be emphasized, including the performance of students in attendance, learning attitude, teamwork ability, hands-on ability, communication ability, and other aspects. These aspects of performance can reflect the comprehensive quality of students and are also important references for enterprises to select and employ personnel.

(4) Establish a feedback mechanism for assessment: Schools and enterprises should establish a feedback mechanism to promptly provide assessment results to students, so that students can understand their shortcomings and adjust their learning strategies in a timely manner. At the same time, schools and enterprises should also adjust the content and teaching methods of practical training in a timely manner based on the assessment results, in order to improve the quality of teaching.

(5) Develop a reward and punishment system: In order to encourage students to participate in practical training seriously, schools and enterprises can establish a reward and punishment system to reward outstanding students and punish under performing students. This can enhance students' competitive awareness and learning motivation.

4. The Achievements of Our University's Joint Construction of Practical Training Bases with Enterprises

In the past few years, our hospital has achieved significant results in the construction of practical training bases through continuous innovation and exploration. It has not only improved the practical ability and comprehensive quality of students, but also cultivated a large number of practical excellent talents for enterprises and society. We now summarize the achievements of our practical training from the following aspects:

1. Improved practical ability and comprehensive quality of students: Through learning and training in practical training bases, their practical ability and comprehensive quality have been significantly improved. They have not only improved their professional skills, but also cultivated various abilities such as teamwork spirit, communication ability, and innovative thinking.

2. Close cooperation between schools and enterprises has been achieved: Our college has established close cooperative relationships with many enterprises to jointly build practical training bases. This cooperation model not only provides students with more practical opportunities, but also provides stable talent sources and professional technical support for enterprises.

3. Promoting the integrated development of industry, academia, and research: Our practical training base not only focuses on practical training for students, but also actively carries out scientific research and social services. Through cooperation with enterprises and society, we have achieved the integrated development of industry, academia, and research, making positive contributions to promoting industrial upgrading and local economic development.

4. Promoted the construction of the practical teaching team: The construction of practical training bases has correspondingly increased the requirements for teachers. In order to better guide and assist students, teachers from both schools and enterprises continuously strengthen their own learning and practice, and improve their professional literacy and teaching ability.

5. Expanded social influence: The construction achievements of our practical training base have been widely recognized and paid attention to by various sectors of society, and many enterprises and institutions have come to visit and inspect, seeking opportunities for cooperation. At the same time, our institute actively participates in social public welfare activities through practical training bases, making positive contributions to society.

5. The Shortcomings and Improvement Measures of the Practical Training Base Jointly Built by Enterprises in Our University

Practical training bases are an important way to enhance students' practical abilities, but in the actual construction process, there are still the following shortcomings:

1. Lack of deep cooperation: The purpose of jointly building practical training bases between schools and enterprises is to achieve deep cooperation and jointly cultivate talents. However, in practical operation, there may be situations where the cooperation between the two parties is not deep enough, resulting in unsatisfactory results of practical training.

2. Uneven resource allocation: During the construction and operation of practical training bases, there may be issues of uneven resource allocation. For example, some majors or courses may have more practical opportunities, while others may have relatively fewer, which may result in some students not being able to fully experience the essence of practical training.

3. Insufficient teaching staff: The construction and operation of practical training bases require a high-quality and professional teaching staff. However, in practical operation, there may be a shortage of teaching staff, which can affect the teaching quality of practical training.

4. Incomplete management system: The management system of the practical training base is an important guarantee to ensure its normal operation and teaching quality. However, in practical operation, there are problems with imperfect management systems, leading to chaotic management of practical training bases and affecting the practical

effectiveness of students.

To address the above issues, the following measures can be taken:

1.Strengthen deep cooperation between schools and enterprises: Schools and enterprises should strengthen communication and cooperation, jointly develop talent training programs and teaching plans, and ensure that the construction and operation of practical training bases meet the needs and expectations of both parties.

2.Optimize resource allocation: Schools and enterprises should allocate resources reasonably to ensure that every major or course has sufficient practical opportunities. At the same time, resource allocation plans can be adjusted according to actual situations to meet the needs of different majors or courses.

3.Strengthening the construction of the teaching staff: Schools should strengthen the training and management of teachers, improve their professional competence and teaching ability. At the same time, enterprise experts or technical backbone can be invited to serve as part-time teachers in practical training bases, providing students with more practical teaching guidance.

4.Improve management system: Schools and enterprises should jointly develop a management system for practical training bases, clarifying the responsibilities and rights of all parties. At the same time, supervision and assessment of practical training bases should be strengthened to ensure their normal operation and teaching quality.

6. Conclusion

The practical training base is an important way to cultivate applied talents. Over the years, our hospital has been continuously trying to cultivate applied talents. Through school enterprise cooperation to jointly build practical training bases, we explore and cooperate with enterprises in terms of cooperation mode, operation mechanism, process supervision, institutional guarantee, and evaluation to build a complete set of high-quality and practical oriented talent training mechanisms. By fully utilizing the advantageous resources of both parties, we can achieve the transformation from theory to practical skills, provide students with a more comprehensive and in-depth learning experience, truly improve the quality of applied talent cultivation in universities, and also provide excellent talent resource reserves for enterprises, promoting the deep integration and development of industry academia research.

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