



A Study on the Practice Education Strategy of Environmental Design Majors in Applied Undergraduate Programs in the Context of Human-Job Matching

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Abstract. Talent cultivation is the first of the four basic functions of universities. In the background of the current situation, the optimization and reform of talent cultivation mode is an important research basis facing the transformation of applied colleges and universities. Person-job matching is an important index to evaluate the employment quality. This paper takes the environmental design major of Guangdong Institute of Science and Technology as an example to investigate the employment destination of environmental design graduates and the matching degree of course content and employment, analyze the content of the research data, and explore how to make students better employed in the context of human-job matching. It is important to improve the quality of students' learning in school, optimize social human resources and promote social progress.

Keywords: human-job matching · environment design · strategy

1 The Current Situation of the Development of Human-Job Matching for Environmental Design Majors - Taking Guangdong Institute of Science and Technology as an Example

1.1 The Concept of Job Matching

People have different personality structures, and these personality differences are suitable for different careers, so that people can find the right career according to their personality characteristics and achieve the purpose of job matching [1] The purpose of this study is to investigate how to help students find employment by constructing an analytical framework based on multidimensional research data. Through a case study of employment data from one school, we will study the matching career needs, personal needs, interests and psychological requirements to select the corresponding career types in order to achieve the effect of job-matching. [2] We insist on the principle of “Matching the person with the job and teaching the student according to his or her ability”, respect the students' individual development wishes, and implement the classification training in order to meet the diversified development needs of the students in terms of their needs for employment, further study and entrepreneurship.

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Employment indicators for undergraduate art majors six months after graduation in 2020				
Specialty Codes	Professional Codes	Specialty Codes	Employment rate six months after graduation	Job and professional relevance
Music and Dance	130201	Music Performance	85.30%	68%
	130202	Music	89.40%	78%
	130205	Dance	90.70%	74%
Theatre and Film	130301	Performances	87.20%	52%
	13004	Drama, Film and Television Literature	86.40%	63%
	130305	Radio and Television Choreographer	87.30%	58%
	130309	Broadcasting and Hosting	87.10%	69%
Fine Arts	130310	Animation	89.30%	74%
	130401	Painting	90.20%	64%
Design	130402	Fine Arts	84.50%	69%
	130502	Visual Communication Design	89.90%	69%
	130503	Environmental Design	91.50%	67%
	130504	Product Design	91.30%	61%
	130505	Fashion and Apparel Design	89.80%	64%
	130508	Digital Media Art	94.60%	75%

Fig. 1. Employment indicators for undergraduate art majors six months after graduation in 2020

1.2 Analysis of the Employment Situation of Environmental Design Professionals

In recent years, the environmental design industry has been playing an increasingly important role in the urbanization process. Students in school learn more theoretical knowledge and lack practical experience. This teaching mode can no longer meet the needs of the market, and the industry-education integration mode can help students better adapt to the needs of the workplace. This data contains all the professional employment and professional learning matching situation of art and design majors, as well as the employment rate six months after graduation. As shown in Fig. 1, the employment rate of art graduates six months after graduation is relatively high, among which the employment rate of environmental design majors reaches 91.5%, comparing with the average employment rate of other majors, ranking the second overall. However, there is some difference in the correlation between jobs and majors, and the correlation degree is 67%. This data shows that the employment choices of graduates of environmental design majors are relatively more in other employment directions besides the employment in the enterprises corresponding to their majors.

1.3 Analysis of Employment Matching Degree of Environmental Design Majors—Example of 2022 Graduates of Guangdong Institute of Science and Technology

According to the above research background, the 2022 graduates of Guangdong Institute of Science and Technology in Dongguan City, Guangdong Province, who graduated in 2022 with a major in environmental design, were used as a research sample to compare and analyze the employment rate with the national employment situation. The sample

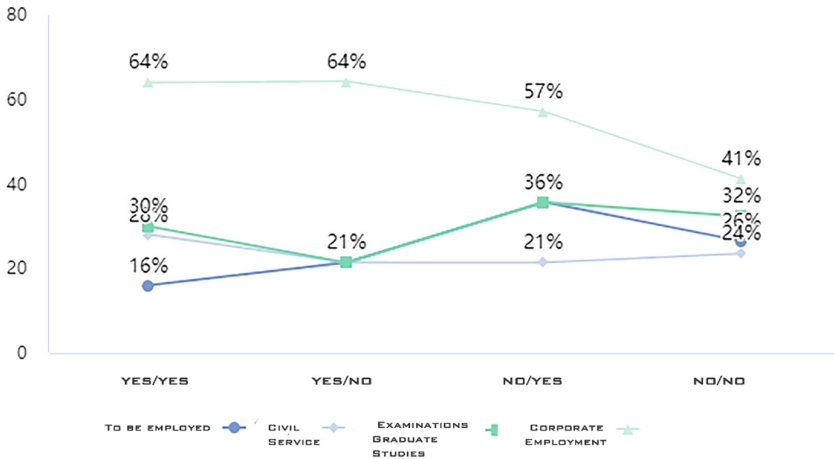


Fig. 2. Employment of 2022 Graduates of Guangdong Institute of Science and Technology

was 150 college graduates of environmental design major for questionnaire survey. As Fig. 2 shows, the data analysis revealed that 56.16% of the graduates could not have a very clear employment goal for their future employment during their study. After graduation, 64.38% of the students did not engage in their major and 35.62% of the students engaged in their major. The survey analysis shows that the correlation between employment imagery and future employment match is high, and students fail to choose the employment direction related to their major after graduation because they cannot better understand the industry-related employment content and future enterprise practice during their study period. The employment rate of enterprise counterparts is 64%, which is not much different from the national employment rate of 67% for environmental design majors. Through the data, we found that the remaining 36% of students who were not employed in the same direction after graduation were divided into four directions: employment in enterprises, public examinations, graduate school, and others. However, the course content set in the school does not fully cover all the needs, nor can it be targeted to help students better choose a career that matches their own.

2 Construction of Practice Education Strategy for Environmental Design Majors in the Context of Human-Job Matching

The training of environmental design professionals in the context of human-job matching, schools should develop career and job matching programs with enterprises or other industry enterprises according to students' needs, in order to improve students' employment competitiveness [3].

2.1 Practical Teaching System of Industry-Education Integration - School-Enterprise Cooperation

Establish a practical teaching system with school-enterprise cooperation, linking coursework with practical projects of enterprises. [4] Students should carry out practical application of theoretical knowledge through practical projects to improve practical experience and comprehensive quality. Strengthen industry exchange and cooperation. Schools should actively establish contacts with enterprises, gain an in-depth understanding of industry needs, develop talent training programs, and strengthen communication and cooperation between students and enterprises. [5] Improve the overall quality of students. In addition to the cultivation of professional knowledge and skills, we should also focus on the cultivation of students' soft power, such as communication and coordination ability, teamwork ability and leadership ability. So that students can really become the talents needed in the enterprises.

2.2 Build a Talent Pool

Establishing a talent pool of environmental design professionals can provide more recruitment resources for enterprises. Students will be classified according to their usual practice performance and study or competition performance to establish a talent pool. [6] When recruiting, the school helps enterprises to find the talents they need more accurately in the demand of enterprises, and find excellent graduates of environmental design from them, and establish contact information and files to provide more talents for enterprises to choose from.

2.3 Conduct Talent Training and Career Development Planning

Environmental design professionals need to have certain comprehensive qualities, including good design concepts, innovation consciousness and comprehensive application ability. In addition, they also need to have certain soft strengths, such as communication and coordination ability, teamwork ability and leadership ability. [7] Therefore, environmental design professionals need to master relevant professional knowledge and skills, and also need to focus on the cultivation of comprehensive quality. In order to improve the comprehensive quality and professional ability of environmental design professionals, enterprises can carry out relevant talent training and career development planning. Through professional skills training, industry knowledge popularization, and career planning guidance, we can help students understand the corporate culture and career development path, and improve their professionalism and working ability [8].

3 The Practice of Environmental Design Professional Education in the Context of Human-Job Matching

3.1 Exam-Oriented - Integrated with the Curriculum

In recent years, the number of national master's degree applicants has shown a year-on-year increase due to multiple factors such as the increased requirements of individual candidates for their own development, higher employment pressure on graduates, the

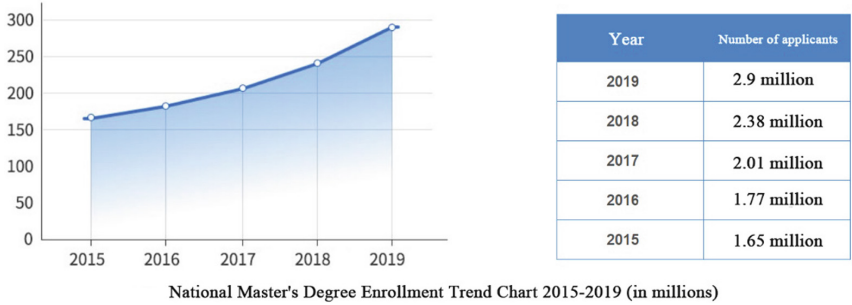


Fig. 3. The number of national master's degree applicants in the past five years

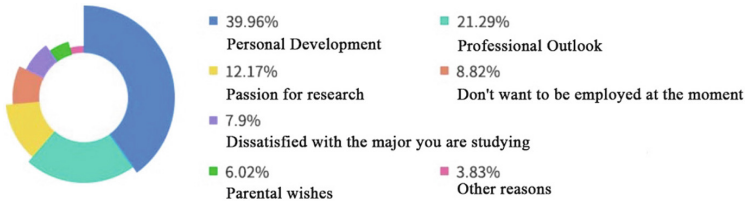


Fig. 4. Research table on willingness to study for graduate school

inclusion of part-time graduate exams in the general examination and the expansion of graduate enrollment. According to the statistics of the research network as shown in Fig. 4 survey shows that the number of students' intention to take the exam doubled from 1.65 million in 2015 compared to the 2019 data. As shown in Fig. 5, close to 60% of students mainly focus on the consideration of future employment prospects to choose graduate school [9] Fig. 3.

As shown in Fig. 5, the number of students applying for graduate exams in environmental design at Guangdong Institute of Science and Technology is also increasing year by year. It rises from about 10 in 2019 to 50 in 2022, accounting for about 30% of the total number of majors. According to the demand of students, the course of "Fast Design" is combined with the content of the examination in the professional teaching, so as to better counsel and help students to take the examination, and until last year, it has broken through from 0 students in 2019 to 4 students in 2022, achieving a positive growth [10].

3.2 For Employment in Enterprises - the Establishment of Innovative Classes

In response to the needs of students employed by enterprises, the Environmental Design Department offers an innovative class. The intention is to select outstanding students, cooperate deeply with companies, and build a class that can both improve students' professional skills and allow companies to select talents. Based on the training needs of the innovation class, the College of Art and Design signed a cooperation agreement with the company. The project-based teaching model is introduced, and real engineering cases are used to drive the teaching, so that students can directly participate in production

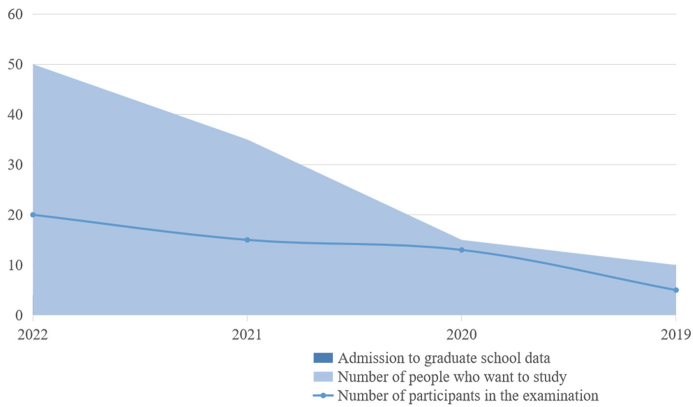


Fig. 5. Statistics of Guangdong Institute of Science and Technology 2019–2022 examinations

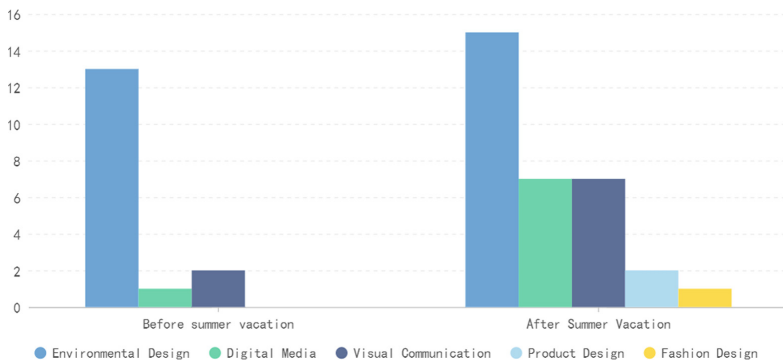


Fig. 6. Implementation of Innovation Classes in Guangdong Institute of Science and Technology

practice during the teaching process. As Fig. 6 shows, the total number of students participating in the innovation class in the College of Art and Design is 32, of which 15 are majoring in environmental design, accounting for 50% of the whole college. The data shows that the environmental design majors are in high demand by enterprises and the project teaching cultivates talents more in line with the needs of enterprises. Therefore, the number of students in the innovation class is also increasing year by year, so that students can not only master the theoretical knowledge in the course of study, but also learn skills through practical projects and improve their practical ability, so that they can better adapt to the requirements of their future careers.

4 Concluding Remarks

In the context of “matching people with jobs”, we emphasize the school’s role as a link by conducting research on students’ employment needs and the needs of the social industry. Through the above, the curriculum reform of environmental design, for example, the teaching of environmental design should not only impart theoretical knowledge

to students, but also strengthen the practical practice to enhance the students' comprehension and application of knowledge. It helps to further improve the teaching effect of environmental design.

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