

Research on the Enhancement of Students' Occupation Ability in Engineering Colleges

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Abstract

This paper analyzes the contemporary problems of the employment ability of engineering college students under the current situation that most engineering college students lack employment ability. The paper analyzes the specific needs of different enterprises to the employment ability of college students, and explores the ways to improve the employment ability of engineering students from different perspectives, such as government policy, university curriculum system, classroom teaching with extracurricular activities, and students themselves.

Keywords

Occupation ability, Engineering colleges, Higher education.

1. Introduction

Improving the employment competitiveness of college students is an important requirement of employment guidance education in colleges and universities. At present, with the rapid development of the tertiary industry, societies need for engineering students is growing. How to effectively improve the employment ability of engineering students is becoming increasingly important. Objectives of training engineering students are to train a number of innovative engineering and technical personnel of high-quality given the needs of society. In order to achieve this goal, a comprehensive analysis of current employment issues is required and a series of measures to meet the needs of society should be developed.

2. Problems existing in the employment ability of engineering college students

2.1 Poor Engineering Ability to Work

The engineering personnel training objectives of Chinese engineering universities are not detailed. Engineering college students in the university campus accept most of the theoretical knowledge, lacking an awareness of innovation. Their practical ability is weak. As students seldom participate in social practice, when faced with practical work, students are often inexperienced, show poor operational capacity, and are underqualified for the work.

2.2 The Employment Expectations are Too High

For college graduates, they tend to have a higher vision for the future, and higher requirements for their employment conditions. However, the reality is that, due to a lack of self-knowledge, students will blindly choose a career and they're not clear whether their ability matches the need of the job. They cannot fully understand the job situation, and thus cannot manage their job.

2.3 The Lack of Proper Employment Guidance

The employment guidance and education of college students are not strong enough, and the theory combining the practice of employment guidance is not strengthened. The employment guidance system is not perfect, the content of employment guidance is not perfect, and the guidance of student's career planning is not really implemented. For the freshmen, it's common to convene a "mobilization meeting" or open freshman elective courses as the beginning of the employment education. Employment guidance, provided in an open class form, is only for the graduates of the year and gives

a general introduction to the employment situation and employment policy. Employment guidance during the middle learning stage is almost blank.

2.4 Moral quality needs to be improved

At present, graduates often violate contracts and make changes in work procedure which makes enterprises particularly worried. These actions resulted in troubles in personnel arrangements and waste of resources (these actions result in a waste of resources and cause troubles to arise with regard to personal arrangements). Enterprises have great concern about the integrity and loyalty of students. 63% of the students think that this is to achieve personal career aspiration. Only 6% of the students think that is immoral. This fully illustrates the current needs of students to enhance their ethics.

2.5 Self-regulation and resistance of pressure capacity is low

According to the survey, 41% of the students think that as a knowledgeable youth, there is no need to participate in manual labor; 43% of the students participated, not willingly. This means that students' self-regulation ability is weak and that they cannot adapt themselves to changes in the working environment. Some students encounter setbacks in the course of work; they cannot adjust their psychological state as soon as possible, and then become nervous, irritable and so on.

2.6 Professional knowledge structure, skills are not prominent

The structure of professional knowledge is not comprehensive and professional skills are not prominent among engineering college students. These problems are mainly due to the curriculum system given the market demand is not perfect. In the current universities' curriculum system, not combining the theory and practice of training makes quality of graduates one-sided and theorized.

3. The social needs of college students

In May 2016, 60 questionnaires were issued to the human resource managers of state-owned enterprises, foreign-funded enterprises, and private enterprises and 53 valid questionnaires were collected. The most important social needs of college students are moral quality, responsibility, frustration, execution, team awareness, interpersonal skills, expression, competition and innovation. Different types of businesses have different requirements for the ability and quality of graduates. The ability to meet the needs of each industry in the top five are: The state-owned enterprises demand higher moral quality (20.53%), responsibility (19.45%), execution (16.13%), interpersonal skills (17.64%), and success ability (15.67%). Private enterprises require practical ability (19.13%), responsibility (24.34%), ability not to get frustrated (12.34%), competition consciousness (18.13%), and innovation consciousness (17.28%); Foreign-funded enterprises require innovation consciousness (16.14%), execution (19.17%), competitive consciousness (20.89%), teamwork (16.07%), and communication skills (15.86%). Joint ventures require teamwork (17.73%), competition consciousness (18.47%), innovation consciousness (16.73%), expressive ability (19.68%), and ability not to get frustrated (16.77%).

4. The way to improve the employment ability of engineering college students

4.1 Improve the relevant policies

Government performs macro-control of higher education, guiding the training of employment ability for college students with policy. In terms of policy making, the government should play the role of "invisible hand" through the employment policy, transform the government functions, formulate relevant laws, regulations and policies, standardize and improve the labor market and create employment opportunities for college students. In the allocation of educational resources, the government should rationally allocate educational resources to guide the colleges and universities towards becoming a diversified comprehensive research university instead of the wrong path which only stresses the heavy scientific research. Universities should attach importance to cultivating employment ability of college students.

4.2 Improve the curriculum system

Colleges and universities should pay close attention to market demand, adhere to the principle of laying stress on the foundation and scientifically construct the curriculum system; on the elective system, change the situation of too many professional compulsory courses, and increase the proportion of professional elective courses. Let humanities education run throughout the teaching of specialized courses, making science and humanities sciences organically combine. Schools should make students equipped with professional knowledge of science and culture while improving their innovation and literacy capability.

The curriculum system should also include career planning education. In the initial stage of career planning, through the psychological questionnaire, career planning open class and other forms, students can understand universities' meaning and understand themselves; In the expansionstage of career planning, through school-enterprise interview,students will further deepen their knowledge of career planning; In the practice stage of career planning, through practice, interviews, schools' enterprise visits and other activities to strengthen communication, students will deepen their understanding of society and clarify their career direction; In the stage of career planningassessment and adjustment, according to the implementation of the results, students should do the assessment and correction.

Table 1 Curriculum Requirements in different stages

Stage of Career Planning	Curriculum Requirements
The initial stage	①To help students understand the significance of the University, the main task and direction ②To help students understand their physiological, psychological characteristics, interests and hobbies
The expansionstage	① To guide students to understand anda variety of occupations ②To deepen students' understanding of the meaning of career planning, through the organization of business exchanges and other activities ③ To guide students to deepen the understanding of professional direction, improve their overall quality andinitially determine career development goals
The practice stage	To strengthen the students practical ability through practice To enable students to deepen understanding of the society and clarify their career direction through the interviews, school visits and other activities
The assessment and adjustment stage	Evaluate and correct according to the results

4.3 Combine theClassroom teaching and extracurricular activities

The curriculum system should not be confined to classroom teaching. On the one hand, the teaching department should adapt to social needs, set the appropriate course system, and give full play to the professional trainingin classroom. On the other hand, the student management department should consider the characteristics of students of different grades, their psychological and behavioral characteristics,and give targeted career development planning, special employment capacity-building and school-enterprise extracurricular activities. University of Technology should establish a mechanism of cooperation between schools and enterprises, for students to build internship stage, so that students can feel the enterprises' culture and management models. Classroom teaching should consciously develop students' practical ability.

Finally, through the combination of classroom and extracurricular activities, students can fully harvest the resources available to them, improve their overall quality, and improve their employability.

4.4 Enhance their own awareness and personal qualities

College students' own efforts are the key factors to enhance their employability. In terms of morality, students should learn to be responsible for their own moral code and reflect upon their own success and failure. In life, students should learn self-management and self-motivation to consciously enhance their core competitiveness and self-confidence. In the terms of knowledge, students should strengthen their professionalism, training, innovative thinking ability, and pay attention to the concept of internal self-employment.

5. Conclusion

After four years of college life, engineering students should become innovative and applied engineering and technical personnel, serve the society, and get accepted by society. In order to cultivate the engineering students' theoretical knowledge, the engineering universities should strengthen the curriculum system of employment guidance and construct a teaching plan that is suitable for undergraduates with extracurricular activities and classroom teaching, so as to equip the students with practical innovative ability to fit the market demand. The teaching plan should pay attention to the humanitarian quality of engineering students, and enhance the students' social communication ability. Students should make their own beginnings. In the aspect of morality, students should improve their lives themselves, have the courage to play, to open up, and get out of the low employment capacity. The government should formulate relevant policies, rational allocation of educational resources, and give macroscopic guidance. Only through using this series of scientific methods can the employability of engineering students be improved effectively.

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