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Employment Analysis of Second Batch Engineering Students

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Abstract: The quality of employment of graduates is the most direct indicator of the achievement of talent cultivation in universities. At present, engineering students of second batch schools are facing major challenges in seeking jobs. The second batch institutions cited here are the sum of the second batch of institutions enrolling students in the various national general higher education admissions exercises, including public and private general undergraduate programs. Based on related literature, the author has discussed and analyzed the employment quality of second-year engineering students. The result shows that, at present, engineering students of second batch schools are facing major challenges in seeking jobs. Second batch colleges and universities should give full play to all their abilities to explore the potential of engineering students. Society should improve the relevant regulations to let engineering students feel at ease in their job search. Second batch students should not be overly ambitious, but should be down-to-earth and do a good job in every job and put their minds at ease.

Keywords: graduates, engineering major, employment, second batch graduates

1. Introduction

Due to the educational reform of colleges and universities, university graduates are becoming more and more common, and the scale of colleges and universities has changed greatly. The number of gaokao students increased from 9.39 million in 2014 to 10.47 million in 2019. The proportion of the overall college entrance examination is gradually increasing. According to statistics, the admission rate for Chinese college entrance examinations increased 2.65 times in 20 years, from 33.86 percent in 1998 to 90 percent in 2019 [1]. Their fresh graduates face many difficulties and challenges in employment. especially for the second batch of engineering students, as there are fewer articles exploring this group of people. Previous articles have focused on the study of college students employment psychological problems and countermeasures. There are also studies on how college students should cope with employment difficulties in the context of big data. This paper focuses on the two engineering students, and at the same time, it also refers to the views of predecessors to carry out a series of discussions and research. This paper will focus on the second batch engineering students as the main object of discussion, analyzing the employment dilemmas and solutions of the second-year engineering college students. The second batch institutions cited here are the sum of the second batch of institutions enrolling students in the various national general higher education admissions exercises, including public and private general undergraduate programs. Finally, it puts forward some effective measures to solve the difficult employment of college students, hoping to

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provide some useful suggestions to the majority of colleges and universities and students, as far as possible to change the employment situation of college graduates that is not optimistic enough.

2. The Employment Circumstances Dilemma Faced by Second Batch Engineering Students

2.1. Uneven Supply and Demand in the Job Market

Higher education aims to cultivate comprehensive talents, but there are not so many high-end positions in society. It makes it impossible for second batch college graduates to get the ideal positions, resulting in a waste of educational resources [2]. In the anonymized process from CV submission to interview, companies are more concerned with the institutionalized cultural capital of fresh graduates. With authenticity difficult to guarantee, certificates that can be checked by authoritative bodies are almost the only criteria for measuring talent, and the differentiation between a university and a second university also places higher demands on the group of second-year students. However, at the interview stage, including after joining the company, cultural capital, in its concrete and objective state, gradually plays an important role, measuring many elements of personal qualities that cannot be reflected in institutionalized cultural capital. The fact that first-level institutions themselves have more cultural capital than institutions is not the main reason for difficulties in employment. This is because the emphasis on theory rather than practice, i.e., neglecting the transmission of cultural capital in specific states, is a problem that needs to be addressed in universities in general.

2.2. Engineering Employment Environment Issues

On the one hand, the fundamental requirement for the transformation and upgrading of China's manufacturing industry is to move from a large manufacturing country to a strong manufacturing country, which has led to an increasing demand for technical talents in the modern manufacturing industry, with a huge shortage of 12.2 million professional and technical talents [3]. On the other hand, fresh engineering students are facing "employment difficulties". Their knowledge and ability structure cannot meet the employment standards of enterprises and there is a discrepancy between their personal wishes and the wishes of society. Engineering students have strong practical skills and logical thinking ability, and they expect to change their lives through the knowledge and technology they have learned, but they also tend to have high expectations in employment. For example, most engineering graduates hope to work in economically developed cities, and hope to enter large enterprises such as state-owned enterprises, while many manufacturing companies are located in second or third-tier cities or belong to the nature of private enterprises. There is also the fact that the working environment in the manufacturing industry is generally poor, and that the health of workers is at risk due to the lack of corporate governance, which makes some students reluctant to enter the industry.

3. Social Attitude and Self-positioning

Most contemporary university students are born after the "00s" and are deeply influenced by the reform and opening up of the Internet. In terms of their choice of working areas, big cities have become the primary areas for university students to find jobs. Due to the influence of negative social thinking, some university students are overly ambitious in the process of job hunting, lacking in overall situation and life orientation, pursuing short-term interests and material enjoyment with strong selfishness and utilitarianism. At present, some university students do not have a correct understanding of their own abilities, and some of them even overestimate or underestimate their own abilities, making it difficult to clarify their own strengths and weaknesses in the process of job hunting [4]. Due to a lack of self-awareness, employment does not have a clear goal. According to the market

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positioning and their own development needs to carry out a targeted job search, there is a certain degree of blindness. In addition, some students in the job search process due to a lack of understanding of job positions and their own development needs, the lack of a clear direction of employment, but also the ability to blindly follow the herd mentality, easily influenced by parents, teachers, and classmates, and thus choose to work in pairs, a lack of autonomy, which will lead to their work in the later stages of maladjustment, resulting in their resistance to work, boredom with work. Some students even choose to keep changing jobs, which has a negative impact on their later development. In summary, it is even more difficult for second batch engineering students without the symbols of cultural capital, interpersonal skills, pressured by social opinion, and so on. How to change the dilemma is an important proposition for second batch engineering students in school.

4. The Employment Core Competitiveness Dilemma Faced by Second Batch Engineering Students

4.1. Inadequate Humanities Education in Higher Education, Especially in Engineering Colleges

The humanities education in part of engineering colleges and universities faces the difficulties of a single education method and the lack of modern education technology and education methods, which all affect the improvement of the humanities education of engineering students and are not conducive to the enhancement of the core competitiveness of engineering students in employment [5]. The inadequacy of humanities education in engineering colleges is affected by many factors, such as the low level of lectures and reports on humanities education, and the difficulty of inviting famous humanities scholars to give lectures in some non-famous “985 Project” and “211 Project” colleges, not to mention the second batch colleges. According to the survey, the training program of engineering students includes a certain degree of practical training, but most of the time, the inculcation of theoretical knowledge still far exceeds hands-on operation. Due to the special characteristics of the profession, engineering students are mostly in contact with machinery and experiments for a long time, which results in engineering students having little opportunity to face the real working environment in most cases. Therefore, engineering students do not know what kind of talent society or enterprises need. As a result, engineering students do not know what kind of talent society or enterprises need. Knowledge and skills are only one aspect, but a good humanistic culture is conducive to the enhancement of corporate spirit and corporate culture, and the employment requirements of enterprises and society are not only in terms of knowledge and skills. The training programs for engineering students generally overemphasize the importance of professional knowledge and skills at the expense of humanistic skills.

4.2. Students Insufficient Attention to Humanities and Social Sciences

Engineering students do not have a clear understanding of their own development, the value of the humanities, or the needs of society in the future. In the Internet era, students can access information and knowledge in a timely and convenient manner [6]. Some engineering students believe that humanities knowledge is readily available through the Internet and that they do not need to memorize it. This is not conducive to the enhancement of humanities literacy among engineering students, because by memorizing humanities knowledge, students can internalize it into their own knowledge system and develop creative ability and strong willpower, which can help them get through difficulties in their future job. At the same time, some engineering students have the idea that humanities knowledge is irrelevant as long as they learn their knowledge and skills well, and some students are too lazy to study and neglect their studies, paying little attention to humanities knowledge.

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5. Suggestions for Improvement

5.1. Colleges & Universities

First of all, all second batch colleges and universities should take ideological education as the leader to correct the employment value orientation of college students. In the process of employment guidance, they should be led by ideological education to correct the students' employment value orientation so that they can plan their careers in a practical and reasonable way [8]7]. Secondly, colleges and universities should combine the background of the times and innovate the mode of "Internet+Employment Guidance" [8]. For example, university teachers can guide students to make use of the relevant online platform to do a career assessment seriously, so that they can clearly understand their own abilities, strengths and career directions that are more helpful to their development through the data results of the assessment. In addition, information technology can also be used to improve the employment information database. If possible, it is advisable to set up an on-campus career guidance platform, where students can leave comments, teachers can solve their problems, and students from various professional colleges can communicate with each other to further understand society and themselves. It is also important to focus on cooperation with enterprises and to carry out more internships.

5.2. Personal Effort

First of all, individuals should correctly treat the frustration and difficulties of job hunting. It is normal for second-batch students to encounter difficulties and setbacks in the job search process, and the psychological problems caused by these difficulties and setbacks are very normal. Therefore, students should face up to the problems, analyze their causes, and at the same time reduce expectations and take effective methods to solve these problems in a timely manner to bring us difficulties and challenges in the job search process. They should improve their core competencies for employment, including the ability to learn, to innovate, to cooperate, to endure hardship, to express themselves and to practice. The most important thing for second-batch engineering students is to improve their humanities skills, strengthen their critical thinking, improve their own sense of independent communication, and thus improve their competitiveness [2]. With the widespread penetration of the new generation of information technology and the great integration of industrialization and information technology, students with an engineering background will have an advantage in job hunting after improving their abilities in various aspects [7].

5.3. Society

The government should first adhere to the economic development strategy of giving priority to employment and introduce policies that are more conducive to the employment and entrepreneurship of second-year engineering students [8]. Firstly, it should establish sound policies and regulations, improve the employment market system, regulate the employment environment of engineering personnel and protect their basic personal safety. Secondly, society should create more public-spirited jobs for second-year engineering students. Provide free skills training and employment guidance for graduates who are not employed in time to improve their employ-ability. At the same time, society should guide university graduates to change their employment concept, encourage them to go to the grassroots and rural areas, and shift their focus from stable institutions and state-owned enterprises to private enterprises and small and micro-enterprises, and choose employment areas from economically developed regions to central and western regions or economically less developed regions. Finally, it is also important to support second-year engineering students to start their own businesses. Society should support students to start their own businesses by providing free training and guidance,

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reducing the rent of office space, and giving preferential treatment and subsidies to second-year engineering students who start their own businesses or are self-employed in terms of finance, taxation and business registration [9]. Through corresponding preferential support policies and a favourable entrepreneurial environment, second batch college students are encouraged to start their own businesses as an alternative to employment [10].

6. Conclusion

The ever-changing society, the constant development of technology, and the emergence of new job categories have placed higher demands on the employ ability of second-year engineering students. Professional knowledge alone is not sufficient for complex jobs, and modern products and technologies cannot be researched by individuals but require teamwork, which requires the cooperation and willpower of engineering students. The development of society, the renewal of products, and the leap in technology are ultimately for the benefit of the public, and the times call for a "human culture" in products and technology. Although there are a large number of second-year students in society, they should not be discouraged from understanding their own position, responding to the needs of the times, and accomplishing their tasks in a practical manner. The most important thing is that the products that the second batch of engineering students will be working on should take into account both the technical content and the humanistic value of the products. The humanistic education of the university actively meets the employment requirements of engineering students in the new era. Through humanistic education, the core competitiveness of engineering students in employment can be enhanced, so that technology and humanistic values can be better combined in the development of society, thus benefiting the whole society. The research on gender in this paper is still lacking. The phenomenon of "gender discrimination" in the employment of female engineering college students is prominent, and there are "employment injustice" and "politely rejected" by enterprises. Further research will be carried out in the future.

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References

[1] *Wang Xuhui. 2017. "Research on supply and demand of higher education in China." Doctor Dissertation, Xiamen University.*
[2] *Sun Yujing. 2019. An analysis of the employment dilemma of second-batch college students — based on Bourdieu's "cultural capital" theory[J]. Modern Communication, (06):58-59.*
[3] *Zhao Hongbing. 2017. Exploring the employment strategy of engineering college students in the new media environment[J]. Talent Resource Development, (22):94-95. DOI:10.19424/j.cnki.41-1372/d.2017.22.047.*
[4] *Li Yingxue. 2021. Analysis of the employment difficulties of college students from microeconomics[J]. Modern Marketing (Academy Edition), (11):181-183.*
[5] *Wang Xuefei, Chen Wei, Jiang Wei. 2020. Research on the enhancement of core competitiveness of employment of engineering college students by humanities literacy education[J]. Jiangsu Higher Education, (07):107-111. DOI:10.13236/j.cnki.jshe.2020.07.017.*
[6] *Sun Ning. 2022. Research on the psychological problems and countermeasures of college students' employment[J]. Modern Trade Industry, 43(07):78-80. DOI:10.19311/j.cnki.1672-3198.2022.07.035.*
[7] *Du Wei, Han Xiangzong. 2022. Analysis of the current employment problem of college students and discussion of countermeasures[J]. Journal of Economic Research, (08):74-77.*
[8] *Feng Kun, Zhu Weiguang. 2022. Exploring the strategy of college students' employment guidance service under the background of "Internet+" era[J]. Heilongjiang human resources and social security, (08):128-130.*
[9] *Yang Wei. 2022. Research on the development strategy of college students' employment guidance in the background of big data[J]. Innovation and Entrepreneurship Theory Research and Practice, 5(08):63-65.*

DOI: 10.54254/2753-7048/11/20230734

[10] Chen Gang, Weng Wenxiang, and Sun Daoming, 2001. 'Survey on the Employment competitiveness of Female Engineering Students and their Countermeasures—Based on the survey data analysis of A University'[J], Journal of Tongling University, (2021), 72- 75.