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Research on the Core Employment Ability of University Students in Applied Universities and the Promotion Path of Employment Guidance Work in the New Era — Taking Chengdu Technological University as an Example

Long Yan[1]

[1] Chengdu Technological University, Chengdu, China
Correspondence: Long Yan, Chengdu Technological University, Chengdu, China.

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Abstract

To enhance the core employability of college students in application-oriented universities and optimize the employment guidance work in universities. This study takes Chengdu Technological University as an example and conducts a systematic analysis of the current situation of students' employability and the problems existing in the employment guidance services. The study discovers that there are still deficiencies in students' innovation ability, interdisciplinary ability and workplace adaptability during the employment guidance process of the university. The research findings indicate that strategies such as deepening College-enterprise cooperation, implementing personalized employment guidance services, and strengthening innovation and entrepreneurship education can enhance students' core employability and improve the employment guidance work in universities.

Keywords: application-oriented universities, core employability, employment guidance, college-enterprise cooperation

1. Introduction

The continuous increase in the number of university graduates and the increasingly fierce competition in the labor market, China is currently confronted with the employment environment and the employment problems of college students (Jiang et al. 2023). Against this backdrop, the educational goals of application-oriented colleges and universities should not merely focus on students' acquisition of professional knowledge but also enhance the cultivation of their core employability (Arranz et al., 2022). Effectively enhancing the core employability of college students and optimizing the employment guidance services will constitute an important direction for the educational reform in colleges and universities (Freire-Seoane et al., 2019). This paper takes Chengdu Technological University as a case to explore the improvement path of the employability cultivation model of application-oriented colleges and universities in

the new era, and also provides theoretical and practical references for cultivating high-quality application-oriented talents in line with the requirements of the new era.

2. Literature Review

2.1 The Connotation and Characteristics of Core Employability of University Students

2.1.1 The Connotation of Core Employability

Core employability is a comprehensive reflection of the knowledge, skills and professional qualities that college students need to be competent for positions in the workplace (Chen et al. 2023). Its core goal is to help students quickly adapt to the complex and changeable workplace environment and demonstrate excellent professional abilities (Arranz et al., 2022). With the continuous upgrading of talent demands in the employment market, core employability has become an important indicator to measure the workplace competitiveness of college students (Jiang et al., 2023). As an important position for cultivating applied talents, applied colleges and universities must attach importance to the cultivation of students' core employability to adapt to the rapidly changing social environment and the complex and diverse workplace demands (Pinto & He, 2018). Through the research and induction of relevant literature, this paper summarizes five aspects: professional ability, innovation ability, practical ability, communication and teamwork ability, and interdisciplinary comprehensive ability (Zhong & Preudhikulpradab, 2022; Jiang et al.2023). These elements constitute an important basis for improving students' core employability and help them better integrate into the future workplace.

Professional ability pertains to the knowledge and skills that students acquire in a specific professional domain and constitutes the foundation of core employability (Zhong & Preudhikulpradab, 2022; Chen et al., 2023; Jiang et al., 2023). For students in application-oriented universities, professional ability not only encompasses theoretical knowledge but also emphasizes the capacity to apply theory to practice (Guan et al., 2013). Innovation ability is a significant driving force in workplace competition, encompassing innovative thinking, the ability to solve problems, and the capacity to put forward novel viewpoints and methods (Zhao et al., 2022). Practical ability is a crucial indicator of the employability of students in application-oriented universities and refers to the ability of students to apply theoretical knowledge to actual work and ultimately solve problems (Pinto & He, 2018). Communication and teamwork ability are indispensable soft skills in the modern workplace (Pinto & He 2018; St. Louis et al., 2021; Chen et al., 2023). With the escalating trend of social demand for compound talents, interdisciplinary comprehensive ability has become vital (Costa et al., 2018).

2.1.2 Characteristics of Core Employability

The first characteristic is the equal emphasis on comprehensiveness and multi-dimensionality (Williams, 2015). The demand for compound talents in the modern workplace is escalating day by day. Core employability is no longer confined to a single professional field but emphasizes the comprehensive application of interdisciplinary knowledge (Jiang et al., 2023). The second characteristic is the continuous escalation of requirements for innovation and practicality. Innovation is the core driving force for social development, and the demand for innovative talents by enterprises shows a marked growth trend (Zhao et al., 2022). The third characteristic is the global vision and cross-cultural adaptability. With the acceleration of the globalization process, cross-cultural adaptability has also emerged as an important indicator in workplace competition (St. Louis et al., 2021). The fourth characteristic is the high degree of alignment with social needs. With the continuous upgrading of the industrial structure and the in-depth advancement of digital transformation, the job market exhibits significant characteristics of specialization and segmentation (Williams, 2015). College students will maintain a high degree of alignment between their core competitiveness and market demand (Zhong & Preudhikulpradab, 2022). The fifth characteristic is lifelong learning and self-drive (Sun & Yuen, 2012). The modern workplace is constantly evolving, and the ability of lifelong learning has become an essential quality (Zhong & Preudhikulpradab, 2022). Ultimately, the core employability of college students in application-oriented universities in the new era exhibits characteristics such as comprehensiveness, innovativeness, globalization, demand orientation and lifelong learning. These characteristics not only mirror the high standard demands for talents in the contemporary workplace, but also offer a distinct direction for universities to optimize the

talent cultivation model.

3. Population and Sampling

The study was conducted at Chengdu university in Chengdu city of Sichuan province of Chinese mainland. On the one hand, Chengdu is the capital city of Sichuan Province and has many universities in Chengdu. The employability of students from science and engineering universities is more representative. On the other hand, this university is an application-oriented undergraduate university. The establishment of majors adapts to the upgrading of the industrial structure in Sichuan Province and is a layout of applied disciplines and majors that connects with the local industrial chain and innovation chain. It is a one of public university of top employment rate in Sichuan Province.

There is total 19,477 students at Chengdu Technological University. According to morgan table, at least, 377 students at this university are chosen to participate in the survey with valid questionnaire (Krejcie & Morgan, 1970). The convenience sampling method was employed to recruit participants. This method could identify and discuss the selection process for participants in this sample and identify the population in the study and identifying individuals in the population (Creswell & Creswell, 2018). The convenience sampling method was adopted in this study to examine the items of professional ability, innovation ability, practical ability, communication and teamwork ability and employment guidance in an exploratory factor analysis.

The designed questionnaire in this research will be distributed to students through the "Wen Juan Xing" platform, a tool proficient in both designing and collecting survey data. Accessible through commonly used social media applications in China, the questionnaire link can be effortlessly opened, facilitating widespread dissemination via social media channels. Employing remunerative strategies in the investigative process aims to inspire active respondent engagement, foster heightened enthusiasm for questionnaire completion, and broaden the extent of questionnaire dissemination. Every respondent completing the questionnaire becomes eligible for a lucky draw, offering them a chance to receive a cash bonus. The probability of obtaining a reward is contingent upon the number of responses and the randomly drawn allocation of prizes—a truly random process. Rewards are seamlessly integrated into the "Wen Juan Xing" system, ensuring that participants who successfully complete the questionnaire receive their incentives directly through the platform.

Subsequently, the research employed the "Survey on Employability of College Students" questionnaire surveys as outlined by Li et al. (2022) for reference. Drawing upon the literature previously referenced, relevant factors influencing college students' employability were synthesized, and a set of 18 employability-related questions were extracted based on the perceived importance and correlation of these influencing factors. The questionnaire comprises six distinct sections covering professional ability, innovation ability, practical ability, communication and teamwork ability and employment guidance, detailed in the appendix. According to the Likert scale within a five-tier rating system, a score of 5 indicates full compliance, 4 signifies a good match, 3 denotes uncertainty, 2 represents a poor match, and 1 indicates non-conformance. All questions in the survey are framed in a positive manner, signifying that a higher score corresponds to heightened employability for college graduates. Conversely, a lower score suggests a weaker employability profile for the graduate.

4. Analysis of the Current Situation of University Students' Employability

A total of 796 valid questionnaires were collected, with the proportions of freshmen, sophomores, juniors and seniors being 26.76%, 26.51%, 17.59% and 28.77% respectively. The study revealed that students performed relatively well in professional ability and practical ability, but still required further enhancement in areas such as innovation ability, interdisciplinary collaboration ability and teamwork ability.

The survey findings indicate that approximately 54.52% of the students deem their professional capabilities to be relatively firm, among which students majoring in engineering demonstrate particularly remarkable performance in professional knowledge and skills. Nevertheless, the students' innovation ability is generally weak. About 48.99% of the students assess their innovation ability as moderate, and merely 5.9% of the students consider themselves to be "very capable" of innovation. Freire-Seoane et al. (2019)

found that there are differences in employment among students in different disciplinary fields. For example, students in the fields of humanities and social sciences have lower employability. Although the college offered project practice and scientific research training opportunities, their innovative thinking and practical ability were still at the initial stage, and there was a deficiency of systematic innovation education and practice platforms. The insufficient innovation ability not only affects the students' learning thinking but also undermines their ability to handle complex problems in the workplace. These research results are helpful for a better understanding of the factors affecting the employment of college students and provide a reference basis for colleges to formulate relevant policies. College should stimulate students' innovation awareness by establishing innovation laboratories, holding entrepreneurship competitions and other activities, and integrating innovation education into the curriculum system to further enhance students' overall innovation ability.

The college places significant emphasis on offering student's abundant internship and practical training opportunities in practical teaching, particularly in the manufacturing sector, where practical experience is regarded as a crucial competitiveness for students. The survey indicates that approximately 52.39% of the students rate their practical ability as moderate, while 18.22% of the students consider their practical ability to be strong and are capable of effectively converting theoretical knowledge into practical operational ability. Nevertheless, the cultivation of students' interdisciplinary ability remains insufficient. Students majoring in science and engineering perform relatively poorly in the integration and application of interdisciplinary knowledge. About 52.01% of the students rate their interdisciplinary ability as moderate, and only 8.04% of the students believe they are "highly competent" in interdisciplinary ability. In the survey, some students pointed out that the current discipline settings are relatively independent and interdisciplinary courses are relatively scarce, which restricts their integration and application of knowledge from other disciplines and majors. To enhance students' comprehensive ability to solve complex problems, the university urgently needs to strengthen the establishment of interdisciplinary courses and support the development of more interdisciplinary learning projects (Costa et al., 2018).

Communication and teamwork skills, being significant soft skills in the contemporary workplace, have held a crucial position in students' employability (Freire-Seoane et al., 2019). The survey outcomes reveal that approximately 45.98% of the students self-evaluated their communication skills as moderate, while 13.32% of the students considered themselves to have strong communication and teamwork skills. Around 42% of the students encountered communication obstacles or coordination difficulties during the teamwork process, and this issue was especially prominent in interdisciplinary cooperation projects. Students pointed out that universities placed excessive emphasis on individual performance assessment and failed to provide sufficient opportunities to enhance communication and teamwork skills. Colleges should strengthen students' teamwork skills and cultivate their positive team spirit through forms such as group projects and team competitions (Pinto & He, 2018; St. Louis et al., 2021).

At present, there are issues regarding the outdated update of employment information in the current employment guidance work. Firstly, approximately 29.27% of the students consider that the update speed of the employment information provided by the college is sluggish, especially the recruitment information of certain industries fails to be released promptly. Secondly, there is also the problem of the deficiency of individualized employment guidance services. Although the college has conducted career planning lectures and resume and interview coaching activities, students generally hold the view that these services are formalistic and lack pertinence. Finally, there exists the problem of insufficient employment practice opportunities. Some students reflect that, particularly in the economic management majors, they are in shortage of sufficient enterprise internship opportunities. In order to enhance the core employability of students, the university should optimize the employment guidance services, strengthen the cultivation of innovation ability and interdisciplinary collaboration ability, and offer more practical opportunities to better support the development and employment of students.

5. Enhancement Paths of Employment

Guidance

5.1 University-Enterprise Cooperation

At present, the society's demand for high-quality applied talents is constantly rising. The practical ability and the ability to solve practical problems of students have become the core criteria for assessing their employability (Albay, 2019). Through collaborating with enterprises, colleges can promptly grasp the industry demands, update the teaching contents, and offer more internship and employment opportunities for students (Arranz et al., 2022). College-enterprise cooperation, especially the cooperation with alumni enterprises, has become a crucial way to enhance the employability of college students and the employment guidance work (Scandura, 2016).

5.1.1 Joint Development of Customized Courses

Scandura (2016) explores application-oriented universities should emphasize the integration of industry, university and research, and jointly develop university courses through college-enterprise cooperation to ensure that the course content is in line with industry needs and enhance students' practical ability. By combining the disciplinary advantages of the university and the actual demands of enterprises, Chengdu Technological University should collaborate with enterprises to develop customized courses or classes to guarantee that the course content precisely meets the requirements of enterprises. On the other hand, through participation in enterprise projects, students can be exposed to real cases in the classroom to improve their ability to solve practical problems (Sun & Yuen, 2012). Especially in emerging industries and technological fields, the course content should be adjusted promptly according to the dynamics of industry development to enhance students' core employability (Arranz et al., 2022).

5.1.2 University-Enterprise Cooperation Platform

Universities ought to establish long-term and stable cooperative ties with enterprises to enhance the pertinence of employment guidance and form a regular College-enterprise cooperation mechanism (Senan & Sulphey, 2022). Establish long-term internship bases, targeted joint talent training programs and other projects to ensure that students can be exposed to the real working environment in advance through internships and project cooperation, and understand the employment demands of enterprises to enhance their core employability (Guan et al., 2013). Through the internship positions and mentor guidance offered by enterprises, students can accumulate work experience in practice, help them quickly understand the development trend of the industry, and make more targeted preparations for future employment (Senan & Sulphey, 2022).

5.1.3 Enterprises' In-Depth Participation

Universities strongly support enterprises' in-depth participation in employment guidance work (Senan & Sulphey, 2022). They regularly invite enterprise recruiters and industry experts to participate in campus job fairs, related competitions, career planning lectures and other activities to help students understand industry dynamics and employment trends (Pinto & He, 2018). Through this form of cooperation, students can obtain more accurate employment information and make preparations for employment in advance (Scandura, 2016). The modern workplace emphasizes cross-departmental collaboration and team communication skills (Pinto & He, 2018). Through forms such as group projects, team competitions and communication training, students' teamwork ability can be effectively strengthened (St. Louis et al., 2021). Especially in interdisciplinary project cooperation, students should be encouraged to participate in projects with students from different background majors, and such projects should be focused on and included in the teaching section (Bartolj & Polanec, 2021).

5.2 Personalized Employment Guidance Services

Employment guidance is not just about providing recruitment information, resume and interview skills; instead, it should be centered on offering students individualized career planning and development paths (Pinto & He, 2018). Due to the diverse interests, capabilities and career aspirations of students, personalized employment guidance helps students gain a better self-awareness and provides more accurate employment guidance services, thereby enhancing their employment competitiveness.

5.2.1 Personalized Career Planning Guidance

The university combines students' disciplinary backgrounds, hobbies and career goals to formulate individualized career development plans for each student. Through career planning counseling and personalized consulting services, it assists students in clarifying their career

directions and development paths (Sun & Yuen, 2012). Kuijpers (2019) support that the university can also establish a career mentor system and invite industry experts, business managers and alumni to act as mentors. Through one-on-one or one-to-many guidance, mentors can provide personalized career advice based on students' professional backgrounds, career goals and personality traits to help students plan their career paths. The university also holds career lectures, skills training and interview simulation activities on a regular basis to enhance the depth and breadth of employment guidance and improve students' core employment competitiveness (Pinto & He, 2018).

5.2.2 Precise Employment Information

Traditional employment information push can no longer meet the individualized demands of students. Michavila et al. 2015 proposed that based on students' backgrounds, interests and career plans, the university realizes the precise pushing of suitable employment positions to students and helps them connect with employers through the interactive utilization of new media, big data analysis and the employment information platform, thereby enhancing the employment success rate; and precisely recommends suitable internship opportunities to assist students in efficiently obtaining employment resources.

5.3 Integration of Innovation and Entrepreneurship Education

In the new era, innovation and entrepreneurship have emerged as significant driving forces in promoting social and economic development. Particularly for students in application-oriented universities, an innovative spirit is necessary to adapt to the rapidly changing workplace requirements (Giannopoulou et al., 2019). Xu & Fan (2021) proposed that colleges should cultivate students' innovative thinking and practical ability through innovation and entrepreneurship education, offering them broader employment and entrepreneurial opportunities.

In the employment guidance work, the university promotes the seamless integration of innovation and entrepreneurship education with traditional employment guidance. Zhao et al. (2022) argued that it actively establishes entrepreneurship practice platforms and offers funds, venues, technical guidance, as well as market promotion to students having entrepreneurial intentions. This not only assists students in enhancing their practical capabilities but also enables them to have a profound understanding of the challenges encountered in the entrepreneurial process (Giannopoulou et al., 2019). The college holds regular innovation and entrepreneurship competitions or exchange meetings, inviting winners, entrepreneurs, and entrepreneurial mentors to share experiences and answer questions, constantly inspiring students to embark on innovation and entrepreneurship and also providing them with rich experiences (Xu & Fan, 2021).

As an application-oriented university, Chengdu Technological University will, in light of the characteristics and requirements of students, continuously optimize its employment guidance services, comprehensively enhance students' comprehensive capabilities, and assist them in achieving better development in the new workplace. The university's employment guidance efforts also need to adapt to the rapidly changing market demands and effectively enhance students' employment competitiveness by strengthening College-enterprise cooperation, providing personalized employment guidance services, and integrating innovation and entrepreneurship education to facilitate their smooth transition to the workplace.

6. Conclusion

Currently, due to the transformation of the economic structure and changes in the job market, the core employability of undergraduate students, particularly those in application-oriented universities, has emerged as a significant topic in higher education reform. Taking Chengdu Technological University as an example, this paper examines the current status of the employability of college students in this university and puts forward corresponding improvement strategies. The study reveals that students perform well in professional skills and practical abilities, but have shortcomings in innovation ability and interdisciplinary ability. The existing employment guidance services need to be enhanced in terms of personalization, accuracy, and the speed of information update. Based on the result analysis, this paper suggests three approaches to improve the employment guidance work: Firstly, strengthen College-enterprise cooperation, promote the in-depth integration of industry, academia, and

research, and offer more practical opportunities; Secondly, provide personalized employment guidance services and assist students in tailoring their career development paths; Thirdly, strengthen innovation and entrepreneurship education and enhance students' ability to cope with market changes. The enhancement of the core employability of college students is the outcome of the combined efforts of universities, enterprises, and the government. Application-oriented universities will keep innovating the education model to satisfy the market's demand for high-quality talents.

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