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Employment and corresponding influencing factors for undergraduates of applied university: A case study in China

Xue Bai[1,2]
Rosy Binti Talin[1+]
Xianming Huang[3,4]

[1]*Faculty of Education and Sports Studies, Universiti Malaysia Sabah, Sabah, Malaysia.*
[1]*Email: rostalin@ums.edu.my*
[2]*Sichuan University of Arts and Sciences, No. 519, Middle Tashi Road, Tongchuan District, Dazhou City, Sichuan Province, China.*
[2]*Email: 1064586045@qq.com*
[3]*Department of Orthopedic Surgery, Second Affiliated Hospital of Army (Third) Military Medical University, Chongqing, China.*
[3]*Email: hxm30xinqiao@tmmu.edu.cn*
[4]*Department of Orthopaedic Surgery, Dazhou Central Hospital, 56 Nan Yue Miao Street, Tongchuan District, Dazhou City, Dazhou, Sichuan, China.*


(+ Corresponding author)

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ABSTRACT

This study investigates the employment status and influencing factors among undergraduates of applied universities in China, focusing on 2024 graduates from a Sichuan university to identify key determinants of successful job placement. A mixed-methods approach was used combining quantitative survey data analysis with qualitative interviews. The survey gathered data on employment rates, job relevance to majors, and personal/educational factors while interviews provided deeper insights. The employment rate for 2024 graduates was 57.87% with only 29.41% in major-related jobs. Significant and positive factors included awards, major understanding, internships, adaptability, and employment attitudes. Graduates with strong professional, interpersonal, and organizational skills had higher employment rates. Issues like insufficient practical knowledge, high employment expectations, weak employment awareness, and the mismatch between specialty settings and social needs were identified. A multifaceted approach addressing educational and personal development is essential to improve graduate employment outcomes in China's evolving economy. The study proposes an integrated employment education system involving government, universities, and society emphasizing practical ability cultivation, comprehensive and sustainable development, and equipping graduates with new quality productivity for employment.

Contribution/Originality: This study focuses on China's applied universities and combines mixed research methods to reveal the structural contradictions in employment and the mismatch between professional settings and social needs.

1. INTRODUCTION

Employment is fundamental to human welfare and a cornerstone of social stability and economic progress. Addressing the employment challenges faced by university graduates is not only crucial for individual fulfillment and family well-being and the sustainable development and harmonious equilibrium of society. Recently, the advent of "dark factories", the gradual implementation of autonomous driving, and the increasing prevalence of "machines replacing humans" have led to a significant transformation in the labor market. The application of artificial intelligence through automation has replaced traditional manual labor in certain job positions, resulting in a reduction of employment opportunities and a decline in labor demand (Acemoglu & Restrepo, 2020). This

technological shift has created a more complex environment for university graduates, presenting new and evolving challenges in the job market which exhibit distinct phase characteristics.

Several university graduates facing unemployment upon graduation has become a pressing issue that requires immediate attention. Resolving the structural imbalance between the supply and demand in the talent market is a practical problem that society must confront (Liu, Ma, & Wu, 2020). Applied undergraduate universities are tasked with the challenge of enhancing the quality of their graduates to meet societal needs as a significant contributor to the talent pool. This raises theoretical and practical questions for universities in China regarding how to align their educational outcomes with the demands of the job market.

This study focuses on three main research questions: the employment status of Chinese applied undergraduate graduates, particularly the 2024 cohort. The factors influencing their employment and their interaction with the job market. The measures that different stakeholders can take to address the employment challenges faced by these graduates. The research aims to conduct an in-depth empirical study of the employment situation of graduates from a specific applied undergraduate university in Sichuan Province, China. This study seeks to uncover the underlying causes and propose targeted solutions, with the ultimate goal of improving the employment quality and satisfaction of graduates and equipping them to meet the demands of the evolving job market by analyzing the current state of graduate employment and exploring the factors that impact the employment of graduates from applied universities.

2. LITERATURE REVIEW

The relationship between education and employment has been a focal point of research in human resource management, particularly since the 1990s in Western contexts (Chen, 2013). Internationally, empirical explorations into the factors influencing employment have been well-established with a robust theoretical foundation. A comprehensive model proposed by researchers in Northern Ireland suggests that individual characteristics, labor market governance, employment environment, and structural factors of employability significantly impact employment outcomes (Pan & An, 2018).

Western scholars widely acknowledge the pivotal role of higher education institutions in shaping graduate employment and enhancing the quality of higher education (Rudalf, 2024). In China, the prominence of graduate employment challenges has escalated since 2008, prompting a shift towards an employment capability-centric education system aimed at bolstering overall employment quality. Domestic researchers have identified a spectrum of objective and subjective factors influencing graduate employment. Chen (2013) distinguishes between internal and external factors as well as single- and multi-faceted elements, including personal attributes, institutional factors, family influences, and societal impacts (Chen, 2013). Zheng (2011) extends this discourse by highlighting objective factors such as economic conditions, social demands, labor market dynamics, employment policies, educational frameworks, career guidance, and family settings whereas subjective factors encompass graduates' comprehensive qualities, job selection perspectives, and professional skills and knowledge structures (Zheng, 2011).

The existing research on university graduate employment in China is predominantly theoretical with a dearth of empirical studies. Chen and Jing (2020) empirical research from an institutional perspective has yielded an influential model of graduate employment encompassing eight factors: strategic objectives, program offerings, curriculum systems, training approaches, faculty competence, employer engagement mechanisms, career guidance, and evaluation and feedback mechanisms (Chen & Jing, 2020). This model has been validated through interviews, Delphi methods, and surveys providing reliable and authentic conclusions. On the other hand, non-empirical studies have been criticized for their descriptive nature and lack of in-depth analysis, particularly in terms of causality. This study aims to bridge this gap by conducting an empirical investigation into the employment status and influencing factors of graduates from an applied undergraduate university in Sichuan, China, offering a more nuanced understanding of the multifaceted challenges and opportunities in the current employment landscape for this cohort of graduates.

3. MATERIALS AND METHODS

3.1. Research Methodology

This study uses a mixed-methods approach integrating quantitative and qualitative techniques for a thorough analysis of the employment situation and influencing factors for undergraduates at a Chinese applied university. The methodology gathers a wide range of data using statistical analysis of surveys and detailed interviews to deepen the understanding of the survey results.

3.2. Participants

The research targeted the 2024 graduates of a university in Sichuan, China. The sample size was determined according to $n_1 = \frac{[Z^2_{\alpha/2}P(1-P)]}{E^2}$; $n_2 = n_1/[1 + (n_1 - 1)/N]$ (Raghunathan & Grizzle, 1995) where α represents the significance level (0.05), Zα/2 denotes the Z-statistic (1.96), P indicates the probability value, E signifies the margin of error, n1 represents the required sample size for an infinite population, n2 represents the corrected sample size for a finite population, and N represents the overall number of subjects in the study. A simple random sampling was employed with random numbers generated using Excel functions and assigned based on graduates' academic identification numbers.

3.3. Instruments and Data Collection

Data collection was conducted through an online survey platform, Questionnaire star which facilitated the distribution and collection of the survey questionnaires. The survey instrument was developed by referencing existing literature on undergraduate employment status (Liu, 2023) employment tendencies (Ji & Luo, 2024) employment concepts (Zhu & Zhou, 2024) and employment behaviors (Liu, 2024). The questionnaire, titled "Survey on Employment Issues of Undergraduate Graduates from Applied Universities in 2024," was structured into three sections: basic student information, self-assessment of employment status and satisfaction, and evaluation of the university's training system.

A pilot test and expert consultation were conducted to finalize the questionnaire (Supplementary Material 1). Face-to-face interviews were conducted with selected student counselors involved in employment guidance, staff from the university's employment office, and representatives from companies that recruit on campus to gain a deeper understanding of the employment situation and potential influencing factors (Supplementary Material 2). The interviews were designed to complement the survey data by providing qualitative insights into the employment dynamics, influencing factors and future trends among the graduating class of 2024.

3.4. Data Analysis

For the quantitative data, Prism 8 software was used to perform chi-square tests on categorical data and Spearman's rank correlation coefficient for assessing correlations with a significance level set at $p < 0.05$ to indicate statistical differences. GraphPad Prism 8 was also used for creating statistical graphs. The reliability and validity of the survey questionnaire were assessed using SPSS 22.

Reliability was determined by Cronbach's alpha coefficient where a value greater than 0.7 indicates acceptable reliability. Validity was assessed through exploratory factor analysis to evaluate the structural and content validity of the questionnaire.

This rigorous methodology ensures a robust and comprehensive analysis of the employment situation and influencing factors for undergraduates of applied universities in China providing a foundation for evidence-based recommendations to improve graduate employability.

4. RESULTS

4.1. Overall Situation of the Questionnaire Survey

The total number of graduates from an application-oriented university in Sichuan, China, for 2024 is 4,553. Preliminary surveys indicated an employment rate of 58.1%. A calculated required sample size of 346 was determined for the random sample survey with the permissible absolute error for the employment rate set at 5%. In this study, a total of 400 questionnaires were distributed and 356 were successfully recovered, yielding a response rate of 89% which exceeds the minimum required sample size. All 356 questionnaires, accounting for 100% of the returned surveys were deemed valid, ensuring the data's reliability for subsequent analysis.

Demographically, the sample included 139 males (39%) and 217 females (61%). Regarding employment status, 206 graduates were employed (57.87%) while 150 graduates were not employed (42.13%). In terms of the distribution of specialties, the survey encompassed 58 individuals (16.29%) from the sciences, 67 individuals (18.82%) from engineering, 199 individuals (55.90%) from the humanities and 32 individuals (8.99%) from medicine, indicating a representative coverage of various academic disciplines (see Table 1).

Table 1. Basic information on employment.

Variables		Employed (%)	P- value	Unemployed (%)	Total (%)
Sex	Male	86 (61.87)	0.2206	53 (38.13)	139 (39)
	Female	120 (55.30)		97 (44.70)	217 (61)
Total		206 (57.87)		150 (42.13)	356 (100)
Type of specialty	Science	35 (60.35)	0.003	23 (39.65)	58 (16.29)
	Engineering	37 (55.22)		30 (44.78)	67 (18.82)
	Literature category	125 (62.81)		74 (37.19)	199 (55.9)
	Medical science	9 (39.13)		23 (60.87)	32 (8.99)

Regarding the alignment of employment with their majors, a mere 29.41% of graduates are working in industries related to their academic disciplines. 19.89% have entered fields unrelated to their studies. Significantly, 12.32% of graduates either lack clear employment plans or remain unemployed. Pursuing further education and engaging in civil service examinations are prominent avenues for graduates with 33.6% choosing to either continue their studies or prepare for civil service exams (see Figure 1). Insights from interviews with employment specialists reveal that graduates who excel academically or have been involved in student leadership are more inclined to pursue postgraduate education or enter civil service examinations.

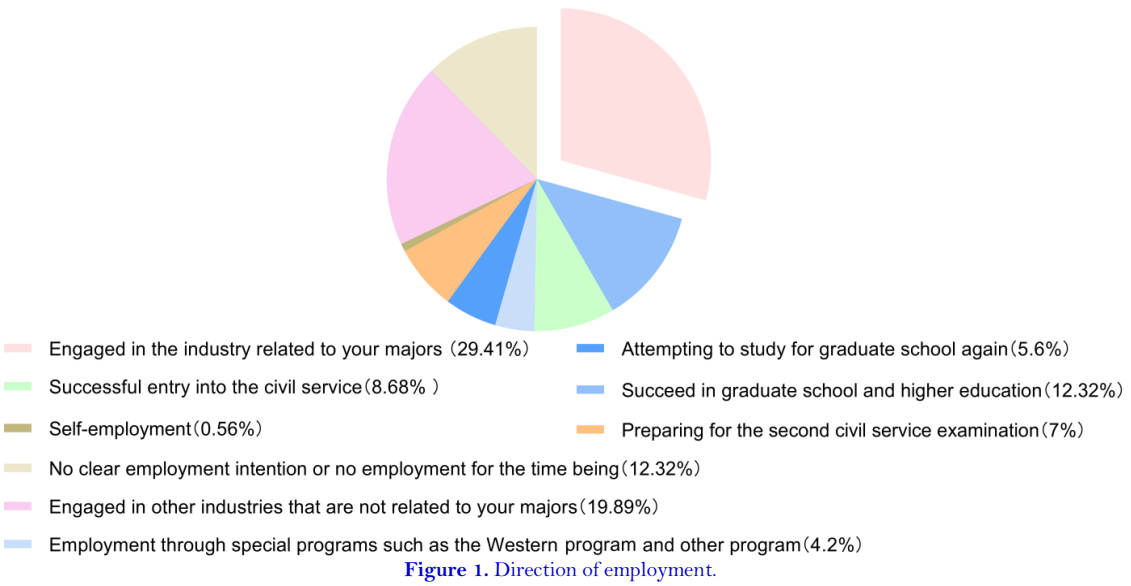

Figure 1. Direction of employment.

4.2. Elements Influencing Graduates' Employment Rate

The employment rate is a vital indicator and benchmark for evaluating the employment status of university graduates and the extent of societal demand for their expertise. However, when considering the overall employment rate, it remains relatively low at 57.87%.

4.2.1. Graduates with Accolade-Winning Experience Have Greater Job Prospects

Graduates who had the distinction of winning awards during their academic careers exhibit a notably higher employment rate than those without such accolades (62.98% compared to 51.43% and p=0.0276). Among the 181 graduates, representing 50.84% of the total who received awards, 36 (10.11%) earned national-level honors, 16 (4.49%) received provincial-level honors, and 129 (36.24%) were honored at the university level or below. Specifically, the employment rates for these awardees were as follows: 22 graduates with national-level awards had an employment rate of 61.11%, 10 graduates with provincial awards achieved an employment rate of 62.5%, and 82 graduates with school-level awards had an employment rate of 63.57%. In contrast, among the 175 graduates (49.16%) without any award-winning experiences, only 90 (51.43%) had secured employment (see Table 2).

Table 2. Impact of award experience on employment.

Awards	Employed (%)	Unemployed (%)
Prize-winning experience	114 (62.98%)	67 (37.02%)
National level (e.g., nature reserve)	22 (61.11%)	14 (38.89%)
Provincial and municipal levels	10 (62.5%)	6 (37.5%)
School-level	82 (63.57%)	47 (36.43%)
No award	90 (51.43%)	85 (48.57%)
P = 0.0276 and chi-square = 4.855		

4.2.2. Advantages of Pre-Internships over Post-Internships

This study categorizes a pre-internship as one undertaken before the completion of two years of theoretical studies and a post-internship as one conducted after one year or less of theoretical studies. Graduates who completed pre-internships exhibit a significantly higher employment rate (69.64% compared to 55.33% and p = 0.0467) than those who completed post-internship. Out of the 56 individuals who participated in pre-internship, 39 (69.64%) were employed whereas out of the 300 individuals who participated in post-internship, 166 (55.33%) secured employment (see Table 3).

Table 3. Employment in pre- and post-internship.

Types of internships	Employed (%)	Unemployed (%)
Pre-internship	39 (69.64%)	17 (30.36%)
Post-internship	166 (55.33%)	134 (44.67%)
P = 0.0467 and chi-square = 3.956		

4.2.3. The Employment Rate and Major Knowledge before Enrollment are Positively Connected

Employment rates show a positive relationship with the industry level and major knowledge prior to university entry (r = 0.162 and p = 0.002). A significant percentage, 12.04%, of graduates admitted to being completely unaware of their chosen major and the industry they would enter upon university enrollment, in contrast to the 6.44% who were very knowledgeable about both before starting university (see Figure 2). Among the graduates who were ignorant of their major and industry at the time of entry, only 37.21% successfully secured employment, a stark contrast to the 86.96% employment rate among those who were well-informed (p = 0.0014) (see Table 4).

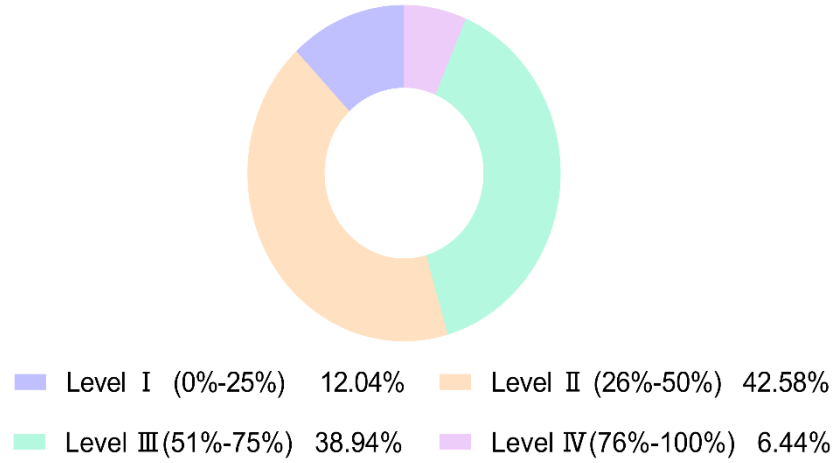

Figure 2. Understanding of the major and industry before entering university.

Table 4. Employment rates influenced by the understanding of major and industry before entering university.

Level of understanding	Employed (%)	Unemployed (%)
Level IV (76-100%)	20 (86.96%)	3 (13.04%)
Level III (51-75%)	82 (58.99%)	57 (41.01%)
Level II (26-50%)	86 (56.95%)	65 (43.05%)
Level I (0-25%)	16 (37.21%)	27 (62.79%)
P = 0.0014 and chi-square = 15.53		

4.2.4. Employment Rate and Degree of Industry and Major Comprehension after Enrollment are Positively Correlated

Employment rates are positively correlated with the knowledge of the industry one will work in post-graduation (r = 0.3 and p< 0.001). While 17.09% and 6.72% of graduates considered their pre-university understanding of the industry to be not very helpful, the majority felt that their comprehension of the industry they would enter improved significantly after starting university (see Figure 3). The study revealed that the employment rate among graduates who found their university experience to be extremely beneficial for understanding the industry they would work in was considerably higher at 82.14%, compared to the 20.83% employment rate among those who did not find university beneficial for this understanding (p < 0.0001) (see Table 5).

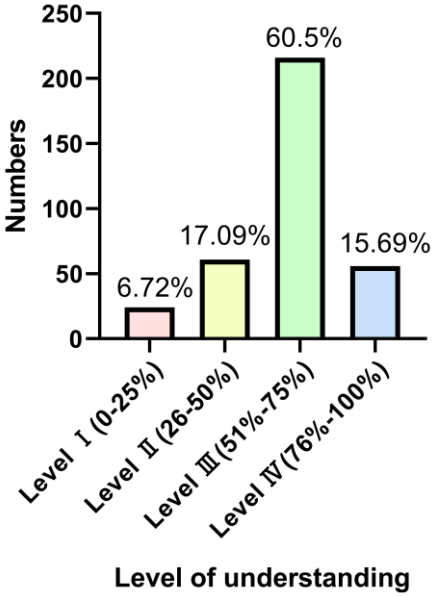

Figure 3. Understanding of the major and industry after entering university.

Table 5. Employment rates influenced by the understanding of major and industry after entering university.

Level of understanding	Employed (%)	Unemployed (%)
Level IV (76-100%)	46 (82.14%)	10 (17.86%)
Level III (51-75%)	128 (59.26%)	88 (40.74%)
Level II (26-50%)	25 (41.67%)	35 (58.33%)
Level I (0-25%)	5 (20.83%)	19 (79.17%)
P < 0.0001 and chi-square = 33.50		

4.2.5. The Extent to Which the Applied Talent Training Model Plays a Useful Role is Positively Correlated with the Employment Rate

There is a positive relationship between the perceived utility of the applied personnel training model and the employment rate (r = 0.226 and p< 0.001). A significant portion of graduates (13.45% and 49.3%) believe that the school's applied talent cultivation model has a greater impact and some impact on their employment, respectively. 31.93% of graduates believe that the school's applied talent cultivation model has no impact on their employment. Furthermore, 2.24% and 3.08% of graduates believe that the applied talent cultivation model has a worsening and a significantly worsening effect on their employment (see Figure 4). Among these graduates, 72.92% who believed that the school's applied personnel training model had a higher effect on their employment successfully secured jobs, while only 18.18% of those who believed it had a much worse effect found employment (P = 0.0001) (see Table 6).

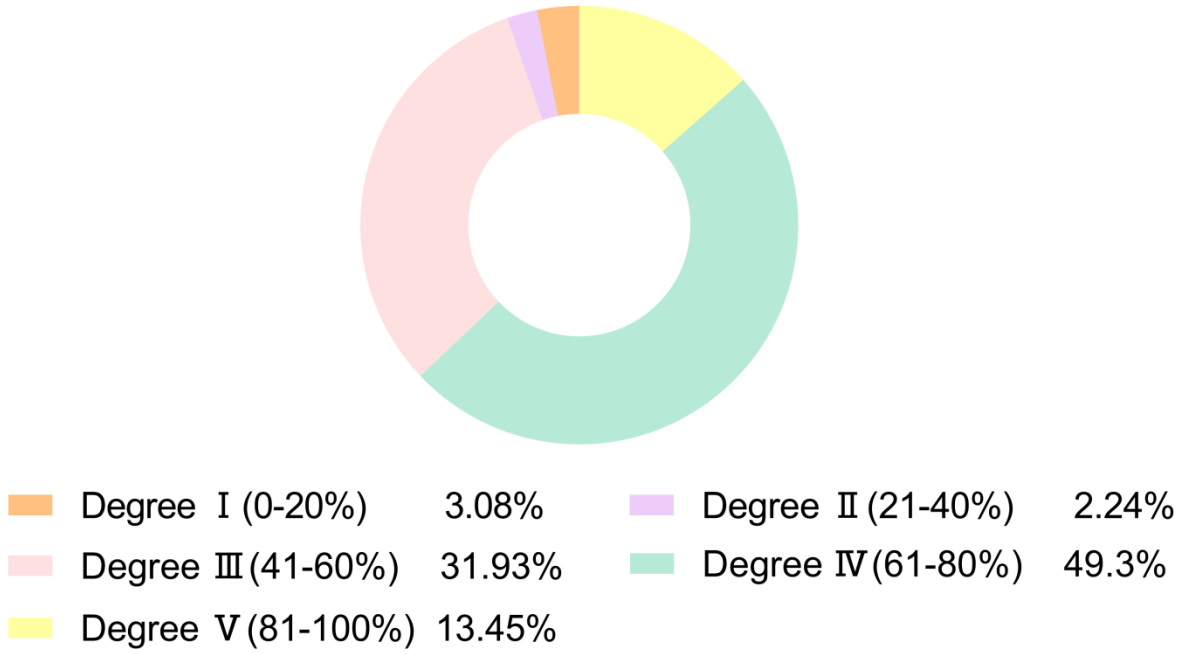

Figure 4. Degree of effectiveness of the application-oriented personnel training model.

Table 6. Employment rate influenced by the degree of effectiveness of the application-oriented personnel training model.

Degree of effectiveness	Employed (%)	Unemployed (%)
Degree V (81-100%)	35 (72.92%)	13 (27.08%)
Degree IV (61-80%)	110 (62.5%)	66 (37.5%)
Degree III (41-60%)	56 (49.56%)	57 (50.44%)
Degree II (21-40%)	1 (12.5%)	7 (87.5%)
Degree I (0-20%)	2 (18.18%)	9 (81.82%)
P = 0.0001 and chi-square = 22.94		

4.2.6. The Concept of Employment Directly Affects Graduates' Employment Situation and Career Direction

Regarding employment outlook, 54.06% of graduates chose to find a job before settling on a career while 15.69% decided to select a job before employment. A mere 7.28% felt fully prepared to meet workplace demands. 10.08% of graduates remain hopeful for an improvement in the employment situation despite the urgency to secure jobs while 12.89% admitted to being unable to find employment (see Figure 5). The survey on graduates' most anticipated career destinations revealed that state-owned enterprises (32.49%), state organs (27.17%), and universities and research institutions (15.69%) are the top three places where graduates are most likely to find employment (see Figure 6).

Cross-analysis of the employment concepts and situations of the graduates revealed that those with positive employment attitudes, such as finding a job first and then choosing a career (62.18%), being fully prepared to deal with it (65.38%), and choosing a career first and then finding a job (70.91%) had higher employment rates. Conversely, those with a pessimistic view towards employment, such as those waiting for the employment situation to improve (52.78%) and those who are confused (23.91%), had lower employment rates (see Table 7) ($P < 0.0001$).

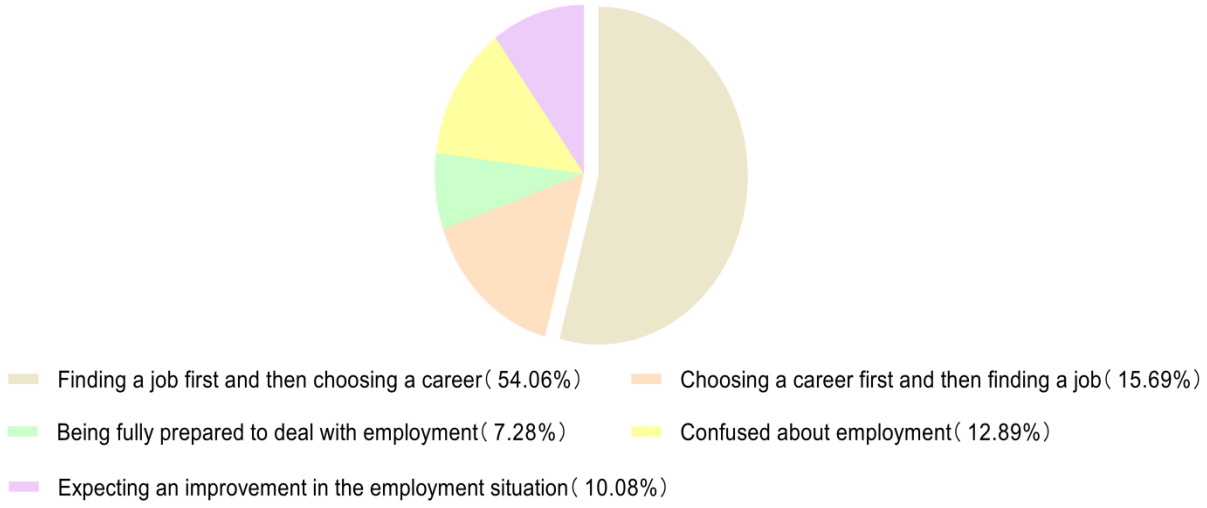

Figure 5. Graduates' concept of employment.

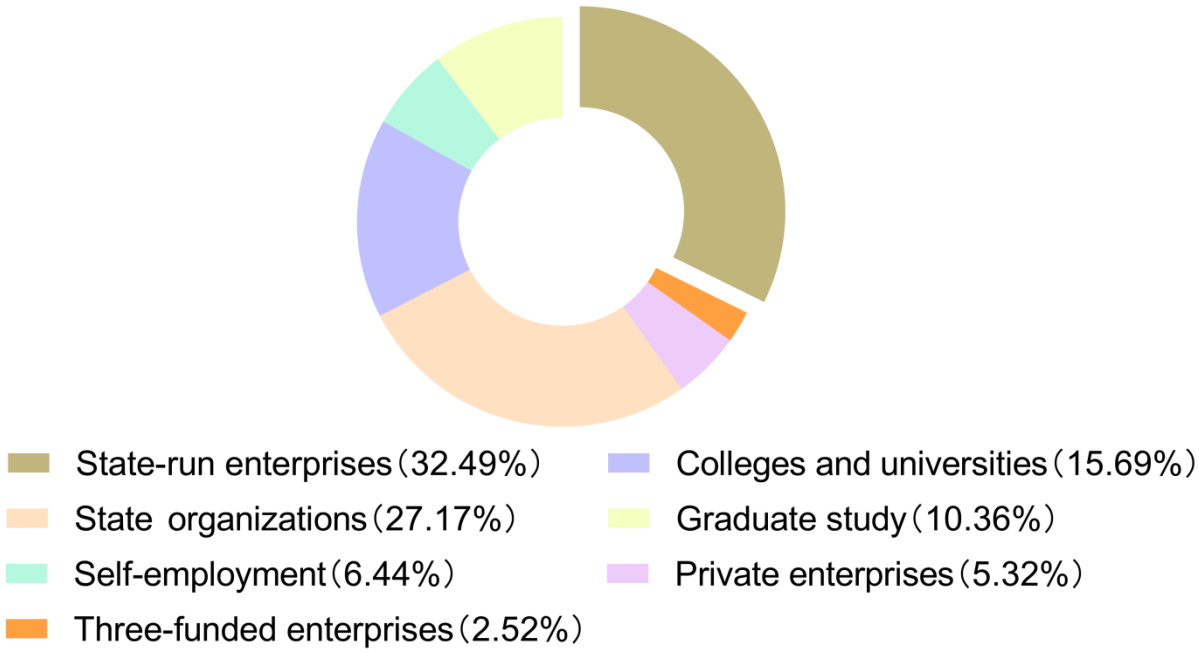

Figure 6. Graduates' most desired employment.

Table 7. Impact of employment concept on employment rates.

Employment concept		Employed (%)	Unemployed (%)
Positive view of employment	Finding a job first and then choosing a career	120 (62.18%)	73 (37.82%)
	Choosing a career first and then finding a job	39 (70.91%)	16 (29.09%)
	Being fully prepared to deal with employment	17 (65.38%)	9 (34.62%)
Negative view of employment	Confused about employment	11 (23.91%)	35 (76.09%)
	Expecting an improvement in the employment situation	19 (52.78%)	17 (47.22%)
< 0.0001 and chi-square = 19.79			

4.2.7. The Employment Rate and the Degree of Adaptability to the Latest Wave of Industrial and Technical Change are Positively Correlated

There is a positive relationship between the employment rate and the degree of adaptation to the latest wave of industrial and technological change ($r = 0.229$ and $p < 0.001$). Survey results indicate that 45.66% of graduates feel unable to adjust to the labor demands of new technological industries, 15.41% are confused and ill-equipped to cope with these demands, and only 7.56% believe they are sufficiently prepared to meet the demands of the ongoing technological and industrial revolution (see Figure 7). Graduates who believe they can adequately handle the demands of the new technological revolution and industrial change have an employment rate of 70.37%, while those who feel they are inadequately prepared to adapt to these changes have employment rates of 54.94% and 36.36%, respectively ($P = 0.0003$) (see Table 8).

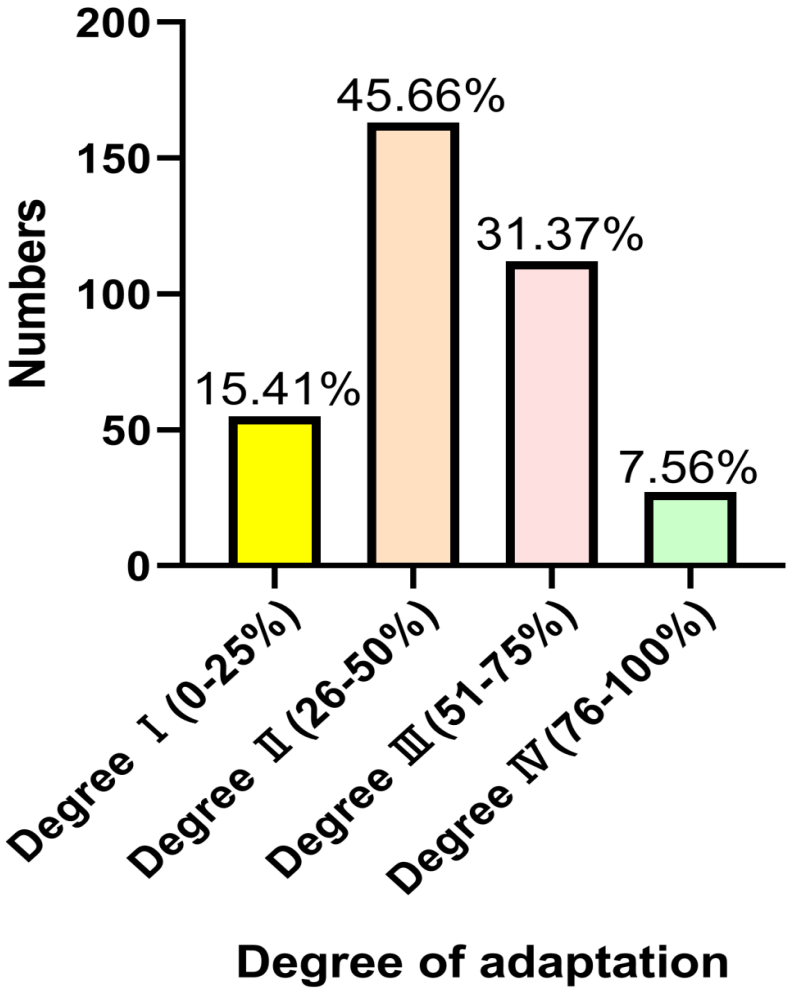

Figure 7. Degree of adaptation of graduates to the new technological revolution and industrial change.

Table 8. Employment rates influenced by the degree of adaptation to the new technological revolution and industrial change.

Degree of adaptation	Employed (%)	Unemployed (%)
Degree IV (76-100%)	19 (70.37%)	8 (29.63%)
Degree III (51-75%)	78 (69.64%)	34 (30.36%)
Degree II (26-50%)	89 (54.94%)	73 (45.06%)
Degree I (0-25%)	20 (36.36%)	35 (63.64%)
P = 0.0003 and chi-square = 19.10		

4.2.8. Graduates Believe that the Three Employability Abilities that Need to be Improved are Professional Knowledge, Interpersonal Skills, and Organizational and Coordination Skills

Graduates identify the three most critical employability skills. They need to acquire professional knowledge (72.83%), interpersonal skills (66.11%), and organizational and coordination skills (60.78%) (see Figure 8). In interviews, several heads of human resources from various organizations underscored the importance of new hires possessing a positive work attitude in addition to their professional competencies. They noted that while work experience can be acquired over time, a negative work attitude can lead to issues for the company and its employees.

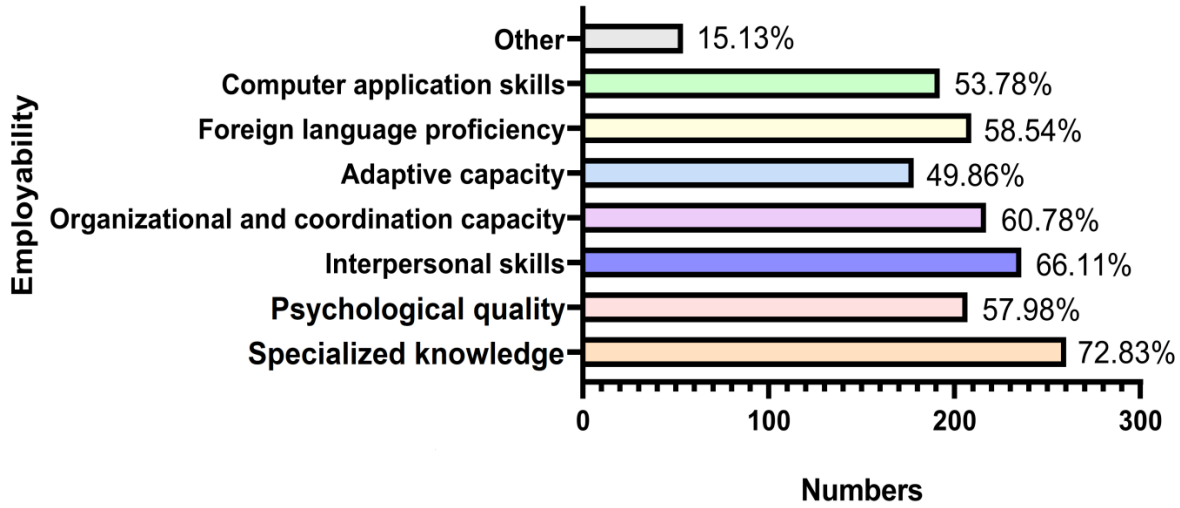

Figure 8. The most important employability skills that graduates need to improve.

5. DISCUSSION

5.1. A Lack of Understanding of Practical Application Abilities

Findings indicate that most graduates lack a deep understanding of their chosen major before entering university, failing to regard "what the major is, how to learn it, and why to learn it?" This lack of introspection leads to a lack of goal-oriented and targeted learning during their university years (Dong, 2007). In contrast, graduates from specialized to bachelor programs who have experienced practical training at the associate degree level tend to have clearer learning objectives and better employment outcomes in their bachelor's studies.

Many applied undergraduate institutions continue to focus predominantly on theoretical lectures, neglecting the integration of practical case analysis that links course content to real-world applications. This approach coupled with a lack of hands-on experience among faculty results in a general deficiency in practical experience and hands-on capabilities among graduates. Furthermore, the post-internship is less effective with some graduates prioritizing easy and convenient internships over substantive learning experiences, merely aiming to complete the course requirements and earn credits. This attitude hinders the development of the technical skills and practical abilities that industries expect from graduates.

The results align with previous research that emphasizes the importance of practical application ability for employability. For instance, studies have shown that graduates with stronger practical abilities are more likely to be sought after by employers and even receive job offers during their internships. These graduates can immediately

contribute to the workplace without requiring additional training on basic skills that should have been acquired during their education.

Comparatively, our findings differ from previous studies that indicate applied undergraduate institutions have effectively integrated practical education into their curricula through the IEM education model. The IEM education model holistically combines cognitive, affective, physical, and intuitive elements to enhance learning environments developed by Barbara Clark. This model emphasizes real-world scenarios, tasks, processes, operations, assessments, and the integration of industry and education leading to the development of "high-tech" capabilities in graduates (Cheng, Xu, Wang, Sun, & Wang, 2019). However, our study indicates that such integration is not universally implemented. Many graduates still face challenges in translating their academic knowledge into practical skills.

In a nutshell, the study underscores the urgent need for applied undergraduate institutions to reevaluate their curricula and teaching methods to better prepare graduates for the demands of the job market. This includes increasing the emphasis on practical application ability, enhancing faculty's practical experience, and ensuring that internships are substantive and aligned with industry needs. Graduates will be better equipped to meet the technical requirements and practical capabilities expected by employers, thus improving their employment prospects and satisfaction (Dong, 2007).

5.2. High Employment Expectations and a Gap with Reality

The study reveals that undergraduates from applied universities in China often have high employment expectations that may not align with the realities of the job market. The top preferences for employment among students are state-owned enterprises, government agencies and higher education and research institutions, which are associated with high social and economic status, academic levels, and job stability (Yue, Feng, Xin, & Qiu, 2023). However, these jobs are not suitable for everyone indicating vague career planning among students and a gap between their ideal employment units and the actual situation.

The mismatch between students' expectations and market realities has been noted in other studies as well. For instance, a report by the Ministry of Education on Graduate Employment Research Institute for College Graduates (Hu, Huo, & Shen, 2024) suggests that students often have unrealistic expectations about their career paths leading to anxiety and confusion when they face the competitive job market. This is further supported by the findings from research data on the nature of actual signing units by industry for college graduates of the 2021-2022 cohort (Yue et al., 2023) which show that while a significant proportion of students prefer public sector employment, the actual employment figures in private enterprises have seen a jump, indicating a potential disconnect between preferences and outcomes.

The findings also resonate with the study by Zhang, Wu, and Huang (2021) discussing the shift in employment consciousness among students in applied universities. The study suggests that students' high expectations for employment in prestigious institutions may lead to reluctance to settle for less prestigious or less stable jobs, contributing to the employment-market mismatch.

Moreover, the trend of "slow employment" has been observed where students prefer to delay entering the job market rather than take jobs that do not meet their expectations (Zhang & Shao, 2024). This is evident in the phenomenon of "take the postgraduate entrance examination multiple times rather than work" highlighting a resistance to compromise on employment expectations (Purohit, Jayswal, & Muduli, 2021).

In comparison, studies by Yue et al. (2023) provide a broader perspective on employment trends, noting that while the proportion of formal employment has reached a new low, the pursuit of further education continues to rise suggesting that students may be opting for extended education as an alternative to employment that does not meet their high expectations.

In a nutshell, our study underscores the need for a reevaluation of career expectations among undergraduates in applied universities. It is crucial to align students' expectations with the realities of the job market and to provide

guidance that helps bridge the gap between their ideal employment and the actual opportunities available. This aligns with the broader discourse in the literature on the need for career guidance and the importance of managing employment expectations to mitigate the employment-market mismatch (Yue et al., 2023).

5.3. Weak Proactive Employment Consciousness and the Need for a Paradigm Shift in Employment Concepts

A significant portion of undergraduates exhibit outdated employment concepts and a lack of proactive job-seeking and employment consciousness in the face of an increasingly competitive job market. This phenomenon, often referred to as "slow employment" is characterized by a fear of entering the job market and a reluctance to actively engage in career planning (Jiang, Wang, & Sun, 2002).

The transformation of employment concepts is imperative for undergraduates to adapt to the new normal of employment. Our study reveals that many students fail to initiate career planning early on which hinders their ability to adapt to the dynamic job market (Yuan & Yang, 2020). This lack of proactive employment consciousness leads to a concentration of graduates in major cities, popular industries and high-salary sectors while neglecting areas and regions that are in urgent need of talent as identified by the state.

The importance of practical work experience in shaping a scientific view of career choice cannot be overstated. It is within the context of work that employment concepts are truly tested and refined. However, our findings indicate that undergraduates often do not receive adequate guidance in career planning which is crucial for fostering a proactive employment consciousness (Flum & Blustein, 2000).

Comparatively, studies such as "Research on the Employment Concept of College Graduates: Characteristics, Changes, and Differences" published in the "China Youth Study" journal highlight the economic preferences in graduates' employment concepts which further underscores the need for a shift towards a more balanced and proactive approach to employment (Yue, 2023). Additionally, research on "Comparative Study on Undergraduate Employment View Between China and Japan" reveals similar trends in both Chinese and Japanese students, such as an excessive expectation of monthly wages which suggests that the issue is not isolated to China but a broader phenomenon in the region (Li, Chen, Jia, & Wei, 2016).

To address this, it is suggested that universities incorporate more comprehensive career planning and employment guidance programs that encourage students to explore a variety of career paths and understand the value of diverse work experiences. Furthermore, there is a need for a cultural shift that promotes the importance of proactive employment consciousness and the pursuit of career satisfaction over traditional markers of success, such as high salaries or prestigious positions in metropolitan areas.

The transformation of employment concepts among undergraduates is not just a local issue but a global challenge that requires a multifaceted approach involving educational institutions, employers, and policymakers to foster a more proactive and flexible workforce ready to meet the demands of the new employment landscape.

5.4. Employability to be Further Improved

The study indicates that there is a significant gap in the professional competencies of students, which manifests in weak foundational knowledge, inadequate skills, and a lack of professional ethos. These competencies are crucial as they form the basis for employers when recruiting new talent (Mingyang, 2023).

Professional Knowledge and Skills Gaps: Some studies emphasize that social security and labor compensation are primary factors affecting employment quality, highlighting the importance of professional skills in the job market (Mingyang, 2023). The proficiency in professional theories and methods is essential for executing job tasks efficiently. However, our data suggests that despite systematic education in their fields, students struggle to apply their learnt theories and methods effectively in practical settings. This discrepancy can be attributed to unclear study objectives, unscientific learning methods , lack of professional interest, and insufficient knowledge accumulation (Mingyang, 2023).

Deficiencies in Career Development Capabilities: In addition to professional skills, our research also points to a deficiency in career development capabilities among graduates, such as interpersonal communication, organizational coordination, learning abilities, and proficiency in foreign languages and computer use. These skills are increasingly important in a globalized and technology-driven job market. The lack of these competencies can limit graduates' adaptability and competitiveness in various work environments (Mingyang, 2023).

Comparing the findings with existing literature, such as the study by Mingyang (2023) which discusses the factors affecting employment quality, we note a consensus on the importance of salary level, work intensity, and work stability as key indicators of employment quality (Mingyang, 2023). The study extends this by emphasizing the need for a holistic approach to education that not only focuses on academic knowledge but also on practical skills and career development capabilities.

Enhancing the employability of undergraduates requires a concerted effort to improve both their professional competencies and career development skills. Graduates will be better equipped to meet the challenges of the job market and contribute effectively to their chosen fields.

5.5. Undergraduates' Inability to Adapt to the Rapid Development of New-Quality Productive Forces Leading to Structural Unemployment

The rapid development of new-quality productive forces driven by technological advancements has not only become the primary force in economic development but also triggered a transformation in the labor market demand, reshaping the new pattern of employment demands. Our study reveals that undergraduates in China are significantly unprepared for the new technological revolutions and industrial transformations leading to a mismatch between the employment intentions of young college students, the knowledge structure of talent in universities, and the demands of the labor market. This mismatch results in a supply of labor that cannot adapt to the changes on the demand side, further exacerbating structural unemployment (Gong, 2021).

Technological Progress and Employment Structure: Technological progress has a profound impact on the employment structure. It brings about capitalization effects, creating new investments and employment opportunities (Gong, 2021). However, these effects are unevenly distributed across regions leading to imbalances in employment regional structures (Gong, 2021). Moreover, automation technology applications have reduced employment opportunities for occupations focused on routine tasks, particularly those requiring medium skills, while increasing opportunities for low- and high-skill job types (Gong, 2021). This technological-driven imbalance in employment also leads to an expansion of income disparities as wages in industries with faster technological progress grow relatively quickly.

Undergraduates' Preparedness and Adaptability: The findings suggest that undergraduates are not adequately prepared to meet the demands of the new-quality productive forces. The mismatch between the supply and demand of labor highlights the structural unemployment issue which is further complicated by the fact that graduates often lack the necessary skills to fit into the emerging job market (Wang & Zeng, 2009). This lack of adaptability is not only a skill gap but also a gap in the mindset and career planning which is crucial for aligning with the dynamic demands of the employment market.

Comparative Analysis and Recommendations: Our findings align with prior studies like Chen and Jing (2020) which stresses enhancing labor skills to address employment structural shifts. We likewise contend that universities urgently need to reform their curricula to ready students for the evolving world of work. This includes not only enhancing technical skills but also fostering a mindset of lifelong learning and adaptability (Gong, 2021).

The inability of undergraduates to adapt to the rapid development of new-quality productive forces is a significant contributor to structural unemployment. It is imperative for educational institutions, policymakers, and employers to collaborate in preparing the future workforce for the challenges of the new employment landscape.

5.6. Prominent Structural Contradictions in the Supply and Demand of Graduates and the Inadequacy of Major Settings to Meet Societal Needs

Misalignment of University Training and Societal Demands: The study indicates a significant misalignment between the training provided by universities and the demands of the job market. This misalignment is characterized by a lack of correspondence between the majors offered by some applied undergraduate institutions and the needs of society, particularly in the face of new technological revolutions and industrial changes (Zhang, 2024). The lag in the response of some higher education institutions to market demands has resulted in a situation where even when market-oriented majors are established, they are often done so hastily and sometimes driven by profit motives rather than educational or societal needs (Jin, Hao, Liu, & Hong, 2022). This has led to the cultivation of a significant number of graduates whose knowledge and skills do not truly meet societal needs, contributing to a new form of "structural difficulty" in graduate employment.

The Impact of Poor Major Design on Graduate Employment: The poor design of university majors, lacking in long-term forecasting of societal talent needs and a lack of demand validation has contributed to the structural unemployment issue. Some institutions have yet to integrate enrollment and employment considerations holistically, leading to a supply of graduates that does not align with market demands (Jin et al., 2022). This mismatch is further exacerbated by the fact that the education system, based on knowledge division, often leads to a highly specialized and segmented talent cultivation mode that is disconnected from actual industry needs. Many vocational education and training courses fail to keep pace with market demands, resulting in graduates whose skills do not match those required by enterprises (Miu, 2023).

Comparing our findings with other studies, such as the work by Jin et al. (2022) investigates the causes and countermeasures of the mismatch between university talent cultivation and social employment demands, we find a consensus on the need for closer cooperation between universities and enterprises (Jin et al., 2022). The study by Wu and Lin (2020) also emphasizes the importance of aligning professional settings with market demands and enhancing the practical teaching system to improve students' practical abilities (Wu & Lin, 2020).

The contradictions between the supply and demand of university graduates and the inadequacy of major settings to meet societal needs are significant issues that require urgent attention and action. We can work towards reducing the mismatch and better preparing graduates for the challenges of the modern job market by implementing the recommended policies.

6. POLICY SUGGESTIONS

6.1. Policy Suggestions

6.1.1. Creation of a Comprehensive Employment Education System Involving the Public Sector, Educational Institutions, and Society

The government has been actively promoting policies that support worker self-employment, regulate employment through market mechanisms, and encourage and promote employment with a consistent focus on improving the quality and ensuring reasonable growth in the quantity of employment (Sun et al., 2024). The government provides comprehensive information through online services, vocational training, and labor market statistics to maintain a balance between the number and quality of workers. It also uses networks to disseminate essential information to both businesses and graduates. Universities, with governmental support, dynamically adapt their curricula and specializations, encourage faculty to teach job guidance courses, and update their specialized course materials to better align with labor market demands. Educational institutions have intensified their efforts to increase graduates' competitiveness in the job market to enhance the employability and vocational skills of university graduates.

Furthermore, it is suggested that the government require businesses to collaborate with universities to develop training programs and internships to address the issue of university graduates entering with unclear career plans.

This includes conducting "pre-internships" that allow students to gain experience in businesses of interest before they even enroll in university. This practical exposure can help students develop a deeper understanding of their chosen fields and make more informed decisions about their majors. Graduates who have completed their foundational coursework can also engage in "post-internships," working in organizations at the forefront of technology. The aim is to foster a new model of application-oriented talent cultivation that interweaves specializations, industries, and occupations through a combination of "pre-internship" and "post-internship" experiences.

6.1.2. Emphasizing the Development of Graduates' Practical Skills

Recognizing that practical competence is a key factor businesses consider when hiring university graduates, it is crucial to further develop graduates' practical abilities and provide them with the necessary resources. On one hand, universities should actively engage in communication with businesses to impart practical training and relevant vocational skills tailored to the nature of the profession, which are essential for graduates' successful employment post-graduation. On the other hand, businesses should proactively offer suitable internships to university graduates to refine the "specialization-industry-occupation-employment" approach to talent development.

6.1.3. Emphasizing Holistic and Sustainable Development of Graduates

It is crucial to focus on the development of graduates' comprehensive abilities before employment as well as their career progression and life planning post-employment to ensure comprehensive employment education for university graduates throughout their academic and professional journey. Starting from the first year of enrollment, the university's employment services should assess graduates and integrate their unique attributes into personalized career development plans. Staff should foster a culture of lifelong learning, with a special emphasis on developing graduates' creativity, adaptability, and communication skills throughout their higher education. The aim is to foster harmonious personal and professional growth by continually enhancing the talents of graduates.

6.1.4. Empowering University Student Employment with New Quality Productive Forces

Universities should expand their educational programs and training courses accordingly to enhance the overall quality and professional skills of workers. Graduates must bolster their core competitiveness by independently studying artificial intelligence-related materials and seamlessly integrating big data and artificial intelligence into their areas of expertise.

University employment management departments can perform three types of work: intelligent complex tasks, automated simple tasks, and synergistic core tasks by integrating artificial intelligence big model systems. This integration allows for AI to enhance the overall planning and execution of university employment services, improving efficiency and deepening the scope of operations.

Employers can also proactively seek new directions in multi-industry alliances to revolutionize productivity, ensuring that the advantages of the new artificial intelligence industry and traditional industries complement and grow together. This approach broadens employment opportunities for creative, professional, and versatile talents.

We should actively explore and cultivate new occupational fields, create new employment growth points, and vigorously develop innovative business forms and models in line with new economic and social development trends and the people's new expectations for a high quality of life (Sun et al., 2024).

6.2. Implications and Limitations

6.2.1. Implications

Curriculum Reform and Industry Alignment: The misalignment between university training and industry demands suggests a need for curriculum reform to better prepare students for the job market. This includes dynamic adjustment of higher education professional and resource structure layout to increase the "goodness-of-fit" of talent supply and demand.

Enhancing Employability: There is a clear indication that universities need to enhance the employability of their graduates by focusing on practical skills and industry-relevant knowledge. This can be achieved by increasing educational resources, such as internships and industry collaborations, to cultivate practical and applied talents.

Addressing Structural Unemployment: The study highlights the issue of structural unemployment which can be mitigated by improving the matching of education and job markets. Policies should focus on solving the structural employment contradictions faced by youth.

Promoting Quality Employment: The emphasis should be on promoting high-quality and full employment among graduates which includes providing personalized and precise employment guidance services.

Policy Support for Employment: The government's role in providing policy support for employment is crucial, as indicated by various policy suggestions aimed at improving youth employment. This includes adhering to prioritizing employment and improving the policy system for youth employment.

6.2.2. Limitations

Data Limitations: The study is based on a case study in China which may limit the generalizability of the findings to other contexts or countries. The specific cultural, economic, and educational factors in China may not be replicated elsewhere.

Sample Bias: The study may be subject to sample bias as it focuses on applied universities in China. This could limit the representation of the broader undergraduate population and their employment situations.

Policy Implementation Challenges: The actual implementation of these policies may face challenges due to varying regional economic development level and educational infrastructure while the study provides policy suggestions.

Changing Economic Conditions: The rapidly changing economic conditions and technological advancements may render some recommendations less effective over time, requiring continuous adaptation and updating of policies.

Lack of Longitudinal Data: The study does not provide longitudinal data which is necessary to understand the long-term effects of employment policies and the sustainability of employment outcomes.

It is essential to consider these implications and limitations when interpreting the results and developing policies while the study provides valuable insights into the employment situation of undergraduates in applied universities in China. Further research with a broader scope and longitudinal data could help address these limitations and provide a more comprehensive understanding of the factors influencing undergraduate employment.

7. CONCLUSION

The research has found insufficient practical application awareness. There is a recognized deficiency in the understanding of practical application skills among undergraduates. Students often lack the hands-on experience and industry-specific knowledge that employer's demand which is crucial for immediate contributions to the workforce.

Mismatched Employment Expectations: The study reveals that undergraduates hold employment expectations that are on the high side with a noticeable gap between their aspirations and the realities of the job market. This

disconnect can lead to disappointment and underemployment highlighting the need for more realistic career guidance and education.

Weak Proactive Employment Consciousness: Undergraduates exhibit a weak proactive employment consciousness, with many requiring a "transformation" in their employment concept to better align with market demands. This suggests a need for universities to foster a more proactive and adaptive approach to job seeking among students.

Employment Competencies Need Enhancement: The research indicates that the employment competencies of undergraduates require further enhancement to meet the evolving demands of the job market. This includes both hard skills, such as technical expertise, and soft skills, like communication and teamwork.

Inability to Adapt to Rapid Development of New-Quality Productive Forces: Undergraduates struggle to keep pace with the rapid development of new-quality productive forces, leading to structural unemployment. This underscores the urgency for educational reforms that prepare students for the future of work and the implications of technological advancements on employment.

Prominent Structural Contradictions: There is a pronounced structural contradiction between the supply of university graduates and the demand from the labor market, with professional settings in universities ill-matched to societal needs. This misalignment calls for a reevaluation and recalibration of university programs to better serve the evolving needs of the economy and industry.

The findings of this study underscore the multifaceted challenges that undergraduates face in securing employment post-graduation. Addressing these issues requires a concerted effort from educational institutions, policymakers, and employers to better prepare students for the realities of the modern job market and to align academic curricula with industry needs.

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Institutional Review Board Statement: The Ethical Committee of the Sichuan University of Arts and Science, China approved this study (Ref. No. SCWLLL20240006).
Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.
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REFERENCES

Acemoglu, D., & Restrepo, P. (2020). Robots and jobs: Evidence from US labor markets. *Journal of Political Economy, 128*(6), 2188-2244. https://doi.org/10.1086/705716

Chen, Y.-M. (2013). Ten years of research on factors affecting college students' employment: 2003-2013 -- An analysis based on CNKI core journal literature. *Modern University Education*, (4), 35-44.

Chen, Y., & Jing, X.-F. (2020). Implementation mechanism and path selection of precision employment in universities. *Ideological & Theoretical Education*, (9), 108-111.

Cheng, B.-Z., Xu, Q., Wang, Y.-L., Sun, Y.-D., & Wang, F.-B. (2019). Exploration and practice of industry education integration and school enterprise cooperation in applied undergraduate universities: A case study of the school of mechanical and electrical engineering, Daqing Normal University. *Teaching and Educating (Higher Education Forum)*, (6), 38-39.

Dong, Y.-Y. (2007). *Research on the practical ability and cultivation of Chinese college students*. Master's Thesis, East China Normal University.

Flum, H., & Blustein, D. L. (2000). Reinvigorating the study of vocational exploration: A framework for research. *Journal of Vocational Behavior, 56*(3), 380-404. https://doi.org/10.1006/jvbe.2000.1721

Gong, L.-T. (2021). Characteristics, impacts, and coping strategies of digital economy employment. *National Governance*, (23), 29-35.

Hu, J.-P., Huo, Y.-L., & Shen, B.-H. (2024). Exploration of classification evaluation of employment work for college graduates. *China University Students Career Guide*, *9*, 91-98.

Ji, D.-Y., & Luo, X.-J. (2024). An analysis of the employment tendency and influencing factors of college students Born after 2000—based on a survey of representative universities in Jiangxi province. *Journal of Chinese College Student Employment*, (01), 42-50.

Jiang, C.-H., Wang, Q., & Sun, W. (2002). Research on the employment intention of college students. *Journal of Anhui Agricultural University (Social Sciences)*, *11*(5), 111-113.

Jin, K.-R., Hao, S.-Y., Liu, W.-J., & Hong, Y.-R. (2022). Analysis of the causes and countermeasures of the mismatch between the cultivation of talents in colleges and universities and the demand for social employment. *Research in Innovative Education*, *10*(11), 2930-2936.

Li, P., Chen, Y.-T., Jia, W.-C., & Wei, Y. (2016). Comparative study on undergraduate employment views between China-Japan. *Chongqing and the World (Academic Edition)*, (05), 60-64.

Liu, X.-B. (2023). Analysis of the employment status and countermeasures of college students. *Human Resource Development*, (23), 31-33.

Liu, X.-Y., Ma, Z., & Wu, Y.-R. (2020). Research on contemporary college students' employment satisfaction factors: Based on logit regression models. *Theory and Practice of Social Science*, *2*(4), 33-43.

Liu, Z. (2024). *Research on behavior analysis and employment of college students based on big data*. Paper presented at the Proceedings of the 2024 International Conference on Big Data and Digital Management.

Mingyang, Z. (2023). Analysis of the factors affecting the employment quality of college graduates: A case study of China. *Psychology Research*, *13*(8), 357-365. https://doi.org/10.17265/2159-5542/2023.08.003

Miu, C.-W. (2023). Empirical analysis of the supply-demand matching of vocational education, technical and skilled talents in the construction of a skilled society. *Education and Career*, (17), 36-43.

Pan, L., & An, T.-T. (2018). New trends in career education in Northern Ireland, United Kingdom. *Comparative Education Research*, *40*(9), 44-50.

Purohit, D., Jayswal, M., & Muduli, A. (2021). Factors influencing graduate job choice–a systematic literature review. *European Journal of Training and Development*, *45*(4/5), 381-401. https://doi.org/10.1108/EJTD-06-2020-0101

Raghunathan, T. E., & Grizzle, J. E. (1995). A split questionnaire survey design. *Journal of the American Statistical Association*, *90*(429), 54-63. https://doi.org/10.1080/01621459.1995.10476488

Rudalf, P. F. (2024). *Student perceptions of on-campus employment: Opportunities for high-impact practice*. Doctoral dissertation, William & Mary. W&M ScholarWorks.

Sun, H., Du, J., Qu, W., Chang, Q., Ma, Y., & Zhao, Z. (2024). Conversation by writing: Learning and implementing the mind of keynote address by general secretary of CPC Xi Jinping in the 14th Group study session of the political Bureau of the CPC Central committee (Part.1). *Journal of Chinese College Student Employment*, (6), 3-18.

Wang, T., & Zeng, X.-Q. (2009). Research on the reason and proposal of college graduates' structural unemployment. *Education and Economy*, (1), 1-4.

Wu, Z.-Q., & Lin, Y.-M. (2020). The basic logic and reform strategies of major setting in applied undergraduate universities. *Journal of Beijing Union University*, *34*(4), 1-6.

Yuan, L.-P., & Yang, Y. (2020). Thematic progression and research focus on university entrepreneurship education curriculum: Knowledge map analysis based on CNKI and WOS documents. *University Education Science*, (1), 89-98.

Yue, C.-J. (2023). Research on the employment concept of college graduates: Characteristics, changes, and differences. *China Youth Study*, (5), 4-13.

Yue, C.-J., Feng, Q.-X., Xin, X.-J., & Qiu, W.-Q. (2023). Research report on employment trends of Chinese college graduates: Based on 2003—2021 survey data. *Journal of East China Normal University (Education Sciences)*, *41*(9), 138-154.

Zhang, C., & Shao, Y.-F. (2024). Analysis of the reasons and countermeasures for the "slow employment" phenomenon of college graduates: Based on a survey of a certain engineering department as an example. *Progress in Modern Education*, *2*(4), 71-73.

Zhang, J., Wu, H., & Huang, J. (2021). The transformation of employment awareness among students in application-oriented universities under the background of career selection policies: Based on the analysis of employment sample data of outstanding graduates in business administration from a certain application-oriented university, *University Education*, (3), 34-36.

Zhang, X. (2024). Reconstruction of the training mode for vocational technical and skilled talents to adapt to the needs of new technologies and industrial changes. *Environment and Development*, *36*, 57-61.

Zheng, T.-C. (2011). *Research on the evaluation methodology of undergraduates' employment capability.* Master's thesis, Beijing Jiaotong University.

Zhu, J., & Zhou, H. (2024). An empirical study of employment-related perceptions of college graduates in the context of digital economy. *China Youth Social Science*, *43*(2), 83-97.

Supplementary material 1

Questionnaire on Employment Issues for the Class of 2024

To My Classmate:

Hi there. At Sichuan University of Arts and Sciences, I work as a teacher! I have arranged this survey in order to gain a better understanding of the employment needs of university graduates and the role that universities play in helping them find jobs. I am a teacher at Sichuan University of Arts and Sciences, and I am currently investigating the employment issues of 2024 university graduates. We appreciate you taking the time to finish this survey. Your responses are quite significant to me. This is an anonymous survey intended solely for use in academic research. Every detail will be kept private. Kindly take a moment to fill out the survey.

Once again, I appreciate your cooperation.

I hope you stay well and have academic success!

A Teacher of Sichuan University of Arts and Sciences

July 2024

1. Gender:

2. Age:

3. Specialization:

4. Your type of education is:

A. Full-time undergraduate

B. Post-secondary education

C. Specialization

5. Honors received while in university:

6. Are they employed (Including further Postgraduate education and research)?

A.Yes

B. No

7. What is your current employment path?

A.Engaged in the industry related to your majors

B.Succeed in graduate school and higher education

C.Successful entry into the civil service

D.Employment through special programs such as the Western Program and other program

E.Attempting to study for graduate school again

F.Preparing for the second civil service examination

G. Self-employment

H. Engaged in other industries that are not related to your majors

I. No clear employment intention or no employment for the time being

8. Reasons for choosing the current direction of employment:

9. Before entering university, did you know anything about your university major, or the industry you might be working in?

A. realise（76%-100%）

B. realize（51%-75%）

C.Don't know much（26%-50%）

D. Not at all（0%-25%）

10. Has entering university helped you to better understand the industries you might pursue in the future?

A.Very helpful（76%-100%）

B. Some help（51%-75%）

C. Not very helpful（26%-50%）

D. Not helpful（0%-25%）

11. How has the university's applied talent training model affected your employment?

A.bite(81%-100%)

B.affect(61%-80%)

C.unaffected(41%-60%)

D.deteriorate（21%-40%）

E. Greater deterioration（0%-20%）

12. How do you think the university should develop talents?

A. Profession-oriented: training talents according to the establishment of disciplines and specialties

B. Industry-oriented: training talents according to the needs of industrial development

C. Career-oriented: training people according to specific social occupations

D. Balancing the three

13. What is your attitude towards employment?

A.Employment before career choice

B. Choosing a job before employment

C. Baffled

D. Expectation of an improvement in the employment situation

E. Well-prepared to cope with the situation

14. What is your most desired career choice?

A.State-run enterprises

B.Three-funded enterprises

C.Private enterprises

D.State Organizations

E.Universities and universities, scientific research units

F.Self-employment

G.Graduate study

15. In the face of the new round of scientific and technological revolution and industrial revolution, do you think you have sufficient ability to adapt to the demand for labor in the development of new scientific and technological industries?

A.able to cope with(76%-100%)

B. Fairly responsive(51%-75%)

C. Lacking（26%-50%）

D. Feeling confused and unable to cope (0%-25%)

16. After going through the job search process, if you were to go back to university, what qualities do you think you should focus on improving? (Multiple choice)

A.specialized knowledge

B.psychological quality

C. Interpersonal skills

D. Organizational and coordination capacity

E. Adaptive capacity

F. Foreign language proficiency

G. Computer application skills

H. Other:

Supplementary material 2

Outline of Interviews on the Employment Situation of Fresh Undergraduate Graduates from Local Universities

First of all, thank you very sincerely for taking your valuable time to cooperate with us and participate in this interview.

This interview will focus on the topic of university graduates' employability, and will explore what constitutes university graduates' employability under the new employment pattern. The interview will last about 30 minutes, and the results will be kept confidential and used only for academic research, so please feel free to talk freely. After the interview, we will give you a summary of the information and ask you to confirm it, thank you again for your cooperation!

Interviewee: University employment managers

1. Basic information about the interviewee (name, work unit, position title).

2.What is the employment status and quality of employment for the 2024 undergraduate graduates in each program?

3. What do you think is the current employment dilemma for undergraduates? How should it be improved?

4. How has the epidemic affected employment? How did the school address this?

5. What is the relationship between the employment situation and the graduates' majors? Is there a big difference in employment between different majors?

6. What kind of career guidance for graduates does the school carry out? What is the feedback from graduates?

7. Do you think there are still deficiencies in the school's career guidance and in what areas?

8. How does the school publicize and implement the Government's employment promotion policy?

9. What do you think are the shortcomings of the Government's employment promotion policy? How can it be improved?

10. What difficulties have you encountered in carrying out undergraduate employment work? How were they resolved?

Interviewee: Grassroots Counselors in Universities

1. Basic information about the interviewee (name, work unit, position title).

2. What are the majors of your undergraduate graduating class? What is the employment situation and quality of employment, and the type of employment?

3. What do you think is the current employment dilemma for undergraduates? How should it be improved?

4. How has the epidemic affected graduates' employment, has there been any change in employment rates, attitudes towards employment, motivation for employment? How has the university addressed this?

5. What are the graduates' employment attitudes? Do their attitudes towards employment have a significant impact on employment?

6. Is there a large number of graduates in your program who have taken the exams for graduate school, the editorial board, or the public office? How many of them passed the exams? Are those who didn't get into the program employed? Or are they still taking the exam?

7. How satisfied are the employers with the graduates? What needs to be improved or changed in the school's training program?

8. What kind of career guidance for graduates has the university carried out? What is the feedback from graduates?

9. Do you think there are any shortcomings in the career guidance work of the university?

10. How does the university publicize and implement the government's employment promotion policy? Are graduates aware of this?

11. What difficulties have you encountered in carrying out undergraduate employment work? How were they resolved?

Interviewee: Heads of enterprises recruiting on campus

1. How do you think university graduates perform in your organization? On the whole, can they basically meet the needs of enterprises and positions?

2. What abilities do you think current university graduates are better at? What do you think current graduates are lacking in?

3. What abilities do you think university graduates should improve in order to obtain higher-quality employment? As an employer, tell us about your suggestions for universities in training university graduates.