Research on the Innovative Path of Informatization Management of College Students' Employment in China

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Abstract: This paper aims to explore the field of career planning and employment guidance for Chinese college students, and puts forward relevant countermeasures and suggestions from the theoretical level under the title of "Research on the Innovative Path of College Students' Employment Informatization Management". By analyzing the problems and challenges of the current information management of college students' employment and combining relevant research results at home and abroad, this paper proposes an innovative path from a theoretical point of view, with a view to providing theoretical support and practical guidance for college students' career planning and employment guidance work.

Keywords: College students; Career planning; Employment guidance; Information management; Innovative paths.

1. Introduction

1.1. Background

Under the background of rapid development and continuous change of global economy, the employment problem of college students has become one of the focuses of social concern. With the change of social structure and the rapid development of science and technology, the traditional employment concepts and methods are undergoing profound changes, which put forward higher requirements for college students' vocational literacy and comprehensive ability [1]. College students' career planning and employment guidance have thus become particularly important, directly related to graduates' future career development and social adaptability.

As an advanced management tool, informatization management has made remarkable achievements in various fields. However, how to organically integrate informatization management into college students' career planning and employment guidance to better serve the majority of college students is still an issue worthy of in-depth study. Informatization management is not only a tool or a technology, but also a concept and a way of thinking, and its innovative application in the career development of college students will help to enhance the competitiveness and social adaptability of college graduates [2].

1.2. Purpose and significance of the study

The purpose of this study is to study in depth the innovative path of college students' employment informatization management, and to explore how to better integrate informatization management theories and practices in order to enhance the effectiveness of college students' career planning and employment guidance. The significance of the study is reflected in the following three aspects.

First of all, with the arrival of the information age, the traditional career planning and employment guidance model is no longer adapted to the current rapidly changing job market. This study aims to make the information management better serve the career development of college students and improve their competitiveness in the competitive job market through innovative paths.

Secondly, this study will deeply analyze the potential role and influencing factors of informatization management in career planning and employment guidance, provide theoretical support and practical guidance for colleges and universities and related management agencies, and promote the continuous improvement of employment service level.

Finally, the research on the innovation path of college students' employment informatization management will provide useful references and lessons for future research in related fields, promote the in-depth integration of information technology and career development, and contribute to the construction of a smarter and more efficient college students' career planning and employment guidance system. In the current informationization era, this study has positive social significance and impetus.

2. Literature review

2.1. Theories of career planning for university students

Several classical theories are covered in the study of college students' career planning theories. Among them, Holland's career interest theory puts forward the matching relationship between individuals and career environments, which provides college students with insights into their personal interests and career choices. The Transcultural Adaptation Model emphasizes the influence of cultural background on career choice, which is important for understanding college students' career adaptation in different cultural environments. In addition, social cognitive theory, psychological capital theory and so on also provide multi-faceted theoretical support for college students' career planning [3].
2.2. Theory and practice of employment guidance

The theoretical system and practical experience of career guidance are becoming increasingly refined. The classical Harvard model puts forward the multi-level factors of individual career development, providing a systematic framework for employment guidance. Career development theory analyzes career development from the perspective of individual life cycle, providing a reference for formulating personalized employment guidance strategies. At the practical level, diversified career guidance tools such as career counseling, mock interviews, and career mentoring systems have gradually become an important part of college students' career development [4].

2.3. Current status of information management of university students’ employment

At present, college students' employment information management presents the development trend of multi-level and multi-channel. Diversified channels such as employment information platforms of colleges and universities, social recruitment websites and enterprise recruitment systems provide college students with a wide range of employment information resources [5]. At the same time, all kinds of intelligent tools and data analysis technology gradually penetrate into the employment information management, which improves the information processing efficiency. However, there are also problems such as information asymmetry, uneven information quality, and challenges of large-scale data management, which urgently need further improvement and innovation.

In these three aspects of the literature review, the theoretical system and the full summary of practical experience provide a strong theoretical foundation for this study, while the current situation of college students' employment informationization management is comprehensively sorted out, providing the necessary background and reference for the subsequent research to propose innovative paths.

3. Theoretical discussion on information management of university students’ employment

3.1. The role of information management in career planning

Information management plays an indispensable and important role in the career planning of college students, and its impact is not only reflected in the provision of career assessment tools and digital platforms for individuals, but also in the provision of all-round, personalized support for college students to help them develop and achieve their career goals in a more targeted manner.

First of all, information management digs deep into the personal traits, interests and career aspirations of college students through intelligent career assessment tools. This in-depth understanding not only helps to reveal individual career tendencies, but also provides a scientific basis for the development of personalized career development planning [7]. Based on advanced algorithms and big data analysis, these intelligent tools can provide more accurate insight into the potential strengths and development direction of each college student. By analyzing individual skills, interests and personality traits, information management can provide college students with tailored career advice, guiding them to better understand themselves and clarify the direction of future career development. This kind of personalized assessment not only provides a deeper self-knowledge experience for college students, but also provides substantial support for their career planning.

Secondly, through the establishment of a digital platform for personal files and career development records, information management can help university students better track and manage their career development journey. This platform provides college students with a centralized and readily updated tool that enables them to clearly record their personal achievements, project experiences, training experiences and important milestones in their career development. The establishment of the digital platform not only improves the visualization and easy storage of information, but also provides a convenient way for college students to view and update their career development information anytime, anywhere. Through such a digital record, college students can manage their careers in a more organized manner, adjust and update their personal goals in a timely manner, and continue to accumulate experience in practice. The establishment of such digital records not only promotes the self-management of individual college students, but also provides strong support for their future job search and career development.

Overall, the role of informatization management in college students' career planning is multidimensional, including both in-depth insight into individual career traits and digital recording and management of career development history [6]. This all-round support helps college students plan their career in a more organized and scientific way, improve their employment competitiveness and meet the challenges of the future workplace.

3.2. Impact of information management on career guidance

Information management plays a far-reaching role in college students' career guidance by introducing big data analysis technology and intelligent personalized guidance tools to provide more accurate and personalized career guidance for college students, thus prompting them to step into the job market in a more targeted way [7].

First of all, informatization management provides college students with more accurate advice on career choices by digging deeper into the recruitment needs of enterprises and market trends through big data analysis technology. The introduction of this technology enables career guidance to go beyond traditional general advice to more in-depth analysis and insight based on specific market conditions and industry trends. By analyzing the recruitment data of enterprises, information management can reveal the demand characteristics, popular positions and related skill requirements of different industries, so that college students can have a clearer understanding of the employment prospects of various industries. This helps avoid blindly following the trend and enables college students to be more targeted in choosing a career direction that suits their interests and professional background.

Secondly, intelligent personalized guidance tools tailor individualized career development paths based on college
students' majors, interests, skills and other characteristics, and provide corresponding training and development advice. This personalized guidance no longer adopts a one-size-fits-all approach, but creates a tailor-made career development plan for each college student based on the actual situation of the individual. Through intelligent matching algorithms, the system is able to more comprehensively analyze the strengths, weaknesses and development potential of college students and provide them with more accurate career advice. This not only improves the matching degree of college students' employment, but also gives them more confidence and clear direction to face the challenges of career development.

Overall, informatization management has made college students' career guidance more personalized and precise through big data analysis and the introduction of intelligent tools. This trend not only provides college students with more comprehensive and effective career planning support, but also lays a solid foundation for their future career path. This development direction will help college students face their career choices more rationally and better realize their personal career goals.

3.3. Key elements of information management of university students' employment

The key elements for the successful implementation of college student employment information management include platform construction and technical support, data quality and standardization, student participation and feedback mechanisms, and information security and privacy protection.

First of all, platform construction and technical support are the foundation of information management. The establishment of an advanced informatization management platform, the integration of multiple resources, and the provision of convenient information query and application services for college students are the key links to ensure the successful implementation of informatization management. Advanced technical support can not only provide a smooth and efficient informatization experience, but also motivate college students to participate more actively in career planning and employment guidance.

Secondly, data quality and standardization are key elements of information management. Ensuring the accuracy and completeness of employment information and establishing industry standards to promote the interoperability and interoperability of data can improve the effectiveness of information management. High-quality data not only helps provide reliable information support for college students, but also provides colleges and universities and enterprises with more accurate analysis of recruitment and training needs.

Third, student participation and feedback mechanism is the guarantee for the success of information management. Actively encourage college students to participate in information management, collect their feedback, and continuously optimize the platform functions to ensure that they meet the actual needs. Establishing a sound feedback mechanism enables students to make timely comments and suggestions in the process of using the platform, so as to make the information management closer to the actual needs of college students.

Finally, information security and privacy protection are factors that cannot be ignored. In information management, the formulation of strict information security policies and privacy protection measures to safeguard the security of college students' personal information is an important guarantee to ensure the credibility of information management. The use of advanced encryption technology and permission management can effectively prevent information leakage and abuse and ensure the long-term sustainable development of information management. The comprehensive consideration of these key elements will provide a sound foundation and sustainable development support for college students' employment informatization management.

Through in-depth discussion of these key elements, this study aims to provide strong theoretical guidance for colleges and universities and related management organizations to better promote the innovation and development of college students' employment information management. The comprehensive consideration of these elements will help build a more intelligent and efficient career planning and employment guidance system for college students and improve the overall service level.

4. Problems and Challenges of College Students' Employment Information Management

At present, the informatization management of college students' employment in Chinese colleges and universities faces a series of problems and challenges. Firstly, college students generally have insufficient knowledge of informationization management and lack a comprehensive understanding of modern information technology in career development. Second, the current employment guidance system in colleges and universities is lagging behind and fails to adapt to the requirements of information management in a timely manner, which leads to the limitation of personalized and precise guidance [8]. Finally, the inaccuracy and incompleteness of employment information is another important problem.

4.1. Insufficient knowledge of information technology management among university students

College students generally have a low level of awareness of information technology management and lack a comprehensive understanding of modern information technology in career development [8]. This is prevalent across majors and grades and may lead to college students failing to make full use of the information technology management platform and enjoy the convenience and advantages it brings. It is crucial to strengthen the education of college students' awareness of information technology management. A comprehensive IT training program, including face-to-face training, online educational resources, and promotional activities, should be established to improve college students' understanding of IT management concepts and tools and enhance their motivation to use them proactively.

4.2. Inadequacies in the employment guidance system

The current employment guidance system in colleges and universities has a certain lag, and fails to adapt to the requirements of information management for personalized and precise guidance in a timely manner. Some colleges and universities may still be in the traditional mode of career guidance services, failing to effectively integrate information
technology means. To solve this problem, it is necessary to adjust the institutional mechanism and optimize and upgrade the employment guidance system. The introduction of advanced information management tools, such as artificial intelligence intelligent career planning system, personalized career assessment, etc., and the enhancement of the information management level of the career guidance personnel to ensure that students can get closer to the actual career guidance.

4.3. Inaccurate and incomplete information on employment

The inaccuracy and incompleteness of employment information is an important issue in the current information management of college students' employment. The wide range of information sources and the use of different data standards may lead to inconsistent and misleading employment information. To solve this problem, it is necessary to establish a more accurate information collection mechanism to prompt enterprises to provide true, accurate and comprehensive recruitment information. A sound auditing mechanism and feedback mechanism should be established to correct and update the information in a timely manner through the actual feedback from college students on employment information, so as to ensure the authenticity and reliability of the information. At the same time, enterprises are being pushed to adopt a standardized format for the release of recruitment information, so as to improve the uniformity and comparability of the information.

By analyzing these problems in depth, this study will propose more specific and practical countermeasures. These include strengthening the diversity of informatization education, promoting the reform and innovation of the employment guidance system in colleges and universities, and establishing a more standardized and strict mechanism for collecting and reviewing employment information. Through these efforts, it will help to promote college students' employment informatization management towards a more healthy and sustainable development path.

5. The Innovative Path of College Students' Employment Information Management

By innovating the path of college students' employment information management, the development of college students' employment information management can be promoted in a more comprehensive and systematic way. This includes both training and guidance for students, as well as the optimization and innovation of the employment guidance system and information collection and release mechanism of colleges and universities. Through the comprehensive application of these innovative paths, more comprehensive and accurate career planning and employment guidance services will be provided for college students.

5.1. Enhancing the awareness of information management among university students

In order to raise the cognitive level of university students on information management, a series of targeted measures need to be taken to induce them to understand and use information management tools more deeply. First of all, the cognitive level of students can be raised by carrying out information technology management training specifically for different grades and majors. Such training programs should include knowledge on career planning, employment information inquiry, etc., and enable students to make more comfortable use of information technology management platforms by teaching them practical skills.

Secondly, in order to ensure that students are exposed to and understand the importance of information technology management at an earlier stage, the relevant content of information technology management can be incorporated into relevant courses, such as career development courses and information technology and career planning courses. In this way, college students will be able to systematically learn and understand the concepts and applications of informatization management in the course of their studies, laying a solid foundation for their future career planning [9].

In addition, through diversified channels such as campus publicity and online social media, the exposure of information management can be increased to stimulate students' interest and encourage their active participation. Lectures, exhibitions, salons and other activities on related topics are organized to convey the concepts and practical applications of information technology management to university students in a lively and interesting way, thus triggering their positive response.

In summary, through the organic combination of the above measures, the cognitive level of college students on information management can be comprehensively improved. This not only helps them to utilize the information management platform more actively, but also provides more comprehensive and scientific support for their career planning. Such comprehensive training measures will make college students more equipped with information literacy and coping ability to face future career challenges.

5.2. Optimization of the career guidance system

In order to better meet the demand of information management for personalized and precise guidance, colleges and universities should start to improve the career guidance system, fully integrate information management tools, and introduce intelligent technology to improve the personalization and relevance of guidance services. First of all, it is recommended that colleges and universities build intelligent career planning systems, which can customize personalized career planning advice for each student through big data analysis and artificial intelligence algorithms. Such a system can dig deeper into students' interests, skills, professional backgrounds and other information to provide them with more specific and realistic career development paths.

Secondly, in order to better guide students to use the information technology platform on their own initiative, colleges and universities should incorporate information technology management tools into their regular career guidance services. By training students to use these tools, they can gain a deeper understanding of their strengths and career development directions. Such a practice not only improves students' information literacy, but also stimulates their interest in information management, making them more willing to actively use relevant technologies in their career planning.

In addition, colleges and universities can also consider establishing a mentor system, in which mentors provide students with personalized information management guidance [9]. Mentors can help students make better use of information technology management tools, interpret data
analysis results, and provide targeted advice and guidance according to their actual situation [2]. This one-on-one mentoring service can more comprehensively meet students’ individualized needs, enhance the effectiveness of mentoring services, and make students more confident and capable of coping with various challenges in their careers. Through these comprehensive initiatives, the university career guidance system will be better adapted to the development trend of information management and serve students’ career planning more effectively.

5.3. Establishment of a sound mechanism for collecting and disseminating employment information

In order to ensure the accuracy and comprehensiveness of employment information, it is recommended that colleges and universities take a series of measures in order to establish a sound mechanism for the collection and dissemination of employment information. First of all, universities and relevant management organizations should work together to formulate strict information collection standards to ensure the consistency and comparability of employment information provided by enterprises. By standardizing the information collection process, information distortion and misinformation can be effectively reduced.

Secondly, in order to strengthen the information vetting process, it is recommended that an independent information vetting team be established. This team should be responsible for conducting in-depth audits of the employment information provided by enterprises to ensure the authenticity and accuracy of the information. Through the intervention of a professional audit team, the credibility of employment information can be improved so that students and other stakeholders can have more trust in the information obtained.

At the same time, in order to identify and correct problems in employment information in a timely manner, it is recommended that a mechanism for student feedback on employment information be established. Students are encouraged to actively participate in prompting the timely updating and correction of information by reporting false information or suggesting corrections. This mechanism of student participation can not only increase the transparency of the information, but also make up for problems that may be overlooked by the information review team and realize the joint supervision of information.

In addition, taking into account the development of modern technology, the non-tamperability of employment information can be ensured with the help of blockchain technology and other means. The characteristics of blockchain technology can effectively guard against the tampering and falsification of information, thereby enhancing its credibility and security.

Through these comprehensive measures, colleges and universities can establish a more sound and reliable mechanism for collecting and releasing employment information, provide students with more authentic and reliable employment information, and provide stronger support for their career planning.

6. Response implementation and impact assessment

In order to be able to provide colleges and universities with concrete and feasible operational guidelines to ensure that the responses developed can be effectively implemented and their effectiveness fully evaluated, we can adopt detailed implementation steps and differentiated evaluation methods. This systematic approach can also provide a scientific basis for the field of career planning and employment guidance in colleges and universities to meet the ever-changing needs of college students.

6.1. Countermeasure implementation steps

The countermeasure implementation steps mainly include two aspects of enhancing college students’ awareness of information management and optimizing the employment guidance system. In terms of enhancing college students' awareness of information management, it is necessary to firstly formulate a detailed information management publicity plan, including clear publicity objectives, channel selection and publicity methods, so as to ensure the comprehensiveness and in-depthness of information transmission. Secondly, training courses on information management should be organized for college students, covering the use of information technology tools, personal information management skills, etc., which should be carried out both online and offline to ensure the participation of all students. At the same time, the university media, social media and other diversified channels should be utilized to carry out publicity activities on information management, including lectures, exhibitions, salons and other forms, in order to enhance the knowledge and interest of university students in information management.

In terms of optimizing the career guidance system, firstly, it is necessary to conduct an in-depth assessment of the existing career guidance system to understand its strengths and weaknesses, and to clarify the aspects that need to be optimized, which can be analysed through student feedback, employment rate data, and so on. Secondly, information management tools suitable for schools and students, such as intelligent career tests and personalized guidance software, are selected and gradually integrated into the career guidance system to ensure a smooth transition and system upgrading. At the same time, for the newly introduced informatization management tools, relevant training is given to the career guidance personnel to improve their ability to use these tools, so that they can better serve the college students and establish a professional informatization guidance team.

With regard to the establishment of a sound mechanism for the collection and release of employment information, it is first necessary to design standardized information collection forms, including mandatory items, data formats, etc., in order to ensure the consistency and comparability of the information collected and to reduce the possibility of information distortion. Secondly, it is necessary to set up a specialized audit team responsible for auditing the recruitment information released by enterprises, and ensure the authenticity and accuracy of the information through the professional audit of the audit team. Finally, a feedback mechanism for students' employment information should be established, so that inaccurate or lagging information can be discovered in a timely manner through students' actual experiences and feelings, and the timely updating and correction of information can be promoted.

The detailed design of the implementation steps will help the universities to have clear guidance in the specific operation, so as to promote the improvement of the awareness of information management, the optimization of the
employment guidance system and the establishment of a sound mechanism for the collection and dissemination of employment information more smoothly. Through these implementation steps, colleges and universities can gradually improve the corresponding working mechanism to ensure the orderly promotion of various measures and achieve long-term and sustainable effects.

6.2. Effectiveness evaluation design

The effectiveness assessment method involves three aspects, namely, enhancing college students' awareness of information management, optimizing the career guidance system and establishing a sound mechanism for collecting and releasing employment information. In the area of enhancing college students' awareness of informatization management, a knowledge quiz was designed to cover the use of informatization tools and career planning, comparing the knowledge level of college students before and after the training in order to comprehensively assess the enhancement effect. At the same time, the influence and attractiveness of the activities are assessed through the participation and feedback of the promotional activities in order to understand the actual effect of the informatization management promotion.

For the optimization of the career guidance system, student satisfaction survey is a key assessment method to comprehensively evaluate the effectiveness of the optimization by finding out how satisfied students are with the new information management tools and guidance services. In addition, comparing the changes in the school's employment rate before and after the optimization, we analyze whether there is a significant increase in order to determine whether the new career guidance system is more effective in promoting student employment.

In establishing a sound mechanism for the collection and dissemination of employment information, assessing the accuracy of the information is a key step. The accuracy of information is assessed by sampling recruitment information to detect false recruitment information and ensure that students are provided with true employment information. At the same time, the career development of employed students is tracked to assess the match between their career choices and the actual positions, so as to reflect the actual effectiveness of the information dissemination mechanism and ensure the authenticity and usefulness of the information. This series of assessment methods will provide a comprehensive understanding of the effects in all aspects and provide powerful data support for the career planning and employment guidance work of college students.

The differentiation of the above assessment methods guarantees a comprehensive grasp of the effects of the countermeasures. The different aspects of the assessment methods focus on the various dimensions of information management, the employment guidance system and the mechanism for collecting and releasing employment information, so as to gain a comprehensive understanding of the impact of the reform initiatives. This differentiated assessment method not only reflects the actual effects of the reforms objectively, but also helps identify and solve possible problems, providing strong support for further improvements.

7. Conclusion

By focusing on the "Innovative Paths of College Students' Employment Informatization Management" in the field of college students' career planning and employment guidance in China, this study aims to explore the role of informatization management in college students' career development at the theoretical level, and to put forward relevant countermeasures and suggestions. The study firstly reviews the classical theories of career planning and employment guidance for college students, including career interest theory, Harvard model, etc., which provides a theoretical basis for the subsequent innovative path. Meanwhile, the current situation of college students' employment information management is reviewed, revealing the existing problems and challenges. In the part of theoretical exploration, the key role of informatization management in career planning and employment guidance is examined in detail, and the importance of related elements is clarified. Based on the theoretical exploration, suggestions for innovative paths are put forward, including enhancing college students' awareness of informatization management, optimizing the career guidance system, and establishing a sound mechanism for collecting and releasing employment information. Finally, the design of countermeasure implementation and effect evaluation provides the study with operability and verifiability.

Of course, this study has some limitations. In proposing the innovation path, this study mainly relies on theoretical discussions and does not analyze the specific empirical data in depth. Since information management involves multiple subject areas, the in-depth analysis of related technologies also has some limitations. In addition, the scope of the study mainly focuses on Chinese university students and fails to fully consider the differences in other countries and regions.

Future research can be carried out in the following four aspects. First, empirical research and case study: conduct more empirical research and verify the actual effects of the proposed innovative paths through case studies to provide more reliable support for theoretical research. Second, cross-cultural comparison: Considering the differences in the informatization management of college students' employment in different cultures, cross-cultural comparative research is conducted to gain a more comprehensive understanding of the universality and applicability of informatization management. Third, in-depth technical research: Strengthen in-depth research on informatization management technology, especially the application of artificial intelligence, big data and other technologies in career planning and employment guidance for college students. Fourth, continuous improvement and optimization: With social development and technological progress, the field of informatization management is constantly evolving, and the research can constantly follow up the latest technological and theoretical advances to propose more innovative and practical paths.

By overcoming these limitations, future research can better provide theoretical support and practical guidance for college students' career planning and employment guidance.

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