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# Digital Transformation and Practical Exploration of Employment Guidance Service System in Finance and Economics Colleges under the Background of "Smart Employment"

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**Abstract:** Under the background of the Smart Employment initiative, career guidance service systems in finance and economics colleges face an urgent need for systematic digital transformation. Traditional employment guidance models, which rely heavily on fragmented offline counseling and static information release, have proven inadequate for addressing students' evolving needs and the dynamics of contemporary labor markets. This study investigates the current operation of employment guidance service systems in finance and economics institutions, identifying key problems such as dispersed service channels, weak data integration, supply–demand mismatches, and limited feedback on employment quality. On this basis, the paper proposes a set of digital transformation strategies, including the construction of integrated smart service platforms that unify information, consultation, and decision support; the implementation of data-driven career education models that leverage big data for personalized guidance; and the deepening of digital industry–academia collaboration to align talent cultivation with market demand. Furthermore, the study emphasizes building interdisciplinary guidance teams with combined expertise in education, information technology, and labor economics, as well as establishing continuous employment quality tracking and evaluation mechanisms. These measures aim to enhance the efficiency, precision, and intelligence of employment services, strengthen students' career planning capabilities and employability, and ultimately promote high-quality, sustainable employment outcomes in finance and economics colleges.

**Keywords:** digital transformation; employment guidance; higher education; smart employment; career services

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## 1. Introduction

Amid the ongoing technological revolution and industrial transformation, next-generation information technologies such as artificial intelligence, big data, and cloud computing are increasingly integrated into diverse industries, fostering the emergence of the concept of "smart employment." This innovative approach fundamentally transforms traditional methods of accessing employment information, while simultaneously redefining the scope and delivery models of career guidance services within higher education institutions. As the job market becomes more competitive and employment environments grow increasingly complex, conventional career guidance systems in finance and economics colleges have revealed significant limitations, often failing to adequately address the evolving needs of contemporary college students [1–3]. To overcome these challenges, institutions must harness the potential of digital technologies to drive transformative reforms in their career guidance service models. By adopting advanced technological solutions, these institutions can establish employment service systems that are not only more efficient but also tailored to the precise needs of modern

students. Such systems would enable the delivery of intelligent, data-driven, and personalized career guidance, ensuring alignment with the dynamic demands of the current employment landscape. This strategic integration of technology into career services represents a critical step toward empowering students to navigate the complexities of the modern job market with greater confidence and success.

## **2. Issues in the Operation of Employment Guidance Service Systems in Financial and Economic Institutions**

The current employment guidance service systems in financial and economic institutions encounter numerous operational challenges that hinder their effectiveness and efficiency [4–6]. These challenges stem from structural, procedural, and technological shortcomings, which collectively impact the ability of these systems to provide comprehensive and tailored support to students throughout their academic and professional development [7–9].

1. Fragmented service structures lacking systemic integration remain a significant issue. Many schools continue to manage career counseling through decentralized approaches involving multiple entities such as student affairs offices, career guidance centers, secondary colleges, and individual counselors. This results in a model characterized by "multi-agency management with fragmented responsibilities," where accountability is unclear, and coordinated mechanisms are absent. Career guidance programs often rely on ad-hoc, last-minute sessions conducted during graduation seasons. These sessions are disconnected from the broader processes of early career awareness cultivation and post-employment tracking feedback. Consequently, students are deprived of continuous and comprehensive guidance throughout their academic journey, which is essential for informed career decision-making and long-term professional success.
2. Another critical challenge is the misalignment between service content and student needs. Most institutions prioritize generic skills training, such as resume writing and interview preparation, while neglecting to incorporate industry-specific trends and job competency requirements into their program designs. This approach fails to address the diverse needs of students, as it overlooks individual differences, disciplinary characteristics, and unique career trajectories. The lack of personalized services limits the ability of students to develop targeted skills and knowledge that align with their specific career aspirations and the demands of their chosen industries.
3. Inadequate digital platform integration further exacerbates the inefficiencies within these systems. Although some institutions have established career information websites or management systems, these platforms primarily function as tools for basic information dissemination. Critical data, such as student profiles, corporate recruitment information, employment contracts, and career assessment results, remain scattered across various departments and systems. This fragmentation hinders efficient data sharing and collaborative mechanisms, making it challenging to provide students with seamless and well-informed career guidance. The lack of a unified digital infrastructure undermines the potential for data-driven decision-making and personalized support.
4. Insufficient depth in industry-enterprise collaboration and weak integration of industry and education also pose significant barriers. Many schools and enterprises maintain superficial partnerships that are limited to organizing job fairs and sharing internship opportunities. These collaborations often lack comprehensive mechanisms for co-developing curricula, sharing faculty resources, and managing internship bases over the long term. Without deeper and more structured cooperation, the potential for aligning educational programs with industry needs remains unrealized, leaving students underprepared for the dynamic demands of the job market.

### **3. The Significance of Digital Transformation in Employment Guidance Service Systems for Financial and Economic Institutions**

#### *3.1. Enhancing service efficiency and coverage*

Traditional career guidance services often encounter significant challenges due to constraints in time allocation, spatial accessibility, and the availability of human resources. These limitations hinder the ability to address the diverse and evolving needs of students comprehensively. However, the integration of online platforms, combined with the utilization of big data analytics and artificial intelligence technologies, has introduced transformative possibilities. Through these advancements, employment-related information, policy updates, and job postings can now be disseminated in real-time with enhanced precision and relevance. This digital approach effectively eliminates information silos, empowering students to access critical resources at their convenience, regardless of time or location. Furthermore, the automation of routine processes, such as scheduling online consultations, submitting resumes, and arranging interviews, has significantly alleviated administrative burdens [10, 11]. This optimization allows human resources to be reallocated toward addressing more intricate and personalized counseling needs, thereby improving the overall quality and responsiveness of services. By leveraging these technological innovations, career guidance systems are better equipped to extend their reach, ensuring that a larger and more diverse student population can benefit from tailored support [1, 12]. This comprehensive enhancement not only increases operational efficiency but also fosters a more inclusive and accessible framework for employment guidance in financial and economic institutions.

#### *3.2. Implementation of Precision and Personalized Services*

Each student possesses unique professional backgrounds, skill levels, career interests, and employment aspirations. By leveraging digital platforms to aggregate learning data, behavioral patterns, and job-seeking feedback, the system can create personalized student profiles. These profiles enable the platform to intelligently match individuals with suitable job opportunities, recommend tailored career development courses, and issue early warnings for potential employment risks. Through the integration of advanced algorithms and data analytics, the system ensures that each student receives guidance specifically aligned with their unique circumstances. This data-driven precision service not only enhances job-seeking success rates but also empowers students to engage in scientific career planning. By transitioning from a generalized approach to a customized strategy tailored to individual needs, the platform significantly improves the relevance and effectiveness of its services. Furthermore, this transformation fosters a more adaptive and responsive framework, ensuring that students are better equipped to navigate the complexities of the modern job market while achieving their professional goals.

#### *3.3. Optimization of Resource Allocation and Scientific Decision-making*

Career guidance necessitates a multifaceted investment strategy encompassing curriculum design, extracurricular activities, corporate partnerships, and mentorship programs. Historically, resource allocation in this domain has often been guided by subjective judgment, which can lead to inefficiencies and suboptimal outcomes. The integration of advanced digital systems enables the systematic collection and analysis of data related to service delivery processes, student engagement metrics, and employment outcomes. This data-driven approach empowers administrators to gain precise insights into the effectiveness and efficiency of resource utilization. For example, they can determine which types of job fairs generate the highest levels of student participation and which vocational training programs yield the most significant improvements in employment rates. These insights form a robust foundation for refining course structures, optimizing event schedules, and incorporating corporate resources that align more closely with student needs and labor market demands. Furthermore, this method ensures that limited resources are strategically directed toward areas with the highest potential impact, thereby enhancing overall resource allocation efficiency. By leveraging these analytical

tools, institutions can develop more effective career development strategies that are both evidence-based and outcome-oriented. This systematic approach not only maximizes the utility of available resources but also strengthens the alignment between institutional offerings and the evolving demands of the professional landscape.

#### **4. Digital Transformation Practice Strategies for Employment Guidance Service System in Finance and Economics Institutions under the Background of "Smart Employment"**

##### *4.1. Establishing an Integrated and Intelligent "Smart Employment" Service Platform*

Financial and economic institutions should establish an integrated, intelligent "Smart Employment" service platform to eliminate traditional information silos. This platform must unify student data from internal systems such as academic affairs, student services, and research databases, while also connecting with authoritative external platforms like national employment service systems to create a comprehensive and centralized data foundation. From a technical perspective, the platform should utilize a microservices architecture, featuring a front-end portal designed to serve students, enterprises, counselors, and administrators. The backend should incorporate an advanced AI algorithm engine to enhance functionality. Beyond offering basic job posting and search capabilities, the platform must focus on developing three critical intelligent modules to address the evolving needs of users and improve operational efficiency.

1. The first module, "Intelligent Recommendation," is designed to leverage user behavior analysis and profiling to provide personalized job opportunities. By utilizing collaborative filtering algorithms, this module can analyze data such as students' academic achievements, internship experiences, skill certifications, and browsing habits. This approach ensures that job postings and recruitment information are tailored to individual preferences and qualifications, significantly enhancing the efficiency and accuracy of job matching processes. Such a system not only saves time for students but also increases the likelihood of successful employment outcomes by aligning opportunities with candidates' unique profiles.
2. The second module, "Intelligent Consultation & Simulation," integrates advanced AI tools to support students throughout their employment journey. This includes AI-powered customer support systems capable of addressing common policy-related inquiries, AI-driven resume optimization tools specifically designed to enhance quantitative expression for finance-related disciplines, and AI-based mock interview systems that simulate realistic interview scenarios in industries such as banking, securities, and accounting. The third module, "Full-Process Online Processing," focuses on digitizing critical employment procedures. This includes the use of electronic signature systems to facilitate employment contract signing, dispatch processes, and file transfers, enabling students to complete all necessary steps remotely without the need for physical visits. To ensure the platform remains effective and user-centric, it must undergo continuous updates and improvements. By analyzing user interactions, such as clickstream data, dwell times, and feature conversion rates, the platform can iteratively refine its interface and algorithms. This iterative approach ensures the system evolves into a highly intelligent and efficient hub that not only meets the functional needs of students but also provides a user-friendly and supportive experience.

##### *4.2. Building a "data-driven" comprehensive career education model*

In the context of digital transformation, career education should establish a comprehensive guidance framework spanning the entire four-year university curriculum. During freshman enrollment, platforms can distribute career assessment tools that generate initial "career development digital profiles" based on students' academic baseline data. These profiles serve as foundational references, enabling personalized guidance tailored to individual strengths and aspirations. As students progress through their sophomore and junior years, the system conducts dynamic analyses by tracking changes

in their profiles. This includes monitoring course grades, participation in business competitions, certifications obtained, and feedback from internships. For example, if a student demonstrates exceptional performance in the "Financial Modeling" course and frequently engages with investment analysis job postings, the system can recommend advanced courses such as Python-based financial analytics, industry research reports, or high-value resources like preparation materials for professional certifications. This ensures that students receive targeted support aligned with their evolving career interests and market demands. Educational formats also require digital innovation, incorporating micro-lectures and interactive case libraries. These resources can provide industry insights, such as the impact of digital currencies and ESG investments on financial professionals, alongside practical skill training like creating Power BI financial dashboards. Furthermore, early warning and support mechanisms should be implemented to address potential challenges. By analyzing behavioral data, such as participation frequency in career activities, resume completeness, and job-seeking initiative, the system can identify students experiencing "career confusion" or "employment challenges." Alerts generated by the system enable counselors or career mentors to intervene proactively through one-on-one digital tool guidance or targeted consultations. This approach shifts the paradigm from "people seeking services" to "services finding people," ensuring that career education is seamlessly integrated throughout students' academic journeys. By leveraging data-driven insights, this model ensures precise, individualized support, fostering holistic career development and enhancing employability outcomes for every student.

#### *4.3. Deepening Digital Integration Between Schools and Enterprises to Expand Smart Practice Channels*

Financial institutions should harness digital technologies to dismantle barriers in school-enterprise collaboration, fostering an intelligent practice ecosystem that seamlessly integrates virtual and real-world elements with deep interaction. On the "virtual" dimension, emphasis should be placed on developing financial "virtual simulation training platforms." For example, creating banking business simulation systems enables students to complete comprehensive processes online, such as customer account opening, credit approval, and risk management. Additionally, virtual financial analysis laboratories for listed companies, equipped with real-time or simulated stock market data, allow students to engage in financial report analysis and investment decision-making. These platforms address the limitations of traditional internship programs by offering cost-effective and scalable solutions, ensuring broader accessibility to practical training. On the "real-world" dimension, digital platforms should further enhance industry-education integration. Institutions can collaborate with enterprises to establish "cloud-based internship bases" or "project pools." Through these platforms, companies can post real-world, non-confidential business analysis and market research tasks, enabling students to form project teams to bid, execute, and deliver tasks under the guidance and evaluation of corporate mentors. This innovative approach not only expands the availability of internship opportunities but also provides students with tangible, verifiable practical experience that aligns with industry needs. Furthermore, institutions should create "corporate live streaming channels" and "industry data zones," where senior professionals from accounting firms, securities companies, and fintech enterprises can conduct live sharing sessions. These channels can also disseminate anonymized industry analysis reports and job competency requirement white papers, fostering a robust exchange of knowledge. By systematically analyzing job descriptions, project requirements posted by enterprises, and evaluation data of interns, schools can identify emerging trends in industry skill demands. This data-driven approach provides actionable insights for refining professional courses and optimizing talent development programs. Ultimately, this establishes a closed-loop talent cultivation system that aligns academic training with the evolving needs of the industry, ensuring that students are well-prepared for the demands of the modern workforce.

#### *4.4. Building a Professional and Multidisciplinary Faculty Team for Guidance*

Digital transformation has introduced significant challenges and opportunities for employment guidance faculty, necessitating the development of interdisciplinary skill sets that combine financial expertise, career counseling, and digital literacy. To address these evolving demands, institutions should implement regular training programs focused on digital tools, ensuring that career counselors, academic advisors, and other faculty members are proficient in utilizing advanced employment platforms and applying data-driven strategies for student career development and support. Faculty members should be encouraged to pursue certifications in areas such as career planning and big data analysis, while actively engaging in corporate digital initiatives to remain informed about emerging financial technologies, including financial automation systems and blockchain applications, as well as the shifting landscape of talent requirements. In terms of team composition, adopting a hybrid model that integrates full-time and part-time professionals is essential. Full-time faculty should concentrate on system development, data analytics, and providing comprehensive counseling services, while part-time mentors with practical digital industry experience should be recruited from corporate partners and alumni networks. These mentors can offer industry-relevant insights through virtual workshops and scheduled consultations. To ensure continuous improvement, institutions should establish detailed digital competency development records for faculty members, tracking their achievements in digital teaching methods, student career guidance, and the application of data analytics tools. These records should be incorporated into performance evaluations and promotion criteria to create a structured incentive system that fosters professional growth and aligns faculty development with institutional goals.

#### *4.5. Establishing a Digital Portrait-Based Employment Quality Tracking and Feedback Mechanism*

A high-quality employment service system necessitates the establishment of a comprehensive closed-loop process that encompasses talent cultivation, job placement, and feedback mechanisms. Upon graduation, students' detailed digital profiles, which include their knowledge, skills, and personal attributes, should be systematically compiled and integrated into robust tracking databases [5]. These profiles serve as the foundation for long-term monitoring and analysis. Post-graduation feedback data should be collected continuously through efficient digital methods, such as periodic online surveys designed to assess salary expectations, job competency, career satisfaction, and the practical application of acquired skills. Universities can enhance this process by forming collaborations with employers through data-sharing agreements, enabling access to anonymized performance metrics of graduates. Additionally, public recruitment platforms and social security records can be utilized to analyze career trajectories and broader development trends. By correlating long-term tracking data with initial training profiles and job-seeking behaviors, institutions can derive actionable insights. For example, quantitative analyses can measure the tangible impact of specific course modules and internship experiences on starting salaries, promotion rates, and overall career progression. These evaluations can also assess the alignment between academic programs and evolving industry demands, while identifying shared characteristics among graduates who achieve notable career success. Such findings are instrumental in guiding critical institutional decisions, including the refinement of admissions criteria and the enhancement of training strategies. Furthermore, institutions should establish formalized feedback application processes to ensure continuous improvement. Employment quality reports should transcend basic employment rate statistics, delving into in-depth data analyses to generate targeted recommendations. These recommendations may include professional early warning systems, curriculum optimization, and reforms in practical teaching methodologies. The insights derived from these analyses should be systematically communicated to the Academic Affairs Office, individual colleges, and program directors. This ensures that talent cultivation plans,

curriculum structures, and practical teaching systems are continuously adjusted and optimized to meet the dynamic needs of both students and the labor market.

## 5. Conclusion

The digital transformation of career guidance service systems within finance and economics institutions holds immense potential to revolutionize service delivery by enhancing efficiency, broadening accessibility, and optimizing the allocation of resources. In response to the ongoing technological and industrial advancements, these institutions must actively adopt innovative approaches to "smart employment" and prioritize the integration of intelligent, digitally-driven career guidance systems. By focusing on the development of unified platforms, fostering data-driven lifelong career education frameworks, and strengthening partnerships between academic institutions and industry stakeholders, these efforts can lead to substantial improvements in the quality and effectiveness of career guidance services. Furthermore, the adoption of such transformative practices will enable these institutions to align more closely with broader economic objectives, ensuring the cultivation of a workforce equipped with advanced skills and competencies. This alignment not only supports the creation of a more adaptable and competitive labor market but also contributes to fostering equitable and sustainable employment opportunities. Looking ahead, future research should explore the long-term impacts of digital integration on career guidance outcomes, investigate emerging technologies that can further enhance service delivery, and assess the scalability of these systems across diverse institutional and regional contexts. Such inquiries will be critical in ensuring that digital transformation continues to drive meaningful progress in career guidance and workforce development.

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