
An Investigation on the Impact of Digital Transformation of Education on the Employment Prospects of English Major Students: A Case Study of Zhengzhou Business University

Ruolin Liu*

Zhengzhou Business University, School of Foreign Languages, Zhengzhou 451200, Henan, China

**Author to whom correspondence should be addressed.*

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Abstract: This paper takes the English major at Zhengzhou Business University (ZBU) as a case, empirically examining the impact of digital transformation of education on students' employment based on data, questionnaire surveys, and in-depth interviews with the 2023 and 2024 graduating students. The study indicates that while digital transformation has improved the overall employment rate, the contracted employment rate has declined, and the proportion of flexible employment has increased. Digital courses have effectively enhanced students' ability to apply technological tools, yet deficiencies remain in deeper skills such as complex scenario handling and data analysis. Furthermore, a gap exists between curriculum content and workplace demands. This paper proposes advancing curriculum practicalization, deepening school-enterprise collaboration, strengthening faculty empowerment, and establishing a tiered cultivation mechanism to steer the digital teaching of English majors towards a paradigm of "capability integration."

Keywords: Digital Transformation of Education; English Major; Employability; Curriculum Optimization

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1. Introduction

Under the background of the rapid development of the digital economy and the deep integration with higher education, the English major, as a traditional arts subject, faces structural challenges in its talent cultivation system. On one hand, traditional language-related positions are becoming saturated with intense competition; on the other hand, emerging fields such as cross-border e-commerce, localization project management, and international new media operations are experiencing sustained demand for versatile talents combining "English, technology and practical skills." In response to this shift, domestic universities are leveraging digital means to promote teaching reforms in English majors, aiming to enhance students' career adaptability and employability through technological empowerment.

As an application-oriented undergraduate institution, ZBU has systematically promoted digital transformation within its School of Foreign Languages since 2021, introducing course such as "Computer-Assisted Translation (CAT)

Training” and “Cross-border E-commerce Simulation Platform.” However, whether such reforms have genuinely promoted student employment and whether the curriculum content effectively aligns with actual enterprise needs remain to be empirically tested. Therefore, this study targets the 2023 and 2024 graduates of the English major at the university, employing employment data comparison, questionnaire surveys, and interviews to systematically analyze the impact of digital transformation on the employment of English major students, aiming to provide a reference for teaching reform and employment promotion in similar institutions.

2. Literature Review

Digital transformation of Education is not merely the application of technological tools but a comprehensive reform of teaching philosophies, curriculum systems, and training models. Zhu Zhiting and Hu Jiao (2022) pointed out that digital transformation encompasses technological integration, data-driven approaches, and process reengineering, with its core objective being the construction of a smart education ecosystem to achieve personalized and precise instruction^[1]. This requires reforms that penetrate deep into the teaching process. At the national policy level, it is also explicitly stated that digital transformation is needed to open up new tracks for educational development, with the key being to promote holistic reforms in educational philosophies, teaching models, and governance models, while adhering to the principle of cultivating students’ higher-order thinking and practical abilities as the foundation^[2]. This provides a core framework for understanding the macro-logic of digital transformation in university English programs. In the field of English teaching, Professor Chen Jianlin from Shanghai International Studies University has noted in lectures that leveraging “micro-majors” as a breakthrough point to integrate interdisciplinary modular courses is an effective path to precisely meet social demands and cultivate versatile talents. This implies that the digital reform of English majors cannot confine itself to the electronic training of language skills but must proactively break down disciplinary barriers.

The digital age has profoundly changed society’s expectations for the capabilities of high-level talents. However, current research indicates that the current research hotspots in foreign language education informatization still mainly focus on teaching models and resource construction. There is still a vast space for research and practice in the deep application and interdisciplinary ability cultivation that directly connects with industrial demands^[3,4].

Overall, the existing studies in this field mostly focus on exploring the significance and broad implications of digital transformation at the macro level, or alternatively, they tend to concentrate on the teaching application of a certain specific technological tool in isolation. As a result, what these studies lack is a comprehensive empirical analysis that spans the entire process from curriculum reform to employment guidance, connecting pedagogical changes with actual career outcomes. In response to this research gap, the present study takes ZBU as a concrete example. By comparing the employment data of two graduating classes of the English major, and by drawing on both course feedback from students and enterprise evaluations from employers, this study attempts to systematically reveal the implementation effect, the practical problems encountered, and the potential optimization measures of digital transformation within the English major context.

3. Research Design and Result Analysis

3.1. Research Subjects, Contents and Methods

This study focuses on the undergraduate graduates of the English major from the Foreign Languages College of ZBU in the academic years of 2023 (260 students) and 2024 (407 students, including those who transferred from other majors to undergraduate programs). Both cohorts have undergone varying degrees of digital course learning. The 2024 cohort had earlier exposure to courses such as e-commerce simulation and CAT. The sample comparison can reflect the phased effects of the transformation.

The main contents of this study include the following aspects: First, compare the core indicators such as employment rate, agreement employment rate, and graduation rate of the two cohorts; second, evaluate the role of digital courses and other courses in enhancing students' abilities; third, analyze the degree of match between the course content and the actual needs of the workplace.

This study adopts quantitative analysis, questionnaire surveys, and interviews as research methods. Firstly, based on the employment data provided by the school's admissions and employment office, statistical and comparative analyses are conducted; then, questionnaires are distributed through the "Questionnaire Star" platform, and 60 valid questionnaires are collected, covering course evaluation, self-assessment of abilities, and employment situations; finally, semi-structured interviews are conducted with 15 graduates and 6 employers to obtain qualitative data.

4. Structural Changes and Analysis of Employment Data

Table 1. Core Employment Indicators for English Major Graduates of Zhengzhou Business School (2023-2024)

Indicator	Class of 2023 (N = 260)	Class of 2024 (N = 407)	Change Range
Overall Employment Rate	88.07%	90.17%	+2.10%
Contracted Employment Rate	84.23%	81.82%	-2.41%
Further Study Rate	4.62%	8.35%	+3.73%

The data shows that the overall employment rate increased by 2.1 percentage points after the digital transformation, indicating the positive impact of digital courses on students' employment outcomes. However, it is worth noting that the agreement employment rate (i.e., formal employment with signed contracts) decreased by 2.41 percentage points, while the proportion of flexible employment increased correspondingly by a similar margin. Through in-depth interviews conducted with graduating students, it was learned that this structural change in employment patterns is closely related to the introduction of the "Simulated Operation of Cross-border E-commerce" course into the curriculum. Specifically, many 2024 graduates mentioned that this particular course simulated the real-world operation of Alibaba International Station, enabling them to master practical skills such as store operation and customer communication. As a direct result of this hands-on experience, some students chose to start their own businesses or engage in freelance work in the cross-border e-commerce sector after graduation. For example, a graduate named Wang shared the following: "After the course ended, I and my classmates started a small online store; although it was not large, we achieved flexible employment." This diversified form of employment not only reflects the stimulating effect of digital teaching on students' entrepreneurial awareness but also reflects the broader impact of emerging economic forms, such as the gig economy and platform-based work, on traditional employment concepts.

In addition, the enrollment rate for postgraduate studies increased significantly, from 4.62% to 8.35%, representing a notable rise of nearly four percentage points. Through further interviews conducted with students who pursued further studies, it was found that some students were stimulated to continue their education due to their exposure to cutting-edge translation technology in the "CAT Training" course (Computer-Aided Translation). Others reported that they received strong support for their postgraduate studies as a result of the improvement in their ability to search for information and use academic tools, skills that were developed through the digital courses. It is also important to note that although the enrollment rate of students who transferred to a higher education institution (i.e., undergraduate-to-postgraduate transfer students) was lower than that of ordinary undergraduate students, the absolute number of such students who successfully enrolled increased significantly. This finding clearly indicates that digital courses have provided new and valuable development directions for students with relatively weaker academic foundations, thereby expanding their opportunities for upward academic mobility.

5. Teaching Outcomes, Skill Development and Weaknesses of Digital Courses

According to the questionnaire survey conducted among the graduates, in response to the question “Which digital course is most helpful for employment?”, 40% of the graduates chose “CAT Training” (Computer-Aided Translation), and 35% chose “Cross-Border E-commerce Simulation Operation Platform”. Together, these two options account for 75% of the total responses, representing a clear majority. This finding strongly reflects that both the CAT course and the cross-border e-commerce course are highly recognized by students in terms of their effectiveness in assisting employment. Consequently, these two courses have become the core course carriers within the broader framework of digital transformation.

Employer interviews further confirmed the effectiveness of the courses specifically in the area of basic skill training. To illustrate this point, the HR manager of a certain company clearly stated: “Students from Zhengzhou Business University can proficiently use Trados software. After joining the company, they can directly participate in the project, saving about 2 weeks of training time.” In a similar vein, a person in charge of a cross-border e-commerce enterprise also pointed out: “Students generally can quickly master the operation of the store backend and complete the basic product listing and customer service responses. The technical threshold has significantly decreased.” These positive remarks from employers indicate that the foundational skill training provided by the digital courses is indeed meeting some of the immediate needs of the workplace.

However, it must also be noted that the courses have obvious shortcomings when it comes to “depth” and “complexity” of practical application. Specifically, 20% of the graduates believed that the course content was “far from meeting the actual needs” of real-world work environments. Moreover, the feedback received from enterprises mainly focused on the lack of ability among students to handle complex and non-routine scenarios. For example, a logistics company manager mentioned that while students could handle standard order processes in the simulation platform without much difficulty, when facing real cross-border return disputes, “they didn’t know how to communicate the claim terms with the overseas warehouse.” In another example, a conference organizer pointed out that students performed well in the “Interpretation Theory and Practice” course under controlled classroom conditions, but when participating in their first real international conference, due to a sudden equipment failure, “they seemed helpless.” These real-world cases collectively reveal that the current course design still focuses predominantly on “process simulation” — that is, following predefined steps in predictable scenarios. As a result, there is a systematic lack of training for uncertainties and unexpected situations, which in turn leads to a noticeable gap between students’ technical application ability and their broader ability to solve practical problems in various and unpredictable work settings.

6. The Matching Degree between Course Content and Workplace Demands and the Underlying Contradictions

Regarding “the matching degree between course content and the demands of the municipal bureau”, the results of the graduates’ questionnaire show on **Figure 1**.

The matching degree between course content and actual needs

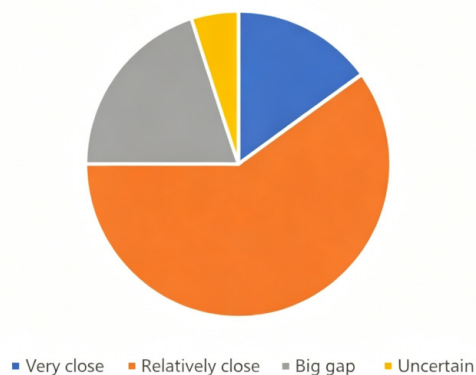


Figure 1. Graduate Evaluation of the Alignment between Course Content and Actual Needs (N = 60)

- Very Close = 15%
- Relatively Close = 60%
- Significant Gap = 20%
- Unsure = 5%

Although 75% of the graduates believe that the course content is “relatively close” or “very close” to actual workplace needs, in-depth interviews conducted as part of this study have revealed a more complex and problematic picture: a phenomenon of superficial matching rather than genuine alignment. To illustrate this point, a graduate currently working in a translation-related field offered the following candid observation: “The computer-assisted translation course only taught the basic use of Trados, but actual work projects often involve multilingual layout, localization testing, and cultural adaptation, and these aspects are rarely touched upon in school.” This specific testimony underscores the gap between what is taught and what is truly required in professional practice.

The contradiction becomes even more acute when viewed from the perspective of employers. For instance, a director of cross-border e-commerce operations pointed out, in no uncertain terms: “Students can use Excel for basic data entry, but they lack the ability to analyze sales trends through data and optimize advertisement.” This piece of feedback clearly indicates that although the current courses cover knowledge at the tool operation level, they unfortunately fail to delve into the deeper business logic level. As a result, students are still relegated to a passive execution role when faced with complex and dynamic work business scenarios.

Furthermore, the student group designated for undergraduate-to-postgraduate transfer (often referred to as “postgraduate transfer students”) serves to highlight the noticeable absence of stratified teaching within the current curriculum. Due to the fact that their course settings tend to focus heavily on “quickly mastering basic operations,” these students are found to be significantly lacking in training related to higher-level data analysis and project planning skills. The available data shows that the enrollment rate of students for postgraduate transfer is actually lower than that of ordinary undergraduate students. Moreover, their job positions are mostly concentrated in basic operations and customer service, leaving them with limited career development space overall. This set of findings collectively reflects a critical shortcoming: that current digital teaching has failed to design differentiated training models based on the distinct characteristics and needs of different student sources.

7. The Direction of Teaching Improvement from the Perspective of Graduates

Regarding the “directions that should be prioritized for the improvement of digital teaching”, the results of the graduate questionnaire show on **Figure 2**.

Priority Improvement Directions for Digital Teaching

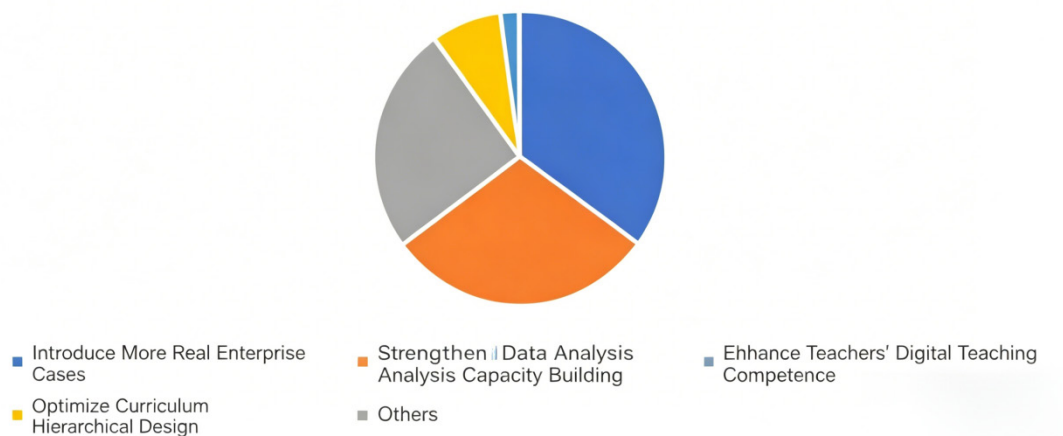


Figure 2. Directions for Teaching Improvement from the Graduate Perspective (N=60)

- Introduce more real business cases = 35%
- Strengthen data analysis capability training = 30%
- Enhance teachers' digital teaching proficiency = 25%
- Optimize tiered course design = 8% · Others = 2%

This statistical distribution clearly and unmistakably reflects the students' deep-seated anxiety about their own academic abilities, as well as their explicit expectations for the content and delivery of the courses. More precisely, more than one-third of the surveyed graduates explicitly called for "introducing more real enterprise cases," a finding that strongly indicates a significant information gap between the knowledge and skills covered in the existing courses and the actual practices commonly observed in real-world enterprise settings. Furthermore, nearly one-third of the participating students pointed directly to "the cultivation of data analysis skills," thereby highlighting the growing importance of data literacy in today's increasingly digital and data-driven workplace environment. It is particularly notable that 25% of the students, or a full quarter of them, firmly believed that "the digital teaching skills of teachers" urgently need improvement. This observation, when considered from an indirect perspective, clearly reflects that the noticeable lag in teacher transformation may have unfortunately become a critical bottleneck that restricts the further deepening and advancement of the courses.

At the same time, employers who took part in the feedback process also provided a number of valuable suggestions, speaking from the demand side of talents in the labor market. All of these sincere pieces of feedback and valuable suggestions originating directly from the industry have provided specific and actionable entry points for strengthening school-enterprise cooperation and for reshaping the future teaching of English major courses.

8. Conclusion

This study shows that the digital transformation of education has had a profound and structural impact on students' employment prospects. Taking ZBU as an example, the digital transformation of education has effectively enhanced students' digital tool application skills and their understanding of emerging occupations by introducing new courses such as computer-assisted translation and cross-border e-commerce simulation. This has, on a macro level, increased the overall employment rate and given rise to diversified employment forms such as self-employment and flexible employment, expanding the professional boundaries of traditional English majors. However, the research found that the current transformation practice is still in its initial stage, presenting a phased characteristic of "significant tool empowerment" but

“insufficient ability integration”. Issues such as the disconnection between course content and the real complex scenarios of enterprises, the weak high-level data analysis and adaptability of students, and the neglect of student differences in the training model have constrained the maximum potential effectiveness of digital transformation, resulting in a decline in the agreed employment rate and challenges to the long-term career competitiveness of graduates.

These findings collectively and convincingly reveal that the essence of the digital transformation of education is far from being a simple, one-dimensional addition of technical tools or isolated pieces of software. On the contrary, it is a comprehensive and systematic project that requires the careful coordination and deep integration of multiple interconnected components, including the curriculum system, the teaching staff, school-enterprise collaboration, and the evaluation mechanism. In other words, no single element can drive meaningful change on its own; all must work in tandem. Looking ahead, future reforms should gradually move towards the meaningful integration of practical operations into the courses, moving beyond theoretical instruction alone. The key to achieving this lies in building a new digital education ecosystem that is oriented towards real industrial demands and aims for the deep integration of capabilities across all levels of teaching and learning. Ultimately, only by adopting this holistic and systematic approach can the fundamental goal be truly achieved: that of genuinely enabling high-quality and sustainable development of English major talents through the effective empowerment of digital technologies and practices.

Disclosure statement

The author declares no conflict of interest.

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