Countermeasures for Improving College English Teaching Efficacy in Private Universities Based on Big Data

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Abstract: The rapid development of big data in the information age has brought unprecedented challenges as well as growth opportunities to traditional English teaching. College English education in private universities is at a critical period of transformation. Starting from the evolution of big data, this study analyzes the opportunities it brings to college English teaching, reveals the existing problems in current college English teaching in private universities, and further explores how to respond to the changes of the times and specifically improve the efficacy of college English teaching in private universities. The aim is to provide innovative ideas for the reform of college English teaching in the new era and offer beneficial references and insights for the educational development of similar institutions.

Keywords: Big data; Private college; English teaching efficacy

1. Introduction

In August 2015, the State Council issued the "Action Plan for Promoting the Development of Big Data" (Guo Fa [2015] No. 50), emphasizing the need to [1] "explore big data's supportive role in transforming educational approaches, advancing educational equity, and enhancing educational quality." The big data era has revolutionized people's work, lifestyle, and learning patterns—information updates at an accelerated pace, knowledge acquisition becomes more accessible, and educational models grow increasingly diverse. For college English teaching, this era transition is both a promising opportunity and a formidable challenge.

Existing domestic and international studies generally acknowledge the positive impacts of big data technology on English teaching, yet quantitative assessments of its practical outcomes remain inadequate. Moving forward, future research must deepen efforts to balance big data applications with the inherent nature of education and the laws of language learning, avoiding over-reliance on technology that compromises humanistic care. Additionally, private universities face unique hurdles in adopting big data technology: compared to public universities, they suffer from limited resources in funding, talent, and technical support, resulting in insufficient integration of big data into teaching. Nevertheless, big data-driven innovations in English teaching models hold

great promise for improving teaching quality and efficiency, enabling more personalized, intelligent, and effective instruction, and ultimately nurturing English talents who meet the demands of contemporary society [2].

Against this backdrop, how to sustainably enhance students' English academic performance and effectively elevate the efficacy of college English teaching has become an urgent concern for contemporary college English teachers, particularly those in private universities.

2. Opportunities for college English teaching in private universities

The big data era has brought benefits to various industries, and its impact on college English teaching in private universities is particularly significant, presenting four key opportunities:

(1) Visualization of Learning Processes

For learners, the collection and analytical processing of learning data introduces an unprecedented visualized learning experience. By presenting data through charts, analytical reports, and other formats, learners gain a clear understanding of their learning status and progress [3]. This transparency empowers them to adjust learning strategies more precisely, identify personalized learning methods, and ultimately enhance learning efficiency.

(2) Enrichment of Teaching Resources

Big data technology enables college English teachers to access and share high-quality teaching resources with greater convenience. Private universities can leverage big data to integrate premium English teaching resources from home and abroad, including massive open online courses (MOOCs), instructional videos, and interactive question banks. This integration enriches teaching content and elevates the overall quality of instruction.

(3) Diversification of Teaching Methods

The integration of big data in private universities has accelerated the innovation and diversification of college English teaching methods [4]. Institutions can implement blended teaching models that combine online and offline components, offering learners flexible learning options. Furthermore, teachers can utilize big data analytics to design targeted and interactive teaching activities, effectively stimulating learners' learning interest and active participation.

(4) Promotion of Educational Equity

Big data technology helps mitigate the imbalance in educational resource distribution by facilitating inter-university resource sharing and cooperation, thereby improving the overall standard of English teaching. Private universities can use big data analytics to accurately identify learners' learning gaps and implement targeted educational interventions, fostering greater equity in education.

In summary, the big data era offers abundant opportunities for college English teaching in private universities. These opportunities not only contribute to improving teaching quality but also foster learners' comprehensive literacy and innovative capabilities, cultivating outstanding English talents for society.

3. Current challenges in college English teaching in private universities

Private universities have developed in China for over four decades. Despite continuous progress, improvement, and notable achievements, they still face several prominent issues in college English teaching:

(1) Outdated Teaching Philosophies

Many teachers in private universities adopt outdated teaching philosophies when instructing learners with weak English foundations. Lacking awareness of teaching reform and innovation, they often resort to "teacher-centered monologues," failing to fully embody learners' subjectivity in the classroom [5].

(2) Monotonous Teaching Models and Methods

A significant number of English teachers in private universities still adhere to traditional teaching models, characterized by one-way knowledge transmission—teachers act as the primary "imparters," [6] while learners passively "receive" information. This textbook and syllabus-centered approach results in a dull classroom atmosphere, dampening learners' learning initiative and interest.

(3) Outdated Teaching Content

The teaching content of college English in some private universities is outdated. Most textbook materials are outdated, poorly aligned with the big data era, and some content has even become obsolete. Consequently, such content fails to attract students' attention, leading to insufficient emphasis on English courses.

(4) Insufficient Learning Motivation and Enthusiasm

Non-English major learners in private universities generally have a weak English foundation. Multiple factors—including the pressure of professional courses, inadequate self-regulation, and quite limited vocabulary—contribute to low learning motivation and enthusiasm.

These issues collectively result in unsatisfactory classroom teaching effects and subpar learning outcomes. Therefore, reforming college English teaching in private universities is imperative, and there is an urgent need to enhance teaching efficacy.

4. Strategies to enhance college English teaching efficacy in private universities under the big data era

Hu Jinpeng, Minister of Education, noted: "We firmly believe that the key to addressing the predicament of foreign language disciplines lies in following the trend of the times, upholding fundamental principles while pursuing innovation, and comprehensively strengthening higher education's ability to serve national strategic implementation and economic and social development [7]." This insight equally applies to college English teaching in private universities amid the big data era. To address the aforementioned challenges, the following five strategies are proposed:

(1) Establish Customized Databases and Online Teaching Platforms

As vital contributors to talent cultivation and scientific research in China, private universities must keep pace with the times and respond to national calls by establishing proprietary databases and online teaching platforms, integrating big data into college English teaching [8]. This integration enables teachers to gain a comprehensive and accurate understanding of learners' English learning progress, enhances students' interest and enthusiasm for English learning, stimulates self-driven learning, cultivates active learning habits, and nurtures international talents capable of adapting to the era's development.

(2) Innovate Teaching Methods and Optimize Curriculum Models

Traditional curriculum frameworks revolve around three core elements: teachers, learners, and textbooks [9]. However, the advent of the big data era—particularly the recent integration of artificial intelligence (AI) into teaching—has transformed educational models. The introduction of big data optimizes traditional curriculum structures, enhances the flexibility and efficiency of teaching systems,

and extends its influence from classrooms to the entire educational ecosystem. The rapid development of AI technology is reshaping foreign language learning and application, exerting profound impacts on talent cultivation and employment prospects in traditional foreign language majors [9]. New Curriculum Model Under the Big Data Era (Teachers + Students + Textbooks + Artificial Intelligence (AI))

Private universities can introduce intelligent teaching systems that leverage big data and AI to analyze learners' learning habits, proficiency levels, and weak areas. Based on these insights, personalized learning recommendations and resources are provided, making teaching more targeted and effective. Teachers can then develop corresponding instructional strategies to achieve pre-defined teaching objectives [10], ensuring each learner progresses based on their individual starting point and realizing personalized and differentiated teaching. In essence, teachers should flexibly employ diverse teaching methods, continuously innovate English classroom models, implement learner-centered personalized instruction, and constantly optimize teaching approaches and curriculum frameworks.

(3) Update Teaching Philosophies and Integrate Real-Life Applications

As knowledge disseminators and guides, teachers play a crucial connecting role in education. Only with advanced teaching philosophies can teachers exert a positive and lasting impact on learners, thereby enhancing English teaching efficacy. Therefore, English teachers in private universities must continuously update their teaching philosophies, integrate real-life scenarios into instruction, and develop a modern English teaching model that adapts to the times. Schools should provide regular training and professional development opportunities for teachers, such as teaching seminars and advanced courses, to help them refresh their teaching concepts and methods and improve teaching outcomes.

In the big data era, cultivating and enhancing college English teachers' information literacy—including information ethics, modern information technology knowledge, and information processing capabilities—is pivotal for the intelligent and informatized reform of higher education English teaching [11]. To keep abreast of the times, teachers must first update their teaching philosophies, master sufficient modern information technology skills, and possess the necessary information capabilities to support modern teaching practices. For example, online attendance systems, virtual class discussions, digital homework assignments, and online assessments enable students to participate in classroom learning remotely. Learners can engage in self-directed learning anytime and anywhere, reviewing difficult concepts repeatedly, which improves classroom learning efficiency and fosters independent learning awareness [12].

(4) Refresh Teaching Content and Improve Teaching Evaluation Systems

Information technology injects new vitality into classroom teaching. Rich teaching resources not only expand textbook-based knowledge but also allow students to explore the history, geography, humanities, and customs of English-speaking countries through the Internet. This integration promotes the organic combination of college English teaching and social culture, broadening students' learning channels. Therefore, private universities must continuously update English textbooks, enhance textbook quality and diversity, and develop more three-dimensional and diversified teaching resources and content.

Simultaneously, teaching evaluation systems require further improvement. For instance, big data can be used to establish or refine online teaching quality evaluation mechanisms that combine formative and summative assessments, comprehensively evaluating learners' learning outcomes and teachers' teaching effectiveness. Additionally, encouraging learners' self-evaluation and peer evaluation helps them better recognize their strengths and weaknesses while fostering critical thinking and collaborative

skills.

(5) Root in National Identity and Cultivate Global Perspectives

College teachers directly interact with learners and exert an indelible influence on the world outlook, outlook on life, and values of newly adult college learners. English teachers should focus on moral education and character cultivation both inside and outside the classroom, reminding learners to love their country and the Party, and guiding them to uphold national roots while developing global perspectives. Teachers should integrate social and cultural knowledge into daily teaching, emphasize the cultivation of learners' native language proficiency and cross-cultural communication skills, broaden their knowledge and horizons, and provide strong support for English learning. Ultimately, teachers should offer targeted instructional guidance to improve learners' English proficiency, nurture compound foreign language talents capable of adapting to the information age [13], and spiritually enrich students to broaden their horizons, enabling them to truly "hold the motherland in their hearts and face the world."

By implementing these five strategies, it is anticipated that students' interest and enthusiasm for English learning will be significantly stimulated, leading to substantial improvements in both learning outcomes and teaching efficacy.

5. Conclusion

In conclusion, the rapid development of emerging technologies has provided transformative momentum for foreign language education. The big data era brings unprecedented opportunities to college English teaching while highlighting existing challenges. To thrive in this era, educators must seize opportunities, proactively address problems, cultivate students' practical application abilities and comprehensive qualities, and improve the pass rate of the College English Test Band 4 (CET-4). Teaching should balance exam preparation with practical application, equipping students with both academic and functional English skills.

College English teaching in private universities must adapt to the times, striving to cultivate more compound talents with "English proficiency + professional skills + cultural literacy [14]." As Wu Yan, Minister of Education, emphasized: "The education system should fully tap into the data wealth generated during the implementation of strategic initiatives, leverage the multiplier effect of educational data to promote educational quality and efficiency, and use data to empower teaching and learning, providing better growth opportunities for hundreds of millions of children" [15].

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References

[1] State Council, 2015, Notice on the Outline for Promoting the Development of Big Data (Guo Fa [2015] N o . 50).

[2] Hu K, 2024, Artificial Intelligence and Foreign Language Disciplines. Foreign Languages in China, 2024(6): 1, 12–16.

[3] Xiang R, 2016, Research on the Innovation of College English Teaching Model in the Era of Big Data—Taking the "Rotating Classroom" of Bohai University as an Example. Journal of Lanzhou Institute of Education, 2016(5): 141–142 + 174.

[4] Yang D, 2024, National Language Strategy: Challenges and Changes of Foreign Language Education in the New Era, thesis, Beijing Foreign Studies University.

[5] Zha M, 2023, Foreign Language Disciplines: How to Uphold the Essence and Innovate? Foreign Language Teaching Theory and Practice, 2023(1): 2–8.

[6] Qi D, 2022, Research on College English Teaching Models from the Perspective of Big Data. Overseas English, 2022(23): 132–134.

[7] Hu J, 2024, Deepen Comprehensive Educational Reform. People's Daily, 2024-08-21(009).

[8] State Council, 2015, Action Plan for Promoting the Development of Big Data: Cultivate 10 Core Leading Enterprises, visited on September 5, 2015, http://finance.sina.com.cn/china/20150905/162923162810.shtml.

[9] Guo Q, 2008, Curriculum and Instruction Theory, 2008(5): 22–29.

[10] Wen Q, 2024, Will Foreign Language Education in the Era of Artificial Intelligence Undergo a Subversive Revolution? Modern Foreign Languages, 2024(5): 722–729.

[11] Ma J, 2023, Research on the Reform Strategy of College English Teaching Under the Background of Big Data. Teaching and Research Reform, 2023(4): 093–095.

[12] Hu Z, 2022, A Comprehensive View of China's Foreign Language Education Policy. Computer-Assisted Foreign Language Education, 2022(2): 3–8.

[13] Wen L, 2023, A Discussion on College English Teachers' Information Literacy in the Era of Big Data. Modern Social Science Research, 2023(3): 047–050.

[14] Shu Z, 2023, A Discussion on the Innovation of College English Teaching Models in Private Universities Under the Background of Big Data. Education Forum, 2023: 155–157.

[15] Wu Y, 2025, Centennial Changes, What Should Xi'an International Studies University Do?—Exploration on the Discipline Development and Comprehensive Reform Practice of Foreign Language Universities. Foreign Language Teaching, 2025(1): 1–7.

[16] Wu Y, 2024, Promote Data-empowered Educational Reform and Innovation, and Accelerate the Development of Specialized Educational Large Models. Translation Teaching and Research, 2024-06-23.