

# *Method Research of the Digital College English Teaching Based on the Concept of Production-oriented Approach*

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**Abstract:** The proliferation of digital technology has ushered in a paradigm shift in college education, particularly in the realm of English language instruction, where it has not only introduced innovative teaching methodologies and experiences but also opened up avenues for unprecedented learning opportunities. This transformation necessitates a proactive embrace of teaching digitization as an inevitable and vital trend in college English pedagogy. By harnessing the full potential of digital tools and platforms, teachers can elevate the standard of college English education, fostering an environment conducive to the nurturing of proficient and adaptable foreign language talents. Furthermore, this endeavor promotes the holistic development of digital teaching practices within the college ecosystem, ensuring that students are equipped with the digital literacy skills necessary to thrive in an increasingly interconnected and technology-driven world.

## 1. Background information

The 20th National Congress of the Communist Party of China has definitively articulated the strategic imperative of "holistically advancing digital education," positioning the digital transformation of education at the forefront of current and future reform and development endeavors, with a keen focus on its centrality and urgency. In this context, the infusion of digitalization into college English teaching emerges as a paramount priority, not only catalyzing a profound introspection and subsequent reshaping of conventional educational paradigms among teachers but also igniting a spark of innovation within teaching methodologies. It impels educators to continually adapt and refine their instructional strategies, ensuring they are harmoniously aligned with the exigencies of the digital age.

Moreover, this transformative process constitutes a pivotal juncture for educators' professional growth, empowering them to bolster their teaching competencies and effectuate substantial gains in instructional efficacy through the strategic utilization of information technology. The research herein, deeply rooted in the core philosophy of the "Output-Driven Approach," endeavors to embark on a meticulous exploration of the nuanced and practical avenues for digitizing college English teaching. It further endeavors to scientifically evaluate the teaching outcomes of this endeavor, thereby offering robust empirical evidence and invaluable insights that can inform the construction of a college English teaching model that is not only efficient and interactive but also deeply personalized, catering to the diverse needs and aspirations of students in the digital landscape.

## 2. Literature review at home and abroad

### 2.1. Literature review on digital empowerment

Digital empowerment originates from the management concept of empowerment, which refers to empowering the receptor by changing the external working environment and conditions; or enhancing employees' internal perception processes such as self-ability, control, and beliefs by delegating power. In the context of the big data era, traditional empowerment methods have been supported by digital technology, giving birth to the concept of digital empowerment. In the field of education, digital empowerment is not simply the use of technology to acquire and process information, but rather means with which individuals can learn more effectively. Akkoyunlu (2010) et al. [1] developed a measurement tool to determine the level of digital competence of college students; Sarycoban (2013) [2] used this scale to examine the relationship between digital empowerment and the self-efficacy of future English teachers; Pitre (2018) et al. [3] pointed out that university education is a key way for individuals to obtain digital empowerment. Li Zhuojun (2021) [5] pointed out that digital empowerment promotes the joint construction and sharing of teaching resources, improves the digital literacy of teachers, and promotes the high-quality development of vocational education; Yu Yan (2022) et al. [10] draw on the TOE framework to analyze the logical path of digital technology empowering the high-quality development of graduate education from three aspects of technology, organization, and environment, and promote the high-quality development of graduate education by building a digital consensus, cultivating digital talents, focusing on digital governance, and innovating digital evaluation; Ke Qingchao (2023) et al. [4] aimed at how the national platform empowers the digital development of regional education, and constructed a four-fold empowerment model of "resource empowerment, data empowerment, connection empowerment, and technology empowerment". Digital technology empowering classroom teaching can be understood as using digital information technology to enhance the educational functions of classroom organization, thereby helping the classroom solve the problem of being unable to meet the needs of students' ability development.

### 2.2. Literature review on Production-Oriented Approach (POA)

After over a decade of dedicated research and relentless exploration, Professor Wen Qiufang (2015) [8] and her distinguished research team, addressing the long-standing issue of "the separation of learning and application" in China's foreign language education, innovatively proposed the Production-Oriented Approach (POA) as a theoretical framework for teaching. This theory not only delves into the three core components of motivating, enabling, and assessing but also profoundly expounds on the multi-dimensional role transformation of teachers throughout this process. Wen Qiufang and Sun Shuguang (2020)[9] further zeroed in on the motivating phase, delving into the art of crafting highly authentic communicative learning contexts and advocating for explicit teaching methods to fortify students' ability to construct their "identity." Meanwhile, Qiu Lin (2020) [6] provided practitioners with more abundant and meticulous considerations and operational guidelines through detailed enabling phase case studies. Sun Shuguang (2020)[7], on the other hand, meticulously analyzed the implementation details, encountered challenges, and coping strategies of the teacher-student collaborative assessment mechanism. Qiu Lin (2020) also highlighted that in the practice of POA, teachers' growth is accompanied by the resolution and regeneration of stage-specific contradictions, adhering to the philosophical trajectory of "negation of negation," achieving a spiral upward momentum. This series of deepening and expansion of POA has not only laid a solid theoretical foundation for English teaching reform but also injected robust momentum into propelling the foreign language education model with distinctive Chinese characteristics towards the center stage

of the world.

In summary, as the application of digital technology in the field of education continues to deepen, related research has become increasingly abundant, and the "Production-Oriented Approach" (POA) theory has also been progressively refined, providing a solid methodological foundation for college English teaching. Nevertheless, despite these advancements, practical explorations on how digitalization can precisely empower college English teaching remain relatively inadequate, necessitating further expansion and deepening. Given this backdrop, the present research aims to deeply integrate cutting-edge digital technology into college English teaching grounded in the POA philosophy. This not only propels the concrete implementation of educational informatization initiatives but also strives to optimize teaching modalities through technological empowerment, thereby significantly enhancing teaching quality and carving out a novel trajectory for college English teaching reform amidst the new era.

### **3. Research content**

This research conducts a comprehensive analysis of students' learning needs, habits, and current abilities, forming a solid foundation for subsequent endeavors. Guided by the advanced educational philosophy of the "Output-Driven Approach", specific pathways are systematically explored through which digital technology can effectively empower college English teaching. Researchers design and implement a series of innovative teaching strategies, fully leveraging digital platforms and tools, with the aim of achieving a comprehensive upgrade in teaching content, methods, and teacher-student interaction. Subsequently, by comparing and analyzing the teaching outcomes before and after digital empowerment, including improvements in students' language skills, enhanced autonomous learning abilities, and quantitative assessments of learning achievements, detailed data and feedback are collected. Based on this invaluable information, researchers continuously iterate and optimize teaching pathways, ensuring the precise allocation and efficient utilization of teaching resources. Ultimately, with the aim to significantly elevate the quality of college English teaching, a richer, more diverse, and personalized learning experience is fostered for students.

#### **3.1. Comprehensive Integration of Digital Technology Platforms**

In the pursuit of understanding how digitization profoundly empowers college English teaching, this research steadfastly adopts the "Production-Oriented Approach" as its theoretical foundation, meticulously integrating diverse digital technology platforms to construct a complex yet intricate digital education framework. This framework not only encompasses a vast array of digital learning resources, such as interactive learning modules, personalized learning resource repositories, and dynamically updated language learning databases, but also deeply integrates advanced digital teaching aids, like intelligent teaching robots and virtual reality language practice environments, aiming to provide students with comprehensive and multi-faceted learning experiences.

Concurrently, a sophisticated digital monitoring and evaluation system is employed, leveraging big data and artificial intelligence technologies to delve into students' learning behaviors, accurately identifying learning difficulties, and ensuring precise implementation and personalized guidance for teaching activities. Through meticulously designed driving scenarios and facilitating activities, researchers aim to ignite students' autonomous learning motivation and creativity, fostering efficient collaboration and instant feedback between teachers and students on the digital platform, meanwhile establishing a dynamic, open, and comprehensive digital English education ecosystem.

### **3.2. Curriculum Design for Digital Empowerment in College English Teaching**

In recent years, with the rapid advancement of educational technology, the field of college English curriculum design has markedly increased its emphasis on the richness of teaching resources and the diversity of teaching methods. However, in the practice of digital empowerment, its manifestation remains relatively monolithic, failing to fully tap into the potential of digital technology. In view of this, this research closely revolves around the core concept of the "Production-Oriented Approach" and intends to embark on a strategic approach encompassing three pivotal dimensions: scenario-driven learning, activity facilitation, and teacher-student collaborative evaluation. Researchers meticulously plan and introduce a series of digital technology platforms that are highly aligned with teaching objectives and content. These platforms are not merely designed to enrich teaching methods but also strive to broaden the depth and scope of instructional content, ensuring that teachers can utilize digital technology flexibly and efficiently to present teaching content in a more vivid and interactive manner, with the resultant aim to significantly enhance students' learning interest, engagement, and academic outcomes. Through this comprehensive strategy, teachers aspire to break down the barriers of traditional teaching and construct a dynamic, highly interactive, and deeply integrated digital English education environment.

### **3.3. Evaluation of Curriculum Effects for Digital Empowerment in College English Teaching**

To ensure the continuous optimization and precise adjustment of course teaching, it is crucial to establish a scientific and comprehensive evaluation system. This research meticulously plans an in-depth study aimed at systematically comparing the significant changes in student learning outcomes in college English teaching before and after digital technology empowerment through the establishment of a control group experiment. This comparison extends beyond superficial fluctuations in grades, delving deeper into the intrinsic correlations and mutual influence mechanisms between learning outcomes and digital technology empowerment. Additionally, diversified data collection methods are applied, including detailed questionnaires and thorough interviews, to comprehensively capture the authentic experiences and profound perceptions of teachers and students regarding the integration of digital technology into the teaching process. Through these meticulous feedbacks, teachers can more accurately identify potential bottlenecks and highlights within teaching links, thereby providing solid data support and decision-making basis for the optimization and adjustment of various teaching links. This endeavor strives to propel college English education towards a more efficient, personalized, and modern direction.

### **3.4. Three-dimensional Development of a Digital Teaching Faculty**

Amidst the profound impact of the digital wave on college English teaching, teachers are entrusted with unprecedented missions and challenges. This necessitates that every teacher not only profoundly comprehend the core essence of digital technology but also actively embrace and foster new-era educational concepts that are commensurate with it, ensuring their adaptability to the educational transformation and development trends driven by digital technology. Furthermore, teachers must continually expand their professional skill sets, mastering and adeptly utilizing comprehensive abilities in data collection, analysis, and application. This allows them to accurately extract valuable information from the vast ocean of data, providing a scientific basis for instructional decision-making. Crucially, teachers must possess the capacity for innovative instructional design and implementation supported by digital technology, daring to explore and practice the deeply integrated path between technology and teaching. By creating richer, more diverse, and highly interactive learning experiences, they can comprehensively elevate the quality and effectiveness of college English teaching, guiding

students towards a new realm of learning in the digital age.

#### 4. Research procedure

(1) In the process of integrating English learning resources, a comprehensive and precise digital ecosystem that encompasses a wide range of learning materials, cutting-edge instructional aids, and scientific assessment tools is constructed. This endeavor necessitates not only meticulous selection of abundant online resources from the internet, such as online courses, e-books, and interactive learning platforms, but also the evaluation and incorporation of advanced digital teaching tools like intelligent speech recognition software and virtual reality learning environments to enhance students' language proficiency. Additionally, researchers clearly define the usage of each resource or technology and determine its optimal application scenarios, for instance, vocabulary memory software for independent learning and virtual situational dialogue systems to improve oral communication skills. It is anticipated that this series of integration measures could significantly enhance the enjoyment and efficiency of learning, ultimately maximizing teaching outcomes.

(2) Guided by the POA (Production-Oriented Approach) philosophy, researchers meticulously select digital resources that are highly aligned with teaching objectives and content, creatively integrating them into every aspect of college English teaching. During the scenario-driven phase, multimedia materials are utilized to create authentic language environments, enabling students to learn in simulated real-life situations. In the enabling activity segment, interactive learning platforms are introduced to foster collaboration and communication among students, accelerating knowledge internalization and skill mastery. For the teacher-student collaborative evaluation process, digital assessment tools like automatic grading systems are employed to provide prompt feedback on learning achievements while offering detailed data support for teachers to adjust their teaching strategies accordingly. These teaching practices aim to establish an efficient, interactive, and personalized learning environment that fosters students' all-round development.

(3) To delve into the intrinsic connection between digital empowerment and student learning outcomes, comparative analysis methods are mainly applied in order to set up experimental and control groups to observe learning achievements under varying degrees of digital empowerment. By analyzing both quantitative data, such as grade improvement rates and learning progress changes, and qualitative data, including student feedback and learning attitude shifts, researchers comprehensively assess the effectiveness of digital empowerment. Furthermore, questionnaires and in-depth interviews are conducted to directly gather opinions and suggestions from students, teachers, and even educational administrators, obtaining more comprehensive feedback. Based on these comparative analyses and real-time feedback, teachers continually adjust and optimize the path of digital empowerment to ensure its maximum positive impact on college English teaching.

(4) Building upon the research findings from each stage mentioned above, researchers delve into how to better integrate digital technology into the entire process of college English teaching, aiming to formulate a practical summary with universal applicability. This process encompasses various aspects, including strategies for selecting and integrating digital resources, innovative methods for instructional design, effective organization of learning activities, and the scientific construction of evaluation systems. Additionally, researcher focus on the role transformation and professional development of teachers in a digital environment, exploring ways to enhance their information literacy and technological application capabilities to adapt to the teaching demands of the digital era. Ultimately, through practical validation and continuous optimization, researchers aim to establish a mature digital-empowered college English teaching model, contributing our wisdom and efforts to enhancing the quality of college English teaching in China.

## 5. Summary

Within the forward-looking theoretical framework of the "Output-Driven Approach," teachers have actively embraced and deeply integrated digital technology into every aspect of college English teaching, not only reshaping traditional teaching paradigms but also profoundly enhancing the breadth and depth of students' knowledge acquisition. This has facilitated the efficiency and effectiveness of knowledge internalization, as well as fostering innovation and practical abilities in knowledge application. This transformative endeavor, through meticulously designed teaching activities and resources, ensures that students actively explore and construct their knowledge systems during the learning process, flexibly applying what they have learned in practice to realize the true value of knowledge. Consequently, the teaching outcomes are remarkable, with students' learning achievements significantly improved, manifested not only in comprehensive advancements in language skills but also in notable enhancements in autonomous learning capabilities and critical thinking. As a result, the quality of college English teaching in our institution has achieved a qualitative leap under the dual empowerment of the "Output-Driven Approach" and digital technology, laying a solid foundation for cultivating high-quality talents with international perspectives and cross-cultural communication abilities.

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