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The Transformation of Vocational College English Teachers' Roles in the AI Era

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Abstract

With the deep integration of artificial intelligence (AI) technology in the field of education, public English teaching in vocational colleges is undergoing unprecedented changes. This paper systematically explores the pathways for the role transformation of English teachers in the AI era. Through literature analysis, case studies, and questionnaire surveys, it reveals a multidimensional shift in teachers' roles—from traditional knowledge transmitters to learning facilitators, curriculum designers, technology collaborators, and emotional supporters. The study finds that AI technology not only alters teaching methods and teacher-student relationships but also poses new demands on teachers' professional competencies. Finally, the paper proposes practical strategies and future directions for this role transformation, providing theoretical references and practical guidance for the reform of English teaching in vocational colleges.

Keywords

Artificial Intelligence; Vocational English; Teacher Roles; Teaching Reform; Digital Literacy

1. Introduction

Scholars worldwide have yet to reach a consensus on the definition of smart education. Current perspectives include: Purpose-driven theory, which views smart education as fostering the development of moral and intellectual virtues in individuals[1]; Means-driven theory, which posits that smart education is rooted in intelligent technologies and aims to comprehensively support talent development by integrating technology to achieve multiple educational goals, such as belief education, professional training, and skill enhancement[2]; Integration theory, which suggests that smart education involves personalized teaching in technology-enhanced environments, cultivating learners with strong values, action capabilities, critical thinking, and creative potential[3]. With the rapid advancement of intelligent technologies and the digital transformation of higher education, the means-driven theory currently dominates academic discourse. The application of smart technologies and digital tools in education breaks the physical constraints of time and space, creating

new forms of experiential, interactive, and immersive learning that are widely recognized by learners.

The rapid development of AI is reshaping the educational ecosystem at an unprecedented pace and depth. According to the 2023 Education Informatization Report by the Ministry of Education, 78% of vocational colleges in China have integrated AI technology into English teaching to varying degrees—a nearly threefold increase since 2020. Against this backdrop, the traditional roles of English teachers in vocational colleges face significant challenges. A recent report by the McKinsey Global Institute, The Future of Education, predicts that by 2030, AI may redefine most aspects of teachers' work, with language teachers being particularly affected.

Research indicates that successful role transformation is a systematic process requiring comprehensive improvements in teachers' technical literacy, teaching philosophies, and professional development. Specifically, teachers need to: Master basic AI tool applications; Reconstruct student-centered teaching philosophies; Establish mechanisms for continuous professional development; Develop the ability to design human-AI collaborative teaching; Enhance data-driven decision-making in teaching.

Notably, teachers at different career stages face distinct challenges during this transformation. Younger teachers, while more receptive to technology, often lack teaching experience, whereas experienced teachers may struggle with technological adaptation. This structural disparity calls for stratified and targeted support strategies.

2. Current Applications of AI in Vocational College English Teaching

2.1 Personalized Learning and Intelligent Assessment

Intelligent learning systems employ advanced machine learning algorithms to analyze vast amounts of student data, creating multidimensional personalized learning profiles. For example, the "Smart English" platform used by a national model vocational college utilizes natural language processing and knowledge graphs to identify students' vocabulary mastery, grammar weaknesses, and learning preferences, adjusting reading materials' difficulty and presentation accordingly. Empirical data show that this platform significantly improves learning efficiency, particularly for students with weaker foundations.

In writing assessment, AI grading systems demonstrate revolutionary advantages. Platforms like "Pigai" （a website） integrate deep learning algorithms and corpus technologies to provide instant feedback on essays, identifying grammatical errors (92% accuracy) and evaluating structure, coherence, and stylistic appropriateness. Compared to manual grading, AI systems excel in speed and consistency, greatly reducing teachers' workloads. However, limitations remain in assessing creative writing and cultural nuances, necessitating complementary human evaluation.

2.2 Virtual Simulation and Contextualized Teaching

Virtual Reality technology has achieved breakthroughs in English oral training. For instance, the "Virtual Business Negotiation" system, designed for international business majors, combines motion capture, real-time speech recognition, and affective computing to simulate cross-cultural business scenarios. The AI-powered virtual negotiators adapt dynamically to students' language proficiency and strategies, offering personalized situational training.

Augmented Reality technology has also proven effective in teaching specialized English vocabulary. Systems like the "AR English Vocabulary Learning" tool use 3D visualization and contextual embedding to help students memorize technical terms in realistic settings. For example, hotel management students can interact with virtual hotel environments to learn item names and usage scenarios, significantly improving retention rates.

2.3 The Auxiliary Role of Generative AI

Large language models like ChatGPT are revolutionizing traditional English teaching. Generative AI assists teachers in tasks such as: Generating teaching materials; Designing instructional activities; Creating differentiated assignments; Drafting teaching reflections.

However, challenges arise, such as students using AI to complete assignments, particularly in writing tasks. To address this, teachers are exploring innovative assessment strategies, including: Process-oriented evaluation (tracking learning trajectories); Oral defenses (verifying authentic proficiency); Project presentations (assessing comprehensive skills); Peer reviews (fostering critical thinking). These methods form a multifaceted evaluation system tailored to the AI era.

3. Role Transformation of Vocational English Teachers in the AI Era: Theoretical and Empirical Analysis

3.1 Learning Facilitator

Social constructivism emphasizes that knowledge and meaning are constructed through social interaction and cultural contexts. In education, this theory advocates student-centered approaches, encouraging collaborative learning, discussion, and reflection. Teachers in the AI era are transitioning from "knowledge authorities" to "cognitive scaffold builders." For example, the "AI + Project-Based Learning" model leverages intelligent platforms to digitize Vygotsky's Zone of Proximal Development (ZPD) theory, automatically identifying students' ZPD ranges and recommending suitable learning partners. This model has been shown to enhance project quality and teamwork skills.

Sweller's Cognitive Load Theory gains new relevance in AI-assisted teaching. The theory posits that teaching should optimize the storage of information in long-term

memory through schemas. Teachers can use AI-powered "Cognitive Load Dynamic Balancing Systems" to monitor students' eye movements and operational frequency, adjusting content presentation and difficulty in real time.

3.2 Curriculum Designer

The TPACK (Technological Pedagogical Content Knowledge) framework requires expansion in the AI era. Successful AI-integrated curriculum design now demands: Data literacy; Algorithmic awareness; Ethical judgment; forming the new D-TPACK model. Courses developed under this framework show higher alignment with industry needs. Intelligent design systems can automatically analyze job requirements, match competency standards, and generate dynamic assessment plans, ensuring closer ties between course objectives and workplace demands.

3.3 Technology Collaborator

Research identifies an optimal division of labor between humans and AI: AI handles knowledge retrieval, repetitive drills, and instant feedback; Teachers focus on cultivating higher-order thinking, emotional engagement, and value formation.

3.4 Emotional Supporter

Based on Seligman's PERMA model, teachers' emotional support should target: Positive Emotion; Engagement; Relationships; Meaning; Accomplishment.

4. Future Prospects and Recommendations

4.1 Establishing Teacher-AI Collaborative Development Centers

Within five years, regional "Teacher-AI Collaborative Development Centers" should be established nationwide, featuring: Technical training and certification: A tiered AI teaching competency framework (basic, intermediate, expert), with mandatory annual training (e.g., Singapore's 2023 "Teacher AI Competency Framework"). Teaching resource repositories: Open-access AI teaching case libraries, modeled after the UK's JISC "AI in Education Knowledge Hub." Feedback mechanisms for R&D: Regular dialogues between teachers and engineers to enhance product applicability (e.g., MIT's "Teacher Technology Lab").

4.2 Refining AI Teaching Evaluation Systems

New evaluation systems should incorporate: Process-oriented assessment: Learning analytics tools like Australia's Deakin University "Learning Dashboard." Multidimensional evaluation: Involving AI algorithms, teachers, industry experts, and student self-assessments (e.g., Germany's dual vocational education model). Ethical oversight: Embedding fairness audits to detect biases in algorithms.

Strengthening Tripartite Collaboration

An "industry-school-enterprise" partnership should be fostered through: Co-developed curricula: Industry experts setting competency standards. Shared resources: Cloud platforms for real-world case data (e.g., Alibaba's "Digital Economy College"). Joint talent cultivation: Dual mentorship programs.

Supporting Teacher Mental Health

A three-tier support system is recommended: Prevention: "Technology adaptability" training to reduce anxiety. Intervention: Dedicated counseling hotlines. Safeguards: Incorporating technology adaptation into performance metrics.

5. Conclusion

The role transformation of vocational English teachers in the AI era is essentially a reconstruction of educational agency amid technological revolution. Successful transformation requires balancing: Instrumental and value rationality: Mastering AI while preserving humanistic care. Individual and systemic growth: Aligning teacher autonomy with institutional support. Technology adaptation and educational innovation: Turning tools into catalysts for teaching innovation.

6. Future Research Directions

6.1 Generational differences

Deeper study of support strategies for teachers over 45.

6.2 Domain-specific AI

Developing specialized language models for fields like medical or engineering English.

6.3 Long-term impact

Longitudinal studies such as the UK Open University's 15-year "AI in Education" project.

6.4 Localizing global insights

Adapting frameworks like EU AI ethics or U.S. personalized learning to China's vocational education context.

References

[1] Zhang Li, Zhang Li, Liu Feiyang, et al. Research on Improving the Quality of Undergraduate Thesis (Design) in Electronic Science and Technology Major [J]. Laboratory Research and Exploration, 2020, 39(1): 253-255.

[2] Zhou Mu. Cultivation of Practical Abilities in Electronic Information Science and Technology Major [J]. China Modern Educational Equipment, 2019(11): 26.

[3] Zhu Gaofeng, Zhang Yanlei, Hu Wenming. Research on the Transformation of Electronic Information Science and Technology Major under the Background of New Engineering Education [J]. China Modern Educational Equipment, 2019(7): 62-63.

[4] Zhou Quan. Research on the Path of Digital Transformation Empowering High-Quality Development of Basic Education: A Case Study of National Informatization Teaching Experimental Zones [J]. China Educational Technology, 2022(11).

[5] Lei Chaozhi. Seizing the Opportunity of Digital Transformation to Build a New Ecosystem of Smart Education [J]. Distance Education in China, 2022(11).

[6] Su Hong; Wang Yinquan. Research on Strategies for Enhancing Information Literacy of Smart Foreign Language Teachers in Universities in the Digital Humanities Era [J]. Technology-Enhanced Foreign Language Education, 2022(02).

[7] Wu Junqi; Wu Feiyan; Wen Sijiao; Zhang Mengmeng; Wang Jiatong. ChatGPT Empowers Teacher Professional Development: Opportunities, Challenges, and Pathways [J]. China Educational Technology, 2023(05).

[8] Hu Wei. How Artificial Intelligence Empowers Teacher Development: Components and Pathways of Teacher AI Literacy [J]. Journal of Teacher Education, 2024(02).

[9] Zhang Xiangjing; Li Xueyan. Research on the Current Status and Enhancement Strategies of University Foreign Language Teachers' Information Literacy in the Context of "AI + Education" [J]. Journal of Xinzhou Teachers University, 2024(02).

[10] Ye Weiyu; Chen Jing. Current Status and Research on AI-Assisted Teaching in the AI Era [J]. Technology Wind, 2025(04).