

Research on the Competence Development of Public English Teachers in Vocational Colleges Against the Background of Education Digital Transformation

Weirong Li¹

¹ The School of Public Basic Education, Guangzhou Civil Aviation College, Guangzhou, Guangdong 510403, China

¹Corresponding author. Email: liweirong@gcac.edu.cn

ABSTRACT

In the context of digital transformation in education, this article deeply analyzes the challenges faced by vocational public English teachers in terms of reduced dependence on teachers for English learning, insufficient digital education technology literacy of teachers themselves, difficulty in meeting differentiated learning needs of students, and pressure brought by new digital teaching evaluation and management. Furthermore, this paper discusses the constituent elements of teacher digital competence and proposes suggestions for the competence development of vocational public English teacher, such as actively learning and understanding the latest digital technologies, vigorously improving digital comprehensive application capabilities, and continuously improving competence levels. These suggestions provide reference for the competence development of vocational public English teacher in the era of digital intelligence.

Keywords: *Digital transformation, Vocational public English teachers, Competence, Development.*

1. INTRODUCTION

Digital transformation of education refers to the use of information technology and the Internet and other digital tools to transform traditional education models and teaching methods into new digital, networked and intelligent education models and teaching methods. With the continuous progress of information technology, the popularization and application of digital tools such as computers, the Internet and mobile devices have penetrated into various fields, and education is no exception. The rapid development of information technology has provided technical support and infrastructure for the digital transformation of education; Through online education platforms, remote education, and other means, the sharing and distribution of educational resources have been achieved, meeting a wider range of educational needs while also bringing new challenges to education and teaching reform.

Competence is a fundamental characteristic of human beings, which is a collection of evaluable and exploitable internal and external elements

possessed by organizational members. The factor that truly determines or primarily determines a person's work effectiveness in the workplace is competence. Digital competence emphasizes the diversity, comprehensiveness, and competitiveness of competence based on digital technology. [1] Research on teacher competence involves the construction of competency models for college English teachers [2], the study of competence models for ideological and political education in vocational English teachers [3], the analysis of competency models for "dual teacher" teachers in vocational colleges [4], the study of digital competence from the perspective of students [5], and the support system for cultivating college English teachers from the perspective of professional competence [6], among others. The competence of vocational public English teachers is a comprehensive value system with corresponding professional knowledge, skills, professional ethics, and values of English majors. Their personal competence level determines the height that professional development can reach. In the context of digital transformation in education, the

competence of vocational public English teachers is facing unprecedented crisis and pressure. The competence model of teachers needs to be reconstructed, and the competence of teachers with digital technology as the distinctive feature urgently needs to be improved.

2. CHALLENGES FACED BY VOCATIONAL PUBLIC ENGLISH TEACHERS IN THE CONTEXT OF EDUCATION DIGITAL TRANSFORMATION

Against the background of digital transformation, vocational public English teachers are facing challenges brought about by new types of education and teaching. Firstly, the powerful functions of digital technology may reduce the dependence on English teachers in English learning. For example, the development of artificial intelligence technology has made online learning and language learning applications more popular and convenient. Students can learn independently through various applications, websites, and software, which poses a challenge to traditional English teaching models; Some artificial intelligence education products can provide students with personalized learning experiences, analyze their learning situations and needs through intelligent algorithms, and provide corresponding teaching content and suggestions, which may reduce the demand for traditional English teachers. Secondly, teachers may face the problem of insufficient digital education technology literacy. Public English teachers with a general background in languages such as linguistics and literature may have deficiencies in their ability to use educational technology tools, integrate educational technology, design information-based teaching, digital literacy, and awareness of network security, which may affect their effective use of educational technology to support teaching and learning activities, and may lead to a decline in teaching quality. In addition, teachers may face challenges brought about by the differentiated learning needs of students. In the era of digitalization, students' passive learning has been transformed into active learning, standardization has shifted towards personalized development, from emphasizing memory and neglecting ability to emphasizing ability and development, fixed thinking has shifted towards critical thinking, creative thinking, and practical thinking, and from emphasizing results and scores to emphasizing process and formation. Teachers need to fully

consider the personalized needs of each student in their teaching, in order to help them fully develop their English abilities, which put higher demands on their own digital literacy and digital teaching ability. Finally, teachers may face pressure from new types of digital teaching evaluation and supervision management. In the era of digitalization, teaching management and evaluation also exhibit distinct digital characteristics. Teachers' teaching concepts, teaching methods, teaching implementation, and teaching quality will be further evaluated, supervised, and managed in a more grid and refined manner. This may bring certain pressure to teachers, forcing public English teachers to invest more time and energy to adapt to digital teaching evaluation and management.

3. ELEMENTS OF DIGITAL COMPETENCE FOR PUBLIC ENGLISH TEACHERS IN VOCATIONAL COLLEGES

Education researchers have proposed different dimensions of teacher digital competence based on different research perspectives and objectives. Wang Xiaodan et al. [7] constructed a digital competence model for university teachers, which includes five dimensions: digital technology application, teaching ability, teamwork ability, scientific research and innovation ability, and digital literacy; Chen Ken et al. [8] constructed a digital competence framework for foreign language teachers from three digital competency domains: language professional ability, language teaching ability, and the ability to promote the development of language learners. This article believes that in the context of digital transformation in education, the competence of vocational public English teachers should include but not be limited to the following elements to adapt to the new teaching environment and requirements:

- **Subject knowledge:** Public English teachers need to have profound knowledge of English language and vocational education, be able to accurately understand and explain English grammar, vocabulary, discourse, and other content, be able to effectively impart to students, and be good at using digital resources to continuously improve their subject knowledge reserves.
- **Cross-culture education:** Public English teachers should have the awareness and ability of cross-cultural education, understand the differences and similarities between different cultures, promote cross-

cultural communication and understanding among students, and help students learn to tell Chinese stories well in foreign languages and spread the Chinese voice well.

- Teaching design ability: Public English teachers should be able to design a comprehensive curriculum design based on information technology and in line with teaching objectives, implement hybrid teaching steps, diversify teaching activities, and systematically evaluate methods according to the needs and characteristics of students, in order to improve their learning outcomes.
- Teaching skills: Public English teachers need to master digital education technology, various teaching platforms and online teaching tools, such as Zoom, Google Classroom, Microsoft Teams, etc.; They need to be proficient in using multimedia technology, including creating teaching PPTs, recording teaching videos, editing audio files, etc.; They also need to be capable of flexibly utilizing information technology and tools for remote teaching and online course design, utilizing multimedia resources and interactive teaching methods, providing diverse learning experiences, and improving teaching effectiveness.
- Learning support: Public English teachers need to be able to provide personalized learning support based on information technology, including online and offline monitoring of student learning progress, providing timely feedback and guidance, and stimulating student interest and motivation in learning.
- Learning management: Public English teachers need to have good digital based learning management skills, including using information technology to organize and manage student learning activities, such as being able to use social media and online collaboration tools for classroom interaction and student management, promoting communication between students, coordinating cooperation and interaction between students, and solving learning problems and difficulties.
- Teaching evaluation: Public English teachers should also learn to build an information-based teaching evaluation system, which evaluates and provides feedback on the teaching process and effectiveness through the use of

information technology and digital tools. This evaluation system can help teachers better utilize technological means to improve teaching effectiveness and management efficiency, help teachers better understand student learning situations, optimize teaching design and methods, and improve teaching quality. Teachers will be able to clear teaching objectives and evaluation standards to ensure consistency between the teaching process and evaluation, evaluate students' learning performance through assignments, tests, exams, and other methods to understand their learning progress and level, assess the teaching methods, utilization of teaching resources, and classroom management of teachers to help improve teaching strategies, appraise teaching effectiveness through indicators such as student feedback, academic performance, and academic development, and verify whether teaching objectives have been achieved, as well as evaluating the adequacy and quality of teaching resources, including textbooks, teaching equipment, online platforms, etc. The construction of an information-based teaching evaluation system is also an important part of improving the competence level of teachers, which helps to promote the professional development of teachers and the modernization of education and teaching.

Meeting these competence elements can help public English teachers better adapt to the needs of digital education transformation, provide high-quality teaching services, and promote student learning outcomes and growth.

4. SUGGESTIONS FOR THE DEVELOPMENT OF COMPETENCE OF VOCATIONAL PUBLIC ENGLISH TEACHERS

In the context of digital transformation in education, vocational public English teachers need to actively develop their competence to adapt to the new teaching environment and needs, including actively learning and understanding the latest digital technologies, vigorously improving their digital comprehensive application abilities, and continuously improving their competence level.

4.1 Actively Learning and Understanding the Latest Digital Technologies

Currently, generative large-scale AI language models are strongly impacting and reconstructing the existing public English teaching ecosystem with their powerful natural language processing and content generation capabilities. In the future, vocational college public English teachers may either be eliminated by AI or those who know how to use AI. Generative AI is an artificial intelligence that learns the features of objects from data through various machine learning methods, and then generates new and completely original content (such as text, images, videos). After the advent of the American artificial intelligence chat robot ChatGPT, the Chinese generative AI technology is not to be outdone. On March 16, 2023, Baidu released the Chinese version of the big language model of generative AI "ERNIE Bot"; On April 7th, Alibaba Cloud's big model "Tongyi Qianwen" began inviting tests; On May 6th, iFlytek released the "iFlytek Spark Cognitive Model". Generative artificial intelligence has been widely and rapidly involved in various aspects of people's daily lives, and its powerful content generation function has even made many industry professionals worry that their work will be replaced by artificial intelligence. As foreign language educators, teachers have to directly face and carefully consider the professional development problems faced by public English teachers in the era of generative artificial intelligence. They should actively embrace AI technology, seize the opportunities brought by this technological revolution to the professional development of public English teachers with a positive attitude, actively respond, seek higher development opportunities, and make the necessary efforts for the high-quality development of vocational English education in the new era. Therefore, public English teachers need to actively learn, understand, and familiarize themselves with various digital and intelligent tools and educational platforms, such as AI tools such as ChatGPT, online learning platforms, teaching management systems, virtual teaching and research rooms, AR, VR, etc., and efficiently utilize various information and digital resources and means for teaching, in order to provide a high-quality teaching experience that combines online and offline.

4.2 Vigorously Enhancing Digital Comprehensive Application Capabilities

Vocational public English teachers should develop the ability to proficiently use digital tools, effectively search and evaluate digital resources, effectively understand and utilize various types of information, and strive to improve their comprehensive digital application abilities. They can actively engage in practical applications in the following areas:

- Design and development of digital textbooks: Vocational public English teachers should actively learn how to design and develop digital textbooks, use online platform resources, AI tools and other technological means to create creative and attractive teaching content to meet the personalized learning needs of students.
- Curriculum construction: Teachers should actively utilize digital resources and means to participate in curriculum construction, including integrating information resources, designing online learning activities, building online learning platforms, establishing resource libraries, and building MOOCs and high-quality online development courses.
- Personalized teaching: The digital transformation of education provides more opportunities for personalized teaching. Public English teachers should utilize the data analysis function of the learning management system, combine with the actual offline teaching, fully understand the learning situation and needs of students, actively provide them with personalized learning support and feedback, and meet the characteristics of subjectivity, individuality, comprehensiveness, practicality, and interactivity in vocational education in the new era.
- Evaluation and feedback: The digital application of teachers also includes the evaluation and feedback of teaching effectiveness, including the use of data analysis tools to evaluate teaching effectiveness, and timely adjustment of teaching strategies.
- Providing online tutoring and support: Vocational public English teachers should use online platforms to provide real-time tutoring and support, answer students' questions, provide additional learning

resources and guidance, extend limited classroom teaching time to before and after class, and enhance students' learning motivation and independent learning ability.

4.3 Continuously Improving Competence Level

The digital transformation of education brings challenges to vocational public English teachers, but also provides more opportunities for development. Wu Lingxia et al. [9] proposed to draw on the international experience of teacher digital competence and release teacher digital competence standards with Chinese characteristics, so that teachers can compare the standards to improve their digital competence level. Xu Qianqian [10] called for providing digital learning opportunities for teachers, encouraging digital collaboration and innovation, and establishing corresponding assessment and incentive mechanisms. It is believed that competence enhancement is a continuous process, and through continuous learning and adaptation to new teaching environments, vocational public English teachers can enhance their competence, better adapt to the needs of digital education transformation, and provide better English education services for students. For example:

- **Continuous learning:** Teachers should maintain their enthusiasm for learning and constantly update their knowledge and teaching methods. They can participate in professional training courses, seminars, academic conferences, virtual teaching and research sections and other activities in the field of digitalization and informatization, communicate with peers, understand the development trend and the latest application of educational technology, constantly learn and update knowledge and skills, maintain the innovation and progressiveness of teaching methods, and improve your digital literacy.
- **Lifelong learning:** The digital transformation of education is a constantly changing and developing process, and public English teachers need to constantly learn and update their knowledge and skills. Teachers should regard learning as a lifelong habit, continuously learning new knowledge, technologies, and methods that combine information technology with foreign language teaching. They can achieve lifelong learning through reading professional books, participating in online

learning, participating in digital technology training, participating in information technology teaching ability competitions, and practicing in relevant enterprises.

- **Participating in teaching and research activities:** Teachers can actively participate in teaching and research activities related to digital teaching organized by schools or educational institutions, and conduct teaching research and communication with colleagues. They can take the lead in establishing a platform for cooperation and sharing among teachers, promoting experience exchange and mutual learning among teachers, and jointly improving digital competence. Through collective discussion and mutual learning, they can also enhance their digital teaching theory and practical abilities, continuously improve and enhance teaching effectiveness.
- **Joining in professional communities:** Teachers can join the digital technology professional community to exchange and collaborate with industry experts and scholars. They can combine expert advice and guidance to identify their own shortcomings and actively make up for them, continuously improving the level of digital teaching. They can also share experience, solve problems, and jointly improve the level of digital and information-based teaching through online social platforms, teacher forums, and other channels.
- **Reflections on teaching practice:** Teachers should constantly reflect on their teaching practices, regularly evaluate and provide feedback on their own competence level, and think about how to better improve teaching ability and help students learn through digital technology. For example, by utilizing the big data analysis function to comprehensively observe and understand the learning situation of students, teachers can collect feedback from students, and adjust one's teaching strategies and methods in a timely manner.

5. CONCLUSION

The traditional teaching model is mainly teacher centered, focusing on knowledge transmission and exam evaluation, while the digital education model focuses more on students' active participation and self-directed learning; The digital education model can provide a more flexible and personalized learning environment through multimedia teaching,

online interaction, and other means, stimulating students' interest and creativity in learning. Currently, vocational education is undergoing digital transformation, driven by the development of information technology and changes in educational needs, which are driving the transformation of traditional education models towards digitization and networking. This transformation aims to provide a more flexible and personalized learning environment, meet the educational needs of different populations, and promote global sharing and exchange of educational resources. In the context of high-quality, efficient, personalized, internationalized, lifelong, and digital education in the new era, vocational public English teachers need to keep up with the development of educational technology and changes in teaching concepts, change their mindset, actively adapt to the needs of the times, improve digital awareness, digital technology knowledge and skills, digital applications, digital social responsibility, and other digital literacy, and maintain the updating and enhancement of teaching skills; Teachers should also actively participate in training courses, seminars, and teaching exchange activities, focus on improving one's own competence level, and promote the high-quality development of vocational English education and teaching.

ACKNOWLEDGMENTS

Funding: Guangdong Provincial Education Science Planning Project (Higher Education Special Project) "Research on Cultivating the Thinking Ability of Vocational College English Students from the Perspective of 'Curriculum Ideology and Politics'" (2021GXJK666); A characteristic innovation project for ordinary universities in Guangdong Province "Research and Practice on the Integration Path of 'Aviation Service English' and 'Aesthetic Education' from the Perspective of Curriculum Ideology and Politics" (2023WTSCX172).

REFERENCES

- [1] Zhang Changcheng, She Xuwei, Research on Difference Factors Influence of Digital Competence for K12 PE Teachers [J]. Journal of Jiaying University, 2023, 41(06), 88-96.
- [2] Du Jingping, Guo Linxiang, The Construction of a Competency Model for College English Teachers [J]. Heilongjiang Researches on Higher Education, 2013 (11): 72-76.
- [3] Sun Qiuchen, Wang Pan, A Study on the Structural Model and Cultivation Path of Ideological and Political Competence for English Teachers in Vocational Colleges [J]. Henan Education, 2023 (9): 90-92.
- [4] Ren Juan, A Study on the Competency Model of "Double Teacher" Teachers in Vocational Colleges [J]. China Journal of Multimedia & Network Teaching, 2023 (11): 140-143.
- [5] FERNANDO G.F., EDUARDO G.J., ISABEL L.C. Undergraduate Students' Perspective on Digital Competence and Academic Literacy in a Spanish University [J]. Computers in Human Behavior, 2017(74): 196-204.
- [6] Zhang Sufen, A Support System for the Training of College English Teachers from the Perspective of Professional Competence [J]. Journal of Taiyuan City Vocational College, 2023(08): 92-94.
- [7] Wang Xiaodan, Wang Jun, Research on the Construction and Application of Digital Competency Model for College Teachers [J]. Journal of Social Science of Jiamusi University, 2023 (6): 128-131.
- [8] Chen Ken, Xin Ping, An Analysis on the Construction of Digital Competence Framework for Foreign Language Teachers [J]. Education and Teaching Research, 2023, 37(08), 33-34.
- [9] Wu Lingxia, Zhai Fei, Wu Caixia, Research on the Construction and Development Path of Digital Competency Framework for University Teachers [J]. China Adult Education, 2023, (22), 60-64.
- [10] Xu Qianqian, Wu Xueping, Digital Competence of Teachers in Vocational Colleges in the Context of Digital Transformation: Development Logic, Connotation Elements and Enhancement Strategies [J]. Vocational and Technical Education, 2023, 44(23), 13-20.