Connotation Examination and Promotion Path of Digital Literacy of English Teachers in Higher Vocational Colleges

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ABSTRACT

Driven by the in-depth advancement of the education digitalization strategy and the high-quality development of vocational education, the digital literacy of English teachers in higher vocational colleges has become a key variable affecting the quality of technical and skilled talent cultivation and the digital transformation of foreign language education. Grounded in the type attributes of vocational education and the characteristics of the English discipline, this study examines the connotation of digital literacy of English teachers in higher vocational colleges and reveals its actual states across dimensions including digital awareness, digital technology knowledge and skills, digital application, digital social responsibility, and professional development. The examination finds that the digital literacy of these teachers is generally at a moderately high level, yet digital application, particularly in teaching design and implementation as well as learning assessment, remains relatively weak, with significant disparities across variables such as teaching age, professional title, and region. The constraining factors involve multiple dimensions, including insufficient digital awareness and technology reserves of teachers, ineffective digital resource allocation and training support of institutions, and the absence of evaluation and incentive mechanisms. Accordingly, systematic promotion paths are proposed from the perspectives of awakening digital awareness, optimizing training provision, deepening resource co-construction, and improving evaluation and incentives, aiming to provide theoretical reference and practical guidance for cultivating the digital literacy of English teachers in higher vocational colleges.

Keywords: *Higher vocational colleges, English teachers, Digital literacy, Education digitalization, Promotion path.*

1. INTRODUCTION: CONNOTATION EXAMINATION OF DIGITAL LITERACY OF ENGLISH TEACHERS IN HIGHER VOCATIONAL COLLEGES

1.1 Defining the Connotation of Digital Literacy

Digital literacy has evolved as information technology has permeated education. The Ministry of Education's Digital Literacy of Teachers standard (JY/T 0646—2022) defines it as teachers' awareness, capability, and responsibility for appropriately using digital technologies to access, process, use, manage, and evaluate digital information and resources; to identify, analyze, and solve educational and teaching problems; and to optimize, innovate, and transform educational and teaching activities [1]. This definition moves beyond the technical question of whether one can operate the tools and treats digital literacy as an integrated system in which awareness, capability, and responsibility are intertwined.

The standard lays out a capability map of 5 first-level dimensions, 13 second-level dimensions, and 33 third-level dimensions. Digital awareness sits at the front end, the psychological prerequisite for teachers' active reflection on digital activities, encompassing cognition, willingness, and will; digital technology knowledge and skills form the foundation for conducting digital teaching; digital

application lies at the core, covering instructional design, teaching implementation, learning assessment, and collaborative education; digital social responsibility emphasizes legal and ethical cultivation and safety protection; and professional development points to teachers' use of digital technologies to drive their own and their community's continuous growth. The five dimensions support one another and constitute a complete literacy structure.

Foreign language education research has further enriched this definition. Grounded in the foreign language discipline, Li Ling characterizes the digital literacy of college foreign language teachers across four layers—awareness and ethics, knowledge and skills, practical application, and disciplinary thinking—and builds a framework with 4 first-level and 13 second-level dimensions [4]. Lai Chun et al., starting from instructional activity design and drawing on the basic models of digital technology integration into foreign language teaching, propose a framework for foreign language teachers' digital literacy oriented toward activity design, highlighting the teacher–technology collaboration and students' autonomous learning stance [5]. These two lines of inquiry provide the theoretical starting point for defining the digital literacy of English teachers in higher vocational colleges.

1.2 The Specificity of Digital Literacy for English Teachers in Higher Vocational Colleges

Higher vocational education is rooted in cultivating technical and skilled talent, stressing the integration of industry and education, school-enterprise cooperation, and the combination of work and study—a type attribute that distinguishes the digital literacy of higher vocational English teachers from that of regular undergraduate institutions. The distinction shows up in three places:

First, migration toward workplace contexts. Higher vocational English must align with job requirements and train students to accomplish tasks in English within real work scenarios. Teachers therefore need not only to use technology to serve the classroom but also to build professional scenarios—business negotiation, hotel services, cross-border e-commerce—with virtual reality and artificial intelligence, and to conduct precise language training and assessment with corpora and intelligent grading [6].

Second, adaptation to heterogeneous student profiles. Higher vocational students enter with wildly uneven English foundations and varied learning motivations. Teachers must rely on learning-analytics technology to map student conditions and track trajectories, then provide differentiated, personalized support—which demands that they both operate the tools and turn technology into a genuine capacity for teaching to each student's needs [7].

Third, implementation through integrated education. Guan Wenjuan et al. construct a framework for foreign language teachers' digital literacy in higher vocational colleges across four dimensions—basic digital literacy, digital education literacy, digital development literacy, and facilitating-learner literacy [7]—which, in essence, is the inevitable requirement of vocational education teaching practice under technology empowerment [6].

The digital literacy of English teachers in higher vocational colleges is a directed, practical, and integrated literacy formed by overlaying the type attributes of vocational education and the characteristics of the English discipline onto the general Digital Literacy of Teachers framework; its foothold is using digital technology to optimize vocational English teaching and to serve the cultivation of technical and skilled talent. This attribute runs through the reality examination and path design that follow.

2. REALITY EXAMINATION OF DIGITAL LITERACY OF ENGLISH TEACHERS IN HIGHER VOCATIONAL COLLEGES

2.1 Overall Level: Moderately High, Yet Still Short of High-Quality Development

Several empirical teams paint a strikingly similar picture: the digital literacy of higher vocational English teachers is generally moderately high, with fairly positive digital awareness and social responsibility, but digital technology knowledge and digital application visibly lag behind. Guo Helong assessed 202 English teachers across six normal universities in three northeastern provinces, with the overall result falling at the "average" level (weighted mean 3.521); digital awareness (3.987) and digital social responsibility (3.89) were relatively strong, while digital

technology knowledge and skills (3.454) and digital application (3.521) were low [10]. Cong Jianmin et al. surveyed 477 higher vocational teachers and likewise found acceptable digital awareness but low application scores, a gap between awareness and practice [9]. Zhao Chenwei et al., examining foreign language teachers in higher vocational colleges against the backdrop of the Belt and Road Initiative, also found deficiencies across all dimensions among younger teachers [8]. The types of sampled institutions differ, but the point that basic skills are acceptable yet high-order capability is insufficient is highly consistent.

2.2 Application Shortfall: A Disconnect Between Belief and Practice

Digital application is the core of the framework, yet it is precisely the weakest link. Drawing on the Digital Literacy of Teachers standard, Hu Jiehui et al. used questionnaires, classroom observation, and interviews to examine foreign language teachers' beliefs and practices regarding digital literacy, finding that teachers' digital awareness was not weak but had not fully translated into efficient practice, with digital assessment and the transformation of AI-driven teaching models being the most deficient[11]. Wang Jijun et al. assessed 302 foreign language teachers at a foreign studies university, yielding a distribution of "high professional development and technical skills, moderate digital application and social responsibility, and low digital awareness"[12]. For higher vocational English teachers, this shortfall is even more glaring: many teachers still use intelligent tools only to display slides and find resources; digital technology and teaching have not truly grown together, and they cannot support high-order demands such as workplace-scenario creation, project-based teaching, and blended learning.

2.3 Group Differentiation: Individual Variation Intertwined with Institutional Environment

Digital literacy among higher vocational English teachers diverges across groups. By teaching age: teachers with 5–10 years of experience often score higher than both those with over 15 years and newcomers with under 5 years, probably because mid-career teachers are both willing to adopt new technology and have accumulated enough teaching experience [10]. By professional title: full professors show markedly stronger digital awareness than assistants and lecturers, yet teaching age constrains the technology application of lower- and mid-rank teachers more noticeably [10]. By region: eastern institutions enjoy better digital infrastructure and resource provision than central and western ones, and literacy accordingly shows regional gaps [8]. Yang Huili's quantitative study of 337 foreign language teachers across 16 universities in a central province further shows that teachers' digital knowledge, digital capability, and institutional policy and technical support interact with one another, jointly pushing technology into the classroom [13]. The root of group differences lies both in the individual and in the institutional environment and systemic support.

3. CONSTRAINING FACTORS OF DIGITAL LITERACY OF ENGLISH TEACHERS IN HIGHER VOCATIONAL COLLEGES

3.1 Individual Level: Shallow Awareness and Insufficient Technical Reserves

Some teachers have not seen the educational value of digital technology clearly, holding a "knowing how to use it is enough" instrumental mindset, and have not elevated it to the level of a transformation in teaching philosophy [14]. Technical reserves are also strained: as artificial intelligence and big data accelerate their penetration into foreign language teaching, many teachers cannot articulate the principles of natural language processing, intelligent grading, or corpus analysis, let alone translate them into teaching innovation. A survey under the AI-TPACK framework shows that college foreign language teachers' AI technological knowledge (AI-TK) is precisely the weak point; although the composite elements such as AI-TPK, AI-TCK, and AI-PCK are generally not poor, individual traits and the institutional environment are what steer how well they function [15]. Technology anxiety and path dependence also hold things back: some senior teachers feel daunted by rapidly iterating tools and habitually stick to old methods, implicitly resisting the transformation [16].

3.2 Institutional Level: Imbalanced Resource Allocation and Misaligned Training Provision

Digital resource endowments vary unevenly between institutions; some schools lag in building

smart classrooms, virtual simulation platforms, and corpus resource banks, failing to meet the hard demands of English teaching digitalization. Most training follows a uniform, general-knowledge route, lacking differentiated design oriented to the English discipline and higher vocational characteristics, producing "unreal training resources"—content detached from the classroom and impossible to implement [6]. Frontier topics such as generative artificial intelligence have not yet fully entered training, and content updates cannot keep pace with technological evolution [17]. Teaching-research communities are also weak; teachers basically fight alone and struggle to gather the synergy needed for collaborative innovation.

3.3 Systemic Level: Absent Evaluation Incentives and Vacant Standards

Most institutions have not yet built a scientific evaluation system for teachers' digital literacy; literacy levels are decoupled from performance assessment and title promotion, so teachers naturally lack motivation [17]. At the policy level, the Digital Literacy of Teachers standard targets all teachers and contains no specialized indicators for the higher vocational tier and the English discipline [10]; this "standard vacancy" leaves evaluation without a disciplinary benchmark and leaves institutions' training plans without a precise target. Once institutional safeguards slow down, the transformation of digital literacy from "what ought to be" to "what is" lags accordingly.

4. PROMOTION PATHS FOR DIGITAL LITERACY OF ENGLISH TEACHERS IN HIGHER VOCATIONAL COLLEGES

4.1 Awakening Digital Awareness and Stimulating Endogenous Drive

Digital awareness is the starting point. Institutions can use themed seminars, case sharing, and role-model guidance to help teachers cross the threshold of instrumental rationality, establish a development philosophy of deep integration, and turn external requirements into internal consciousness; they must also confront technology anxiety and cognitive gaps, cultivate an inclusive and open digital atmosphere, and let teachers gradually grow digital confidence under low pressure. Generative artificial intelligence has opened new space for foreign language teaching, and teachers must rebuild their own digital literacy structure along several dimensions—cognition, skills, practice, ethics, and support [18]. Awakening awareness cannot be rushed; it must be sustained by a routine mechanism that keeps teachers sensitive to the educational value of technology.

4.2 Optimizing the Training System and Enhancing Application Capability

Training must cure the ills of generalization and homogenization and shift to tiered and categorized models. Tiered: novice teachers supplement basic skills, backbone teachers tackle deep integration, and senior teachers shift philosophy and review cases. Categorized: design topics close to higher vocational English—for example, workplace-scenario virtual-simulation instructional design, corpus-assisted vocabulary and discourse teaching, and the application and evaluation of intelligent grading systems. Shi Weizhen et al., drawing on the Three Education reform and following the five-dimension digital literacy framework, brought in multi-party support from government, enterprises, and universities to build a "3553" enhancement strategy [19]. Deng Yanxi proposes an assessment—evaluation—training—competition closed loop—using assessment to locate shortcomings, training to fill gaps, and competition to force out innovation [20]. If higher vocational English teacher training follows this line of thinking, it can form a virtuous cycle integrating assessment, training, and competition.

4.3 Deepening Resource Development and Empowering Teaching Innovation

Institutions must increase resource development and integration, building an English-oriented digital resource platform and a teacher learning community. In resources, develop a higher-vocational flavor: build corpora of workplace English aligned with jobs, virtual-simulation training projects, and micro-courses and MOOCs to stock materials for contextualized and project-based teaching [21]. In community, take teaching-research offices and course groups as the axis to build cross-disciplinary, cross-institutional digital learning communities where experience and resources flow. In environment, shore up smart-teaching conditions, provide hardware backing for VR, AI, and other technology applications, and lower usage thresholds and costs. With both resources and environment made solid, literacy can actually move into the classroom.

4.4 Strengthening Evaluation Incentives and Safeguarding Sustained Development

Institutions can take the Digital Literacy of Teachers standard framework and, in light of the realities of higher vocational English teaching, set indicators and weights across the five dimensions—digital awareness, technical knowledge and skills, digital application, digital social responsibility, and professional development [23]; tie evaluation results moderately to performance assessment, title promotion, and excellence awards, establishing the baton of evaluation driving construction [22]. Add a digital-teaching-innovation award to give a platform to teachers with outstanding integration results. Pushing from both evaluation and incentive turns literacy from passive enhancement into active development [24]. This advancement path requires the combined force of philosophical renewal, technology empowerment, resource integration, institutional safeguards, and diversified cooperation to embed itself in the ecosystem of institutional digital transformation, teacher professional development, and student growth.

5. CONCLUSION

Enhancing the digital literacy of English teachers in higher vocational colleges is a systemic project, connecting on one end the digital transformation of vocational education and on the other the cultivation of technical and skilled talent. Starting from type attributes and disciplinary characteristics, this study clarifies its connotation, actual states, and constraining factors, and proposes paths along four lines—awakening awareness, optimizing training, developing resources, and strengthening evaluation and incentives. Its cultivation cannot be a solo effort but must be placed within the collaborative ecosystem of institutional digital transformation, teacher professional development, and student growth. Future work can conduct more large-scale empirical surveys of higher vocational English teachers, build a disciplinary evaluation indicator system, and trace how literacy enhancement actually changes teaching effectiveness and student development, so that precise cultivation rests on firmer empirical ground.

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