Digital Literacy for University Foreign Language Teachers: Theoretical Reconceptualization, Evaluation System, and Enhancement Pathways

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Abstract

The deepening digital transformation of education has placed revolutionary demands on the professional competence structure of university foreign language teachers. Digital literacy has transcended mere technical operational skills to become a comprehensive professional attribute integrating cognition, practice, ethics, and development. This article aims to re-examine and redefine the essential connotation of digital literacy for university foreign language teachers from a pedagogical theoretical perspective, and to systematically analyze the practical dilemmas and structural challenges in its development. Building upon this foundation, it constructs a developmental-oriented, multidimensional, and operable "three-dimensional, four-tier" evaluation system model for digital literacy. Furthermore, it designs a systemic enhancement pathway that integrates national policy, institutional support, platform empowerment, and teacher agency. This study seeks to provide a framework with both theoretical foresight and practical guidance for promoting the digital professional development of university foreign language teachers in China and facilitating the deep integration and transformation of foreign language education in the digital age.

Keywords

1. Introduction

The report of the 20th National Congress of the Communist Party of China explicitly called for "advancing educational digitalization and building a learning society and a learning nation where lifelong learning is pursued by all", marking educational digitalization as a national strategy. The Ministry of Education's 2022 promulgation of the industry standard Teacher Digital Literacy provides clear guidance for building the digital capacity of the teaching workforce[1]. Foreign language education, as a foundational and bridging discipline in higher education, faces particularly urgent demands for digital innovation in its teaching philosophies, content, and methodologies. University foreign language teachers, as

the core implementers and drivers of this transformation, directly impact the quality of talent cultivation and the effectiveness of the educational digital transformation based on whether they possess the comprehensive literacy to adapt to and lead digitalized teaching.

However, the development of digital literacy among current university foreign language teachers commonly faces the dilemma of "easier said than done": a gap exists between acquiring technological tools and their deep integration into pedagogy, a lack of synergy between individual effort and systemic support, and a disconnect between episodic training and sustained development[2]. The root causes lie in a still-instrumental understanding of digital literacy, lacking an ecologically grounded conceptualization based on educational theory; corresponding evaluation systems often become formalistic or employ vague indicators, failing to serve diagnostic, guiding, and developmental functions; and enhancement pathways remain fragmented, unable to construct a systemic ecology supporting teachers' sustainable professional growth. Therefore, this article addresses three core questions: How should the complete connotation of digital literacy for university foreign language teachers be theoretically reconceptualized within the digital educational ecology? How can a scientific, systematic, and operable developmental evaluation system be constructed? And how can a systemic development pathway involving multi-party collaboration and endogenous motivation be designed?

2. Theoretical reconceptualization

Traditional views often simplify teacher digital literacy to a set of information technology operational skills[3]. This paper argues for its reconceptualization within the overall educational ecology of the digital age from a pedagogical perspective. The digital literacy of university foreign language teachers refers to a comprehensive, situated, and developmental system of professional competencies essential for teachers within digital teaching environments to promote the integrated development of students' language proficiency, intercultural communication skills, and key competencies for the digital era. It is rooted in Pedagogical Content Knowledge and deeply integrated with technological knowledge, forming the core foundation of Technological Pedagogical Content Knowledge. It can be deconstructed into four interwoven, dynamically developing dimensions:

Digital Cognition and Values: This is the motivational system of literacy. It includes a profound recognition of the educational value of digital technologies, a keen perception and positive embrace of digital transformation, and a sense of mission in conducting foreign language teaching within the global informational context. It transcends the technical anxiety of "whether one can use it" and points toward the value rationality of "why to use it" and the critical awareness of "how to use it well".

Digital Knowledge and Skills: This is the instrumental system of literacy. It encompasses instrumental knowledge: mastery of the basic principles and operations of various digital hardware, software, platforms, and emerging technologies; pedagogical knowledge: understanding technology-enhanced foreign language teaching methodologies, such as data-based learning analytics, blended learning design, and online collaborative task construction; resource knowledge: the ability to efficiently retrieve, evaluate, integrate, and innovatively develop multimodal digital teaching resources for foreign languages.

Digital Teaching and Practical Innovation: This is the core manifestation and testing ground of literacy. It refers to the teacher's ability to creatively apply digital cognition and skills to real, complex teaching scenarios. This includes: designing and implementing technology-enhanced personalized learning pathways; managing dynamic online-offline blended learning spaces; utilizing digital tools to promote higher-order thinking and intercultural interaction; and employing processual data for precise pedagogical intervention and diversified assessment.

Digital Ethics and Social Responsibility: This is the bottom line and aspiration of literacy. It involves adhering to digital citizenship ethics in teaching, research, and management: protecting student data privacy and information security; respecting intellectual property and academic norms; guarding against ethical risks in technology; and intentionally fostering students' healthy digital identity, responsible online behavior, and critical information literacy.

These four dimensions constitute an organic

whole, where "Cognition and Values" provide direction, "Knowledge and Skills" form the base, "Teaching and Practice" are the core, and "Ethics and Responsibility" offer safeguarding, collectively propelling the evolution of the teacher's professional identity within the digital educational ecology.

3. Practical Dilemmas

The current challenges in enhancing the digital literacy of university foreign language teachers are systemic and structural, not merely technical[4].

Integration Dilemma: The Pervasive "Two-Skin Phenomenon". Many teachers acquire isolated technical skills but struggle to integrate them deeply and meaningfully with foreign language acquisition theories and specific teaching content. Technology application remains superficial, limited to content presentation and information transmission, failing to effectively support core language teaching processes such as linguistic interaction, negotiation of meaning, and cultural experience[5]. The integrative dimension of the TPACK framework remains underdeveloped.

Ecological Dilemma: Fragmented Support Systems. There is a scarcity of high-quality, systematic, and discipline-specific digital teaching resource platforms. Technical training is often disconnected from teaching practice, lacking sustained follow-up instructional coaching. A collaborative culture within teacher communities—centered on digital teaching practices such as co-planning, peer observation, and case study discussions—has yet to mature, leaving teachers in a state of "digital isolation".

Institutional Dilemma: Lack of Evaluative and Incentive Guidance. The current teacher evaluation and promotion systems still prioritize traditional research outputs and teaching hours as rigid criteria. Teachers' innovative efforts in digital teaching, achievements in resource development, and effectiveness in blended course reforms are often difficult to measure scientifically

and receive substantive recognition, leading to insufficient endogenous motivation for developing digital literacy[6].

Developmental Dilemma: Disconnected Professional Learning Pathways. The development of teachers' digital literacy lacks a systematic design that matches different career stages and progresses sequentially. Training is often one-off, generic lectures, lacking personalized learning paths based on individual diagnosis and continuous professional development support.

4. Evaluation System

To address the aforementioned dilemmas, an evaluation system with the core objective of promoting teachers' continuous professional development must be constructed. This paper proposes a "three-dimensional, four-tier" evaluation model.

Three Dimensions: Core Principles of Evaluation

Developmental Dimension: The fundamental purpose of evaluation is to foster growth, not merely to judge. It emphasizes process-oriented and value-added assessment, focusing on providing teachers with direction for improvement and resource support through evaluative feedback.

Situational Dimension: Evaluation must be closely aligned with the characteristics of the foreign language discipline and specific teaching contexts. It involves designing flexible indicators that differentiate the varying demands of digital literacy across course types such as General English, English for Academic Purposes, Translation, and Literature.

Pluralistic Dimension: Diversification of evaluation subjects, integrating teacher self-assessment, peer evaluation, student evaluation, expert evaluation, and platform data evaluation to form a holistic profile and avoid bias from any single source.

Four Tiers: The Operationalized Hierarchy of Evaluation Indicators

Under the four core literacy dimensions, a four-tier indicator structure is designed, progressing from abstract to concrete and measurable. **Table 1** is shown below:

Table 1. four tiers of indicators for evaluating digital literacy

Tier-1 Indicator	Tier-2 Indicator	Tier-3 Indicator	Tier-4 Evidence Example
Literacy Dimension	Competency Element	Behavioral Observation	Basis for Evaluation
Digital Cognition & Values	Awareness of Technology Integration	Proactively explores innovative applications of digital technology in foreign language teaching	Teaching reflection logs recording technology trials and reflections; applications for digital teaching reform projects
	Awareness of Critical Use	Can evaluate the pedagogical applicability and potential limitations of digital tools and resources	Justification for technology selection in lesson plans; ability to articulate pros or cons of a teaching APP
Digital Knowledge & Skills	Digital Resource Development Ability	Can independently or collaboratively develop high-quality original digital teaching materials	Artifacts such as self-produced micro-lecture videos, interactive courseware, corpus-based exercises
	Data Literacy	Can interpret student learning behavior data generated by Learning Management Systems	Written analysis of learning situations and proposed instructional adjustments based on platform data reports
Digital Teaching & Practical Innovation	Blended Learning Design Ability	Can systematically design coherent online-offline blended learning activities for pre-class, in-class, and post-class phases	Complete blended course teaching plan including task sheets, online activities, offline interaction design
	Technology-Enhanced Interactive Learning Ability	Can use technological tools to facilitate instant classroom interaction and deep collaboration	Classroom teaching recording segments demonstrating use of clickers, etc.
Digital Ethics & Responsibility	Information Security Practices	Strictly adheres to regulations on protecting student personal information throughout the teaching process	Use of anonymized student assignment data; compliant use of cloud storage for sharing teaching materials
	Fostering Digital Citizenship Literacy	Integrates content on information discernment, online etiquette, etc., into teaching	Course designs incorporating specific tasks on critically evaluating online information sources

The implementation of this evaluation system requires supporting tools such as corresponding scales, classroom observation protocols, and teaching portfolio assessment guidelines. It is crucial to fully leverage educational big data and learning analytics technology to automatically collect and analyze teachers' instructional behavior data on digital platforms, providing support for process-oriented and objective evaluation.

5. Enhancement Pathways

Enhancing teachers' digital literacy is a systematic project that requires the integration of both top-down and bottom-up forces to construct a supportive ecosystem featuring four-dimensional synergy.

At the policy level, it is essential to strengthen standard guidance and institutional incentives[7]: under the framework of Teacher Digital Literacy, develop the Guidelines for Digital Literacy Development of University Foreign Language Teachers to clarify competency requirements at different stages; promote the inclusion of digital teaching achievements in professional title evaluations, position appointments, and performance distribution systems; and establish special projects such as "Digital Innovation in Foreign Language Education" at national and provincial levels to promote teaching through research and practice through competitions.

At the institutional level, it is necessary to consolidate support platforms and cultural foundations: establish university-level "Digital Intelligence Foreign

Language Teaching Support Centers" that integrate training, resource development, technical consultation, and research collaboration; implement a "school-based" development model by conducting workshops, salons, and peer coaching based on real teaching issues, and building digital teaching case libraries; encourage the formation of cross-departmental, cross-institutional, and even international "digital teaching communities of practice" to foster a sustainable professional culture through collaborative lesson planning, open classrooms, and cooperative research.

At the platform level, emphasis should be placed on enabling personalized and intelligent development: develop smart teaching platforms for foreign language disciplines that integrate intelligent lesson preparation, interactive teaching, precise assessment, and resource management, thereby lowering the technical barrier to entry; utilize learning analytics to construct teacher digital profiles and intelligent mentoring systems, which delivers personalized learning resources, training suggestions, and peer cases to support targeted development.

At the individual teacher level, the key lies in stimulating intrinsic motivation and promoting reflective practice[8]: teachers should adopt a lifelong digital learning mindset, viewing digital literacy development as an integral part of professional growth; actively engage in cyclical "design–practice–reflection" classroom action research, deepening understanding through small-scale teaching experiments, reflective journals, and video analysis to achieve the integration of knowledge and action; systematically develop personal digital teaching portfolios that consolidate teaching designs, student work, teaching reflections, and peer feedback, thereby serving as both a record of professional development and important evidence for evaluation participation.

6. Conclusion and Outlook

The development of digital literacy among university foreign language teachers is a critical link in grounding the national educational digitalization strategy within discipline-specific teaching. Through theoretical reconceptualization, this paper defines digital literacy as an ecological literacy system encompassing cognition, knowledge, practice, and ethics. By constructing the "three-dimensional, four-tier" developmental evaluation model, it provides an operable framework for the scientific assessment and precise profiling of this literacy. By designing a four-dimensional collaborative systemic pathway, it aims to build a supportive ecology for teachers' sustainable professional growth.

Future research and practice can deepen in the following directions: First, developing and validating specific assessment tools based on this evaluation model to conduct large-scale empirical research for accurately diagnosing the current status. Second, undertaking longitudinal studies to explore critical incidents, transitional stages, and influencing factors in the development of teachers' digital literacy. Third, strengthening international comparative research to assimilate and adapt advanced models and experiences in the global landscape of foreign language teacher digital professional development, thereby propelling the digital innovation of foreign language education with Chinese characteristics to greater depth. Only through the synergistic innovation of theory, evaluation, and practice can university foreign language teachers be truly empowered to become leaders and shapers of excellence in language talent cultivation for the digital age.

Disclosure statement

The author declares no conflict of interest.

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