

# Professional Development of English Teachers in the Context of Digital Transformation

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**Abstract:** The digital transformation of education is a critical juncture in the ongoing evolution of educational paradigms, delineating a trajectory that necessitates careful navigation. Teachers, as the vanguard of educational innovation, occupy a central role in this metamorphosis, with the enhancement of their digital literacy being paramount to their professional development. This imperative extends to English language instructors, who encounter a myriad of challenges in aligning with the digital shift. Thus, examining the digital transformation of education through the lens of ecosystem theory is of inestimable value, as it highlights the pivotal importance of bolstering digital literacy among English teachers within this transformative landscape. To augment the caliber of English education, it is imperative to integrate artificial intelligence into English language instruction and to proactively execute strategies aimed at elevating the digital literacy of teachers. By pursuing these measures, we can consistently enhance the professional development of English educators, thereby contributing to the robust and high-quality progression of English education.

**Keywords:** Digital literacy; Ecosystem theory; Professional development of English teachers; Digital transformation of education

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## 1. Introduction

English educators are confronted with a multitude of opportunities and challenges amidst the digital transformation of education. English, as a core or elementary subject, demands a significant investment of time in the academic curriculum for students. It is imperative that English instruction lays a robust foundation in foreign language proficiency, endowing students with the linguistic and cultural competencies essential for engaging with future scholarly, vocational, and personal challenges. This foundation not only nurtures a rich array of opportunities but also stimulates expansive thinking and broadens students' horizons. By providing them with accessible language resources, students are enabled to assimilate both domestic and global knowledge, thereby bolstering their professional competitiveness.

Consequently, the expectations placed upon English instructors in higher education and basic education are heightened, necessitating the enhancement of their digital literacy and the elevation of their professional acumen. This imperative underscores the need for an active and strategic response to the digital transformation within the education ecosystem. It is through the augmentation of digital literacy and the continuous professional

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development of English educators that the quality and impact of English language instruction can be significantly advanced, aligning with the evolving demands of the digital era.

## **2. Digital Literacy of Teachers**

The development of teachers' digital competencies involves not only the mastery of technology but also the improvement of their teaching practice with the appropriate pedagogical use of technology to contribute to student learning. There are opportunities for the education institutions in measuring digital competencies to find strengths and weaknesses to focus their training programs. The same applies to students, who should be provided with the relevant training for the development of digital skills and prevent the lack of these from becoming an obstacle to their performance in the classroom (Silvia Farias-Gaytan, Ignacio Aguaded & Maria-Soledad Ramirez-Montoya, 2023). The research on teachers' digital literacy has developed rapidly, showing three stages of "budding - development - prosperity". The research focuses on teachers' "optimizing classroom teaching", "digital competence", "digital teaching ability" and so on (Sun Caixia, Xu Chenyang, 2024). Teachers, while designing educational scenarios, need to develop new teaching capabilities, create participatory online learning, and stimulate learners' motivation through various learning activities. Teaching, which is predetermined, will affect students satisfaction, learning perception, and sense of community. The use of digital technology creates a better learning situation for students, promotes students' personalized perception, and is conducive to the establishment of a harmonious teacher-student relationship.

## **3. Theoretical Framework**

In the discourse on the digital transformation of education, a plethora of theoretical frameworks and models have been integrated into scholarly research. Among these, Ecosystem Theory, pioneered by psychologist Urie Bronfenbrenner, posits that an individual's development is shaped by a complex array of environmental systems that interact both directly and indirectly with the individual. This theory underscores that teaching efficacy and the professional development of educators are not attributable to a single factor, but rather to the synergistic actions of all components within the broader educational ecosystem.

Bronfenbrenner delineates the ecosystem into distinct yet interconnected layers: the microsystem, mesosystem, exosystem, macrosystem, and chronosystem. From an educational ecosystem perspective, the microsystem might encompass teacher training, classroom teaching practices, and the peer support networks established within the teaching community. The mesosystem could involve home-school partnerships and interdisciplinary collaboration among educators. The exosystem level might pertain to the policy support provided by school administrations and educational governance, as well as the resources offered by community libraries and science and technology centers. At the macrosystem level, it could refer to educators' awareness of global educational trends and the integration of international educational concepts and practices into teaching and teacher training, as well as the socio-economic context in which teachers operate. The chronosystem, finally, pertains to the ongoing trajectory of teacher professional development and the evolving advantages and challenges posed by traditional education in the context of new developmental stages.

In this study, Ecosystem Theory serves as a robust theoretical foundation for comprehending and analyzing the professional development trajectories and strategies of the English teachers in the digital intelligence era. It offers a comprehensive framework to scrutinize the intricate interplay and interdependencies between teacher professional development and the environmental contexts in which they are situated.

#### **4. What is Digital Transformation of Education For?**

The digital transformation of education refers to the proactive adaptation of the education system to external environmental changes and internal developmental needs, as well as the facilitation of innovation and reform within the education system through leveraging new infrastructure (Luo Jianghua, Wang Lin, 2023). The digital transformation of education involves a comprehensive digitization of all components, elements, domains, and processes within the educational system. Its ultimate goal is to establish an innovative governance framework for education, encompassing teaching, service systems, and an enriched educational ecosystem.

In this transformation, teachers play a central role as the primary practitioners of digital integration in the education system. Developing an adaptive, intelligent education platform not only supports the teachers but also serves as a significant micro-level measure to advance digital transformation. With the assistance of artificial intelligence, teachers can articulate their specific needs and preferences in real-time, identify relevant learning paths when encountering technology that is not directly applicable on the platform, and access manual support services when problems arise. For frequently reported issues or common needs, support staff can organize periodic offline training sessions, informing relevant educators via notifications from the platform to help them promptly address technical challenges. This also provides teachers with the latest technical guidance and tailored support. While seemingly straightforward, this support process is a crucial component of the digital transformation in the education system. By focusing on enhancing teachers' digital literacy, we can fundamentally drive the digital transformation of the education system.

#### **5. Great Significance of the Integration of AI into English Education**

The digital transformation of education will evolve through the seamless integration of educational practices across physical and digital spaces. This shift aims to overcome traditional barriers in the supply and circulation of high-quality resources, using data to comprehensively profile key educational stakeholders—students, teachers, and institutions alike. It promises to drive improvements in educational quality, equity, and governance (Zhou Haitao, Li Baoping, 2023). The introduction of artificial intelligence (AI) in education represents a novel pathway for digital transformation, extending beyond mere technological upgrades to foster a deeper integration within educational systems. In the realm of English instruction, incorporating AI is not only a forward-looking strategy but also essential for enhancing educational quality and nurturing globally competent individuals.

Digital technology should not be perceived as a peripheral tool in modern education; rather, it is a foundational force driving educational transformation. Digital technologies empower the development of teaching information systems and support automated decision-making, while fostering innovations that can catalyze systemic educational reform (Fu Min, Ran Limin, 2024). Although technology infrastructure plays a significant role, the real impact of educational digitization resides in the instructional practices of teachers. Teachers' digital literacy is both a core aspect and a direct manifestation of this transformation. Only teachers who have solid digital skills can genuinely advance the digital transition in education, enabling both AI and other digital technologies to become integrated components in the educational field. If the schools focus solely on hardware solutions, even the most advanced digital tools would be of limited benefit if teachers lack the skills to operate them or to apply digital technologies effectively. Simply outfitting classrooms with sophisticated equipment would be superficial without corresponding digital competency; the technology remains ornamental unless teachers know how to integrate it meaningfully into their English teaching practices.

The English teachers, therefore, need to skillfully blend digital tools with language instruction and enrich their methods with multimedia and online resources—such as virtual courses and multimedia content—to fulfill the demands of contemporary education. Teaching English, a key language of international communication, requires not only linguistic proficiency but also an understanding of diverse cultural communication norms. Enhanced digital

literacy empowers teachers to leverage online resources for developing students' intercultural communication skills. Digital tools also support personalized learning, as English teachers can utilize data analytics to gain insights into students' learning patterns, enabling them to tailor resources and methods to individual needs.

In the digital age, English teachers must continually advance their digital competencies and instructional strategies to keep pace with educational technology advancements, fostering a commitment to lifelong learning through ongoing courses, seminars, and professional development. Whether in the higher education stage, or the basic education stage, English teachers bear the additional responsibility of cultivating students' information literacy and critical thinking. This role requires adeptness in information management, including the abilities to screen, process, and apply digital resources effectively, while also teaching students how to critically assess the authenticity of online information.

## **6. Strategies for Improving Digital Literacy of English Teachers**

The digitization and intellectualization of pedagogy represent the tangible nexus within the broader digitalization of education. Educators act as the catalysts throughout this process, assuming roles as initiators, executors, as well as monitors and evaluators of the digitalization initiatives.

### **(1) Ecologically-balancing resource and platform development**

The enhancement of educators' digital literacy is contingent upon the synergistic influence of both intrinsic and extrinsic factors, with particular emphasis on the support provided by external conditions. This includes the development of a comprehensive digital resource repository and the aggregation of high-caliber English educational materials from both domestic and international sources. Such materials encompass online courses, instructional software, and digital textbooks, all of which contribute to the formation of a robust and diverse educational resource ecosystem.

### **(2) Enhancing the ecological cultivation of digital competence and consciousness among educators**

Given that the teachers are often engaged in dual roles of teaching and research, they are generally more receptive to embracing and leveraging novel technological advancements. Nonetheless, it is imperative to cultivate their digital consciousness through targeted initiatives that facilitate an understanding of the advantages and convenience offered by digital technologies in the educational context. These initiatives should be designed to alleviate any apprehension regarding the complexities of new technologies and to foster an openness to innovation. To bolster the proficiency of the English teachers in harnessing and applying digital technologies, a school or educational institution at different stages of learning must prioritize a continuum of advanced, systematic technical training programs tailored specifically for English educators. This approach not only equips educators with the necessary skills but also fosters a culture of continuous learning and adaptation within the academic community.

### **(3) Advancing the ecological progression of pedagogical innovation and integration**

The teaching profession is inherently one process of perpetual learning, with the imperative for educators to continually evolve and embrace innovative approaches. The English instructors are encouraged to integrate the flipped classroom model within their online teaching platforms to facilitate personalized learning experiences. The incorporation of cutting-edge technologies such as virtual reality and big data analysis can serve to invigorate and expand the scope of educational content, thereby enhancing the vibrancy, engagement, and efficacy of the learning process.

### **(4) Synergistic application of ecological theory in enhancing digital literacy among educators**

Ecological theory underscores the dynamic interplay and mutual dependence between organisms and their

surroundings. In the context of bolstering the digital literacy of the English teachers, it is apt to view educators as the organisms within an ecosystem, with digital technologies, educational resources, and platforms constituting their environment. By cultivating a nurturing ecological milieu, the constructive interaction and collaborative advancement between educators and their environment are fostered, leading to the holistic enhancement of digital literacy. Institutions of education are advised to bolster communication and collaboration by establishing intra- and extramural teacher communities, providing ample opportunities for interaction, and offering resource support. These measures are essential in crafting a conducive learning and working atmosphere that nurtures the professional growth and digital acumen of educators.

#### **(5) Promoting the coordinated development of individuals and groups in the ecosystem**

We can implement a mentor system in the teacher community, with experienced teachers acting as mentors to mentor teachers who are new to the profession or have relatively weak digital literacy. It is possible to guide teachers who are highly experienced but not good at digital technology, and select tutors in an eclectic manner to open up the boundaries of technical guidance, so that teachers are willing to show their problems and shortcomings, and seek advice humbly. The schools and educational institutions should break the disciplinary barriers, encourage teachers to form interdisciplinary and interdisciplinary teams to jointly undertake teaching and scientific research projects, and promote the joint improvement of teachers' digital literacy through teamwork.

#### **(6) Continuous optimization and iteration of the educational ecosystem**

Effective evaluation and feedback mechanisms not only gauge students' acceptance and engagement with digital technology in teaching but also highlight areas for improvement within institutional management and digital technology services. To this end, implementing a "Digital Teaching Satisfaction Survey" at the end of each semester for both students and teachers can provide critical insights into satisfaction levels, usability, and areas where digital resources may need refinement.

#### **(7) Building a sustainable digital literacy ecosystem**

Integrating digital technology into teaching requires that educators invest time to develop their digital literacy and pedagogical skills. Equally essential is the need for substantial financial support from schools, governments, and broader society to build and sustain a robust digital literacy ecosystem. Schools should foster an environment conducive to language learning by developing a culture rich in digital teaching practices. Initiatives such as digital teaching festivals, instructional innovation contests, and other interactive events can promote a culture of digital innovation and inspire educators to explore new teaching methods actively.

#### **(8) Enhancing research and academic support**

For most of the teachers, teaching and research are intertwined responsibilities. Thus, alongside pedagogical support, facilitating academic research is also crucial for advancing the English teachers' digital literacy. The widespread adoption of digital technologies naturally enhances communication and collaboration between educators and their domestic and international peers, increasing opportunities to participate in academic conferences, seminars, and similar gatherings. These interactions allow teachers to share research findings, gain insights from best practices, and elevate their academic development to new heights.

#### **(9) Strengthening research and academic support**

Improving the digital literacy of the English teachers mainly has two aspects, one is to promote the teaching and professional development level of teachers, and the other is to improve the digital literacy of students. Teachers can add a "Digital Literacy and English Learning" module to the English curriculum, guide students to master the skills of searching and utilizing digital resources, online collaboration and communication through case analysis and practical operation, and cultivate students' critical thinking and information screening abilities. The integration

of digital technology not only brings convenience to teachers' teaching, but also provides more possibilities for students' learning. The schools and educational institutions can develop "English learning cloud platform", or with the help of learning pass, rain class and other platforms, online courses, learning resources, learning communities and other functions together. Students can choose appropriate courses and resources according to their own learning need and interests, and communicate and interact with teachers and classmates through the platform.

### **(10) Continuous tracking and evaluation**

Building a sustainable system for teachers' digital literacy requires the establishment of a long-term evaluation framework to periodically assess the functionality of the digital literacy ecosystem. This will help ensure that various initiatives are effectively implemented and continuously improved. Digital proficiency is an essential component of teachers' professional development. Therefore, the schools must prioritize the professional growth and evolving needs of English teachers, offering tailored career development plans and targeted support. Such resources will empower teachers to achieve new milestones in digital pedagogy, fostering innovation and progress in their instructional practices.

## **7. Conclusion**

Digital transformation of education is to promote the deep integration and participation of digital technology in different fields and fields of education, rather than the simple application of digital technology in education. It will lead education into a new stage of development and bring about profound changes in educational concepts, educational models, and educational management methods. What it will change is not any link or form of education. It is a comprehensive and all-round reform, which is the inevitable choice for education to follow the development of The Times. The process of teachers participating in the digital transformation of education is a process of improving digital literacy for individuals and "shaping education reformers through education reform"for regions (Liu Yuanjie, 2021). Since English is of great significance in the study of subjects at different educational stages for students, the English teachers are at the forefront of driving digital transformation in the education. An in-depth examination of the challenges they face is essential to enhancing their digital literacy. Despite the complexity of this process, it is only by acknowledging and confronting these challenges that the English educators can sustain positive self-efficacy and actively seek measures to improve their digital skills. To this end, institutions and educational authorities must implement supportive policies and secure substantial funding to foster the digital competencies of the English teachers. This support is crucial not only for advancing digital transformation but also for cultivating a cohesive ecosystem within the English education system, ensuring that each component develops in a balanced manner and operates harmoniously within the broader educational system. In doing so, the professional growth of the English teachers becomes a core driving force within this transformative framework.

## **References**

- [1] Fu Min, Ran Limin. (2024). Digital Transformation of School Education: Cognitive misunderstandings, Potential Challenges and Solution Strategies. *China Audio-visual Education*, (1): 44-50.
- [2] Liu Yuanjie. (2021). The spatial logic construction of China's Education Reform at county level in the New Era [J]. *Educational Development Research*, 41 (10) : 66-77.
- [3] Luo Jianghua, Wang Lin. (2023). The new infrastructure enables the logic, challenges and practical direction of digital transformation in education. *China audio-visual Education*, (3):37-45.
- [4] Silvia Farias-Gaytan, Ignacio Aguaded & Maria-Soledad Ramirez-Montoya. (2023). Digital transformation and digital literacy in the context of complexity within higher education institutions: a systematic literature review. *Humanities and social sciences communications*. <https://doi.org/10.1057/s41599-023-01875-9>.
- [5] Sun Caixia, XU Chenyang. Evolution and trend of International teacher Digital Literacy research: A visual Analysis based on Web of Science Core Database [J]. *Progress in education*, 2024, 14 (7) : 1676-1687. <https://doi.org/10.12677/ae.2024.1471361>.