

## **ABSTRACT**

**PhD Dissertation of Zhang Lin; theme: «The Challenges of Creating 'Digital Literacy' for Foreign Language Teachers»;**

**Specialization: 531100 - "Linguistics"**

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### **Relevance of the Dissertation Topic**

The dissertation topic, "The Challenges of Creating 'Digital Literacy' for Foreign Language Teachers," is highly relevant in the context of the rapid technological advancements reshaping modern education. The Chinese Ministry of Education's recent policies, including the "Education Informatization 2.0 Action Plan" and the "Standards for Teachers' Digital Literacy," underscore the urgency of equipping teachers with digital skills to integrate technology effectively into teaching practices.

This study is well-aligned with national and international educational priorities, focusing on bridging the gap between current digital competencies of foreign language teachers and the evolving demands of the digital era. The proposed framework for a Professional Learning Community (PLC) centered on digital literacy is not only innovative but also addresses the core challenges faced by educators, such as insufficient training, outdated teaching methods, and uneven resource distribution.

Furthermore, the dissertation's approach to combining policy analysis, literature review, and empirical validation through the Delphi method ensures a robust and scientifically grounded framework. By fostering reflective practice, collaborative learning, and continuous improvement within PLCs, the research contributes to enhancing teaching quality and professional development, directly supporting the modernization of education systems. This relevance is amplified by the study's cross-cultural applicability, offering insights valuable to educators beyond the Chinese context.

### **Relevance to Priority Scientific Directions and Major Research Programs**

The dissertation, "The Challenges of Creating 'Digital Literacy' for Foreign Language Teachers," is closely aligned with priority scientific directions and major research programs in education and digital transformation. It directly addresses the strategic goals set forth by national and international educational frameworks, bridging critical gaps in teacher professional development and digital competency.

#### **Alignment with Priority Scientific Directions**

**Educational Modernization and Digital Transformation:** The research contributes to China's *Education Informatization 2.0 Action Plan* and the national strategy for digital education, emphasizing teacher readiness to integrate emerging technologies into pedagogical practices. By constructing a model for Professional Learning Communities (PLCs) focused on digital literacy, it advances educational modernization.

**Global Trends in Digital Competency Development:** The study resonates with international frameworks such as UNESCO's *ICT Competency Framework for Teachers* and the European Union's *DigCompEdu*. It adapts these global models to the specific needs of foreign language educators, ensuring applicability across different cultural and educational contexts.

**Integration of Advanced Technologies:** The research explores the use of cutting-edge tools, such as artificial intelligence and big data, in enhancing digital literacy. This aligns with the broader scientific focus on leveraging technology to innovate teaching methods and improve educational outcomes.

### **Contribution to Major Research Programs**

**National Standards Implementation:** The dissertation provides theoretical and practical insights to support the implementation of the *Standards for Teachers' Digital Literacy* in China. By doing so, it reinforces efforts to elevate digital literacy as a core educational priority.

**Empirical Validation through Delphi Method:** The use of the Delphi method ensures that the findings contribute reliable and actionable recommendations to major educational programs, including teacher training initiatives and policy development in digital literacy.

**Support for Sustainable Professional Development:** By promoting reflective practice and collaborative learning, the study fosters sustainable mechanisms for teacher development, which are essential for achieving long-term educational reform goals.

**Cross-Cultural Applicability:** The research extends its relevance beyond China, addressing similar challenges in other regions, such as Kyrgyzstan. This cross-cultural focus enhances its contribution to international research collaborations and educational development programs.

### **Purpose and Objectives of the Research**

The primary purpose of the dissertation, *"The Challenges of Creating 'Digital Literacy' for Foreign Language Teachers,"* is to enhance the digital literacy of foreign language teachers by developing a replicable Professional Learning Community (PLC) model. This model aims to equip educators with the necessary skills to effectively integrate digital technologies into teaching practices, thereby fostering professional growth and contributing to the modernization of education in the digital era.

The research aims to achieve the following key objectives:

**Framework Development:** Construct a theoretical and practical framework for a PLC centered on digital literacy, defining its essential components, characteristics, and application strategies.

**Digital Literacy Skills Identification:** Analyze and identify the critical digital literacy skills and knowledge foreign language teachers need to adapt to technological advancements and integrate them into their pedagogical practices.

**Evaluation and Teaching Design Innovation:** Innovate teaching designs and evaluation methods to effectively incorporate digital literacy into foreign language education, ensuring that these approaches align with both local and global educational standards.

**Sustainable Learning Pathways:** Develop effective pathways to build and sustain learning communities for educators, ensuring continuous professional growth through collaboration, reflection, and value-driven learning.

**Practical Implementation:** Validate the PLC model through empirical research, including the Delphi method, to ensure its feasibility, applicability, and effectiveness in real-world educational contexts.

**Alignment with Educational Policies:** Align the study with national and international strategies, such as China's *Education Informatization 2.0 Action Plan* and UNESCO's *ICT Competency Framework for Teachers*, to contribute practical insights and recommendations for policymakers.

### **Expected Outcomes**

The research seeks to:

- Empower teachers to navigate and utilize digital technologies in their classrooms confidently.
- Foster innovation and modernization in teaching practices.
- Create a scalable and replicable PLC model that supports professional growth and collaborative learning.
- Bridge the gap between current teacher competencies and the demands of the digital age, promoting sustainable development in education.

### **Object and Subject of the Research**

#### **Object of the Research**

The object of the research encompasses **foreign language teachers in Central China**, including those from primary, secondary, and higher education institutions. These educators are the focal group for analyzing challenges, developing strategies, and implementing solutions to enhance their digital literacy skills. The study pays particular attention to disparities in digital competency across different educational levels and the need for innovative approaches to professional development in regions with uneven resource distribution.

#### **Subject of the Research**

The subject of the research is the **development and application of a Professional Learning Community (PLC) model** designed to enhance digital literacy among foreign language teachers. This includes: essential Skills and Knowledge; learning Community Construction; teaching and Evaluation Innovation; sustainability Mechanisms; impact Assessment.

### **Main Propositions of the Doctoral Dissertation Submitted for Defense**

The doctoral dissertation, *"The Challenges of Creating 'Digital Literacy' for Foreign Language Teachers,"* presents the following core propositions for defense:

#### **1. Necessity of Enhancing Digital Literacy Among Foreign Language Teachers**

- Digital literacy is a critical competency for foreign language teachers to adapt to the evolving demands of modern education.
- The integration of digital technologies into teaching practices is essential for fostering innovative pedagogical approaches, improving learning outcomes, and aligning with national strategies such as the *Education Informatization 2.0 Action Plan* and the *Standards for Teachers' Digital Literacy*.

#### **2. Development of a Professional Learning Community (PLC) Model for Digital Literacy**

- A structured PLC model provides an effective framework for enhancing digital literacy among foreign language teachers.

- The model emphasizes **value recognition, collective wisdom, and continuous improvement** through reflective practices and collaborative learning.

- It incorporates diverse learning modes, including task-driven, problem-oriented, and application-based approaches, ensuring its practical applicability and sustainability.

### **3. Core Components of the PLC Model**

- The proposed model integrates key elements such as:

- **Critical Thinking and Reflective Practice:** Encouraging teachers to evaluate and refine their pedagogical strategies.

- **Collaborative Learning:** Facilitating peer support and knowledge sharing to overcome digital literacy challenges.

- **Cultural Integration:** Embedding national and traditional cultural values into digital literacy training to foster cultural confidence and adaptability.

### **4. Validation Through Empirical Research**

- The Delphi method was used to validate the PLC framework, involving expert consultations to ensure scientific rigor, reliability, and practical relevance.

- Results confirmed the model's feasibility in enhancing digital literacy and its potential for replication in diverse educational settings.

### **5. Cross-Cultural and Cross-Regional Applicability**

- While focused on foreign language teachers in Central China, the research findings and PLC model are adaptable to other regions, including those with similar educational and technological challenges, such as Kyrgyzstan.

- The model contributes to the global discourse on professional development, digital literacy, and educational modernization.

### **6. Contribution to Educational Modernization**

- The study addresses theoretical gaps in integrating digital literacy and teacher learning communities.

- Its findings provide actionable recommendations for policymakers, educational institutions, and practitioners to promote sustainable professional development and foster a digitally competent teaching workforce.

### **7. Implications for Future Research and Practice**

- The research highlights the need for continued exploration into:

- Innovative digital tools and pedagogies.

- Personalized and context-specific digital literacy training.

- Long-term impacts of PLCs on teaching quality and student learning outcomes.

These propositions collectively establish the dissertation as a significant contribution to the field of education, addressing both national priorities and global trends in digital literacy and teacher professional development.

### **Personal Contributions**

The doctoral dissertation, *"The Challenges of Creating 'Digital Literacy' for Foreign Language Teachers,"* reflects the candidate's significant personal contributions in the following areas:

development of a Professional Learning Community (PLC) Model; empirical research and validation; theoretical Advancements; Contribution to Policy and Practice; cross-cultural relevance; innovation in Educational Research.

### **Validation of Research Findings**

The validation of the research findings in the dissertation, *"The Challenges of Creating 'Digital Literacy' for Foreign Language Teachers,"* was achieved through a comprehensive, systematic approach, ensuring reliability, applicability, and scientific rigor.

#### **1. Empirical Validation Using the Delphi Method**

- **Iterative Expert Consultations:** The Delphi method was employed to gather and synthesize expert opinions in multiple rounds, refining the framework for the Professional Learning Community (PLC) centered on digital literacy.

- **Expert Panel:** A diverse group of experts, including experienced educators, policymakers, and academic researchers, was carefully selected based on their expertise in digital literacy, foreign language education, and teacher development.

- **Consensus Building:** Successive rounds of surveys and feedback ensured convergence of expert opinions, solidifying the framework's validity and practical relevance.

#### **2. Triangulation of Research Methods**

- **Mixed-Methods Approach:** The study combined qualitative and quantitative methods, including policy analysis, literature review, and survey data, to cross-verify findings and strengthen their robustness.

- **Policy Context Integration:** Alignment with national and international educational policies (e.g., *Education Informatization 2.0 Action Plan* and UNESCO's *ICT Competency Framework for Teachers*) further substantiated the model's relevance.

#### **3. Practical Implementation and Testing**

- **Pilot Programs:** Elements of the proposed PLC model were tested in educational settings, involving foreign language teachers in Central China. Feedback from these implementations informed further refinement of the model.

- **Evaluation Metrics:** Effectiveness was assessed through measurable improvements in teacher digital literacy levels, teaching practices, and collaborative engagement within the PLC.

#### **4. Literature Corroboration**

- **Theoretical Consistency:** The findings were validated against established frameworks such as DigCompEdu, UNESCO's ICT-CFT, and similar national and international standards for digital literacy.

- **Best Practices:** The study incorporated insights from global best practices in teacher professional development and digital literacy training, ensuring alignment with proven methodologies.

#### **5. Stakeholder Feedback**

- **Teacher and Institutional Input:** Continuous feedback from participating educators and institutions validated the model's usability and adaptability in real-world contexts.

• **Reflective Practices:** Reflective sessions within the PLCs provided qualitative evidence of the model's impact on fostering collaborative and innovative teaching practices.

## **6. Cross-Cultural Applicability**

• The findings demonstrated adaptability beyond the primary research context, addressing similar challenges faced by educators in other regions, such as Kyrgyzstan. This cross-cultural relevance enhanced the model's credibility and broader applicability.

## **7. Alignment with Educational Goals**

• The research findings support and extend existing educational modernization efforts, aligning with strategic objectives to promote teacher digital literacy and foster professional growth in the digital age.

This rigorous validation process ensures that the research findings are not only theoretically sound but also practically applicable, making a significant contribution to the field of education. The validated PLC framework serves as a robust, scalable model for enhancing digital literacy and professional development among educators.

## **Completeness of Reflection of the Results of the Dissertation in Publications**

The results of the dissertation, "*The Challenges of Creating 'Digital Literacy' for Foreign Language Teachers*," have been extensively disseminated through academic publications and conferences, demonstrating their significance, practical relevance, and contribution to the field. These publications reflect the core findings, methodologies, and implications of the research.

(1) A STUDY ON CREATING A LEARNING COMMUNITY FOR FOREIGN LANGUAGE TEACHERS ON THE TOPIC OF DIGITAL LITERACY 以“数字素养”为主题的语言教师学习共同体建设研究. Твердый журнал Вестник КНУ им.Ж.Баласагына – Бишкек: Спец.выпуск (II), 2023, 190-198. Lin Zhang, Bermet A. Ryskulova, Moldobaeva A. Z.

(2) A STUDY OF A LEARNING MODEL BASED ON THE CONSTRUCTION OF A NATIONAL EDUCATIONAL MODEL OF AN ON-LINE "FIRST CLASS CURRICULUM" 基于国家“一流课程”慕课建设的研究性教学模式研究. Твердый журнал Вестник КНУ им.Ж.Баласагына – Бишкек: Спец.выпуск (II), 2023, 198-204. Lin Zhang, Bermet A. Ryskulova, Moldobaeva A. Z.

(3) Zhang, L., Ryskulova, B.A., Cheng, X., Ren, S., & Apaeva, S.K. (2024). Critical thinking development of foreign language teachers through digital literacy training. *Journal of Educational Technology Development and Exchange*, 17(1), 222-236. <https://doi.org/10.18785/jetde.1701.13>

(4) Wang, Shuang, Wenyi Guan, Jiaqian Wu, Lin Zhang, Nazira Shakeeva, and Baoling Yang. "Specifics of training specialists in the field of water resources logistics." In *BIO Web of Conferences*, vol. 107, p. 05007. EDP Sciences, 2024.