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Construction and Validation of a Creative Teaching Competence Scale for EFL Teachers

Qiuyu Xu[1], Kailun Wu[2], Huang Zuo[1*]

[1]College of Teacher Education, South China Normal University, Guangzhou, China
[2]Shanwei School of the Affiliated High School of SCNU, Shanwei, China
Email: *20151012@m.scnu.edu.cn

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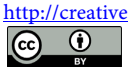

Abstract

This paper aims to develop and validate a Creative Teaching Competence (CTC) scale for Chinese high school EFL teachers. The study uses expert review, pilot testing, exploratory and confirmatory factor analyses, and subgroup comparisons to propose a three-factor structure consisting of Knowledge, Ability, and Beliefs/Affect. The main findings indicate a moderate overall CTC level, relatively stronger Beliefs/Affect than Knowledge, and significant urban-rural differences.

Keywords

Creative Teaching Competence, EFL Teachers, Scale Development, Teacher Agency, High-Stakes Testing, Educational Ecology

1. Introduction

The 21st-century educational landscape has witnessed a paradigmatic shift—moving beyond the mechanical transmission of knowledge to the cultivation of students' "core competencies" as the cornerstone of quality education (Zhang, 2016). Within the context of English as a Foreign Language (EFL) education, this shift mandates a departure from traditional rote-learning methodologies toward innovative, student-centered pedagogical approaches. Consequently, creative teaching has evolved from a supplementary instructional strategy to a critical professional imperative for EFL teachers worldwide. However, despite a robust body of literature focusing on "teaching for creativity"—the deliberate design of activities to foster students' innovative thinking—scholarly attention to "teaching creatively" (i.e., teachers' own creative pedagogical competence) remains conspicuously underdeveloped (Jeffrey & Craft, 2004; Reilly et al., 2011). This empirical gap is particularly pronounced in high-stakes testing environments, where systemic pres-

sures often constrain the enactment of creative teaching. In China's senior high school EFL context, this tension is acutely felt. Teachers navigate a profound professional dilemma: they are simultaneously tasked with implementing top-down policy mandates for quality-oriented, innovative education and responding to bottom-up societal pressures driven by the highly competitive National College Entrance Examination (Gaokao). This utilitarian educational ecology gives rise to a "high will, low skill" paradox—many EFL teachers express strong intentions to innovate but lack the practical knowledge, skills, and contextual support to translate these intentions into sustained classroom practice.

Compounding this challenge is the ubiquitous digitalization of modern education: recent scholarship highlights that teachers' innovative aspirations must be mediated through Technological Pedagogical Content Knowledge (TPACK) to be effective in contemporary classrooms (Dong et al., 2020). Yet, many EFL teachers report feeling constrained by inadequate digital pedagogical repertoires, restrictive school cultures, and the pressure to prioritize exam performance over creative exploration—forcing them to negotiate conflicting professional identities as both compliant "exam-coaches" and innovative "creative facilitators" (Tao & Gao, 2017). Crucially, existing efforts to assess teacher creativity often fail to capture its multidimensional and deeply psychological nature. Traditional measures tend to focus narrowly on explicit instructional skills or general personality traits, overlooking the implicit cognitive and affective foundations that underpin creative praxis. Cutting-edge empirical evidence suggests that a teacher's capacity to teach creatively is fundamentally shaped by their intrinsic values, emotional orientations, and deep-seated beliefs about creativity—rather than merely their technical pedagogical skills (Anderson et al., 2022). Furthermore, recent research underscores that teachers' pedagogical beliefs and literary competence significantly drive their creative practices in dynamic language education settings (Calafato, 2024).

To address this critical gap, the present study conceptualizes Creative Teaching Competence (CTC) through an integrated theoretical lens. Drawing upon McClelland's (1973) Iceberg Competency Model—which distinguishes between explicit (knowledge, abilities) and implicit (beliefs, motives, affect) dimensions of professional competence—and the TPACK framework (Mishra & Koehler, 2006)—which emphasizes the integration of technology, pedagogy, and content knowledge—we propose a Tripartite Framework of CTC that inextricably links these dimensions. Furthermore, we situate this competency framework within the ecological approach to teacher agency (Priestley et al., 2015), recognizing that a teacher's creative performance is not an isolated individual trait but an "ecological achievement" shaped by the affordances and constraints of their school context (e.g., urban-rural resource disparities, professional hierarchies, and institutional norms).

By bridging the psychological measurement of individual competencies with a socio-cultural understanding of teacher agency, this study seeks to address two core research questions:

1) How can the Creative Teaching Competence (CTC) of high school EFL

teachers be systematically conceptualized and psychometrically measured?

2) What is the current developmental status of CTC among Chinese high school EFL teachers, and how do demographic and contextual factors (e.g., teaching regions, professional titles) influence their competence?

Ultimately, this study aims to develop and validate a robust, multidimensional CTC scale tailored to the high-stakes EFL context. By unpacking the structural mechanisms of creative teaching and identifying the contextual factors that shape its enactment, the findings will provide actionable empirical evidence for educational administrators and policymakers. Specifically, this research seeks to inform strategies to bridge the urban-rural divide, reconstruct teachers' professional identities, and cultivate supportive Professional Learning Communities (PLCs) that sustain creative teaching, even within the constraints of exam-oriented educational ecologies. In doing so, it contributes to a more nuanced understanding of how to foster teacher agency and unlock the innovative potential of EFL education in China and beyond. To conceptualize this before detailing our methodology, CTC is defined herein as a multidimensional construct comprising three distinct facets: Knowledge (explicit cognitive reserves regarding digital tools and EFL subject pedagogy), Ability (practical skills to dynamically design and adapt innovative strategies in real-time), and Beliefs/Affect (intrinsic motivation, self-efficacy, and emotional readiness to embrace creative teaching).

2. Literature Review and Theoretical Framework

2.1. Conceptualizing Creative Teaching in the EFL Context

In the landscape of 21st-century English as a Foreign Language (EFL) education, the concept of creative teaching has evolved from merely incorporating gamified activities to encompassing a highly complex, professional praxis. The cultivation of "core competencies" (Zhang, 2016) has become the central tenet of recent educational reforms in China, demanding a shift from mechanical knowledge transmission to the nurturing of students' innovative abilities (Liu et al., 2000). Recent international literature also emphasizes the critical distinction between "teaching for creativity" (fostering students' innovative thinking) and "teaching creatively" (teachers' own pedagogical reinvention) (Jeffrey & Craft, 2004). Within the EFL context, teaching creatively is characterized as a reflective, adaptive, and contextually grounded process. Creative teachers do not rely on rigid instructional templates; rather, they constantly adapt, negotiate, and dynamically integrate diverse pedagogical methods to accommodate specific classroom contexts and the individual needs of their students (Reilly et al., 2011). However, globally and particularly in China, EFL teachers' creative praxis is frequently constrained by highly institutionalized curricula and high-stakes standardized testing cultures. In such utilitarian educational environments, examining teachers merely through the lens of explicit teaching skills is insufficient. It is imperative to systematically unpack the underlying structural dimensions of their creative teaching competence (CTC) to understand how they navigate these institutional tensions.

2.2. Unpacking Competence: From the Iceberg Model to the TPACK Framework

To deconstruct EFL teachers' CTC, this study primarily adopts McClelland's (1973) Iceberg Competency Model, a framework that has been increasingly validated in Chinese educational contexts for curriculum design and teacher evaluation (Li & Yan, 2012). The model posits that professional competence comprises explicit, above-the-waterline characteristics (knowledge and abilities) and implicit, below-the-waterline characteristics (beliefs, motives, and affect). Recent empirical evidence robustly supports the implicit dimensions of this model; for instance, Anderson et al. (2022) demonstrated that a teacher's creative praxis is fundamentally underpinned by their intrinsic values, affect, and self-efficacy regarding creativity, rather than merely their explicit pedagogical skills. Furthermore, acknowledging the ubiquitous digitalization in modern education, the explicit "knowledge" dimension in the Iceberg Model must be recontextualized. Thus, this study incorporates the Technological Pedagogical Content Knowledge (TPACK) framework (Mishra & Koehler, 2006). The integration of the TPACK framework into the explicit dimension of our model is supported by recent literature (e.g., Dong et al., 2020), which demonstrates that robust pedagogical beliefs alone are insufficient; they must be translated through TPACK to exercise effective educational leadership and creative pedagogical design in contemporary digital classrooms. This integrated lens provides a robust theoretical foundation to explain the widely observed "high will, low skill" dilemma among EFL teachers.

2.3. Operationalizing the Tripartite Framework of CTC

While the Iceberg Model and TPACK framework provide a theoretical macro-structure, the specific dimensions of EFL teachers' CTC must be empirically validated within their authentic teaching contexts. To bridge the gap between abstract conceptualization and empirical measurement, this study operationalized the theoretical constructs into a measurable Tripartite Framework of CTC (i.e., Knowledge, Ability, and Beliefs/Affect) through a rigorous, mixed-methods scale development process. Initially, a comprehensive literature review and the Delphi method were employed. An expert panel comprising educational researchers and senior EFL practitioners engaged in iterative rounds of evaluation to refine the initial item pool, ensuring the content validity and contextual appropriateness of the indicators. Subsequently, Exploratory Factor Analysis (EFA) was conducted on a pilot sample. The empirical data corroborated the theoretical assumptions, successfully extracting three distinct yet interconnected latent factors. This extraction process essentially crystallized the 3D Framework of CTC, proving that teachers' creative competence is not a monolithic construct, but a measurable synergy of their explicit technological-pedagogical knowledge, instructional abilities, and implicit affective beliefs.

2.4. Bridging the Contextual Divide: Ecological Agency and Identity Negotiation

Why do teachers with similar knowledge reserves demonstrate vastly different lev-

els of CTC across various school contexts (e.g., urban vs. rural)? To address this contextual divide, this study draws upon the ecological approach to teacher agency (Priestley et al., 2015). From this perspective, teachers' creative agency is not an innate, static trait but an "ecological achievement". Recent investigations strongly validate this ecological perspective as a crucial framework for exploring how language teachers actively construct professional agency amidst systemic curriculum modifications and contextual constraints (Namgung, Moate, & Ruohotie-Lyhty, 2023). Agency emerges from the dynamic interplay of a teacher's past training (the iterational dimension), their future aspirations for student growth (the projective dimension), and the affordances or constraints of their current school environment (the practical-evaluative dimension). In navigating the restrictive practical-evaluative conditions of high-stakes testing, creative EFL teachers must actively reconstruct their professional identities. As Tao and Gao (2017) highlighted in their study of language teachers, a strong identity commitment to humanistic educational goals is the crucial catalyst that activates teacher agency amidst institutional constraints. Ultimately, it is the profound, implicit beliefs at the bottom of the Iceberg Model—those prioritizing humanistic student development—that fuel teachers' projective agency, enabling them to reconstruct a creative professional identity and transcend environmental barriers.

3. Methodology

This mixed-methods study adopted an exploratory sequential design to conceptualize, develop, and validate the Tripartite Framework of Creative Teaching Competence (CTC) for high school EFL teachers, and further investigate the current developmental status of CTC and its contextual correlates. The study integrated quantitative psychometric scale development and statistical analysis with qualitative theoretical grounding and contextual interpretation, adhering to the methodological rigor for educational competency research (Priestley et al., 2015; Hu & Bentler, 1999). The research procedures included four core phases: theoretical framework construction, scale development and pre-testing, formal survey administration, and data analysis and validation, with participants, instruments, and analytical strategies detailed as follows.

3.1. Participants

A purposive stratified sampling strategy was employed to recruit high school EFL teachers from urban and rural regions in [China, anonymized for publication], ensuring representativeness across teaching contexts, professional titles, and teaching experience. The sampling frame covered three administrative levels (municipal, county, and township) to capture the urban-rural ecological divide in EFL education.

3.1.1. Pre-Test Sample

A pilot sample of 82 high school EFL teachers was recruited for the pre-test phase to refine the initial CTC scale items. Participants included 29 urban teachers (35.4%) and 53 rural teachers (64.6%); their professional titles ranged from primary

(24.4%), intermediate (51.2%) to senior (24.4%); and teaching experience spanned 1 - 5 years (29.3%), 6 - 15 years (47.6%) and over 15 years (23.1%). No significant demographic differences were found across subgroups ($p > 0.05$), ensuring the pilot sample's suitability for item purification.

3.1.2. Formal Survey Sample

The formal survey included a final sample of 306 high school EFL teachers, with invalid questionnaires (response rate <80%, regular answering patterns) excluded from analysis. Among the valid participants, 131 were urban teachers (42.8%) and 175 were rural teachers (57.2%); professional titles comprised primary (31.4%), intermediate (45.8%) and senior (22.8%); teaching experience included 1 - 5 years (33.0%), 6 - 15 years (44.1%) and over 15 years (22.9%). The demographic distribution of the formal sample was consistent with the overall high school EFL teacher population in the sampling region, supporting the generalizability of the study's findings.

All participants provided informed consent prior to data collection, with the study approved by the Institutional Review Board (IRB) of the researcher's affiliated university. Participation was voluntary, and all data were anonymized with unique identification codes to ensure confidentiality.

3.2. Research Instruments

The study developed a Creative Teaching Competence Scale for High School EFL Teachers based on the Tripartite Framework (Knowledge, Ability, Beliefs/Affect) derived from McClelland's Iceberg Competency Model (1973) and the TPACK framework (Mishra & Koehler, 2006). The scale development followed a rigorous process of item generation, expert validation, pre-test purification, and formal test validation, with all items scored on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree), where higher scores indicate higher levels of CTC.

3.2.1. Initial Item Pool Generation

The initial item pool was constructed through two complementary approaches: 1) a comprehensive literature review of creative teaching, EFL pedagogy, and teacher competence research, generating initial items aligned with the three CTC dimensions; 2) semi-structured interviews with senior high school EFL teachers and educational researchers. This process generated a preliminary pool of 45 items.

3.2.2. Expert Validation

An expert panel consisting of 3 EFL education professors, 2 senior high school EFL teaching supervisors, and 3 national-level model EFL teachers evaluated the item pool using a modified Delphi procedure. The panel rated each item on relevance, clarity, and appropriateness. Items with inadequate mean scores or low content validity ratios were eliminated or revised. This expert validation process removed 7 items, resulting in a refined pool of 38 items.

3.2.3. Pre-Test and Item Purification

The refined 38-item scale was administered to the pre-test sample (n = 82), with

item purification conducted using Exploratory Factor Analysis (EFA). The extraction method utilized was Principal Component Analysis (PCA) with Varimax orthogonal rotation. Data suitability for factor analysis was confirmed by a Kaiser-Meyer-Olkin (KMO) measure of 0.789 and a highly significant Bartlett's test of sphericity ($\chi^2 = 2108.084$, $df = 703$, $p < 0.001$).

Factors were retained based on theoretical construct alignment and eigenvalues, extracting 3 public factors that cumulatively explained 61.156% of the total variance. Items were scrutinized and eliminated if they demonstrated severe cross-loading across multiple factors. This purification process removed 2 items (A 17 and B 32, which exhibited multi-factor loadings > 0.40), finalizing the 36 items retained for the formal scale. The overall scale demonstrated excellent internal consistency (Cronbach's α = 0.967). Final standardized factor loadings for the retained 36 items ranged from 0.513 to 0.846, confirming strong structural validity aligned with the theoretical framework.

3.2.4. Formal CTC Scale

The formal Creative Teaching Competence Scale for High School EFL Teachers comprised 36 items across three dimensions (see Table 1 for dimension descriptions and sample items):

1) Knowledge (12 items): Assesses explicit cognitive reserves of creative EFL pedagogy, including TPACK integration, creative instructional design knowledge, and EFL subject-specific creative teaching knowledge.

2) Ability (12 items): Measures practical skills to design, adapt, and implement creative EFL teaching strategies in high-stakes testing contexts, including classroom adaptation, student needs diagnosis, and digital pedagogical application abilities.

3) Beliefs/Affect (12 items): Evaluates intrinsic motivation, creative teaching self-efficacy, and affective readiness for creative EFL teaching, including beliefs about the value of creative teaching, self-efficacy in creative practice, and emotional engagement in innovative pedagogy.

Table 1. The tripartite framework of creative teaching competence (CTC) and sample items.

Dimension	Description	No. of Items	Sample Item (Translated from Chinese)
Knowledge	Explicit cognitive reserves regarding creative pedagogy, digital tools, and EFL subject knowledge.	12	"I have a solid understanding of how to integrate digital technologies (e.g., Seewo whiteboard) to facilitate creative EFL teaching." (Item K15)
Ability	Practical skills to design, adapt, and execute innovative instructional strategies in high-stakes contexts.	12	"I am able to keenly observe students' learning bottlenecks and dynamically adjust my teaching pace." (Item A17)
Beliefs/Affect	Intrinsic motivation, self-efficacy, and affective readiness to embrace creative teaching.	12	"I feel a strong sense of passion and motivation when I perceive students' active engagement and curiosity in class." (Item B18)

4. Results

4.1 Construct Validity and Confirmatory Factor Analysis (CFA)

To further validate the psychometric properties and the three-factor structure of the CTC scale extracted from the EFA, a CFA was conducted using the main survey sample (N = 306). Multiple indices were utilized to evaluate the model fit. The CFA results indicated that the proposed three-factor model yielded an exceptionally excellent fit to the data: χ^2/df = 1.133 (below the strict threshold of 3.0), CFI = 0.990, TLI = 0.990, RMSEA = 0.021 (90% CI [0.010, 0.028]), and SRMR = 0.028. All fit indices robustly satisfied the rigorous standards recommended by Hu and Bentler (1999) (**Table 2**).

Table 2. Fit indices of the measurement models.

Model	χ^2	*df*	χ^2/df	*CFI*	*TLI*	*RMSEA* [90% *CI*]	*SRMR*
Proposed 3-factor model	838.30	591	1.133	0.990	0.990	0.021 [0.010, 0.028]	0.028
Alternative 2-factor model	1395.51	593	2.353	0.901	0.895	0.067 [0.062, 0.071]	0.059
Alternative 1-factor model	1534.61	594	2.584	0.884	0.877	0.072 [0.068, 0.076]	0.063

Furthermore, convergent and discriminant validities were established. As shown previously in **Table 3**, the Composite Reliability (CR) values for the three latent dimensions ranged from 0.863 to 0.895, indicating exceptionally strong internal consistency. The Average Variance Extracted (AVE) values ranged from 0.612 to 0.640, significantly surpassing the 0.50 benchmark. Discriminant validity was rigorously evaluated using the Fornell-Larcker criterion; the square root of the AVE for each latent construct was strictly greater than its inter-construct correlations with any other factor in the model. These results confirm that the three dimensions of CTC are distinct yet theoretically related constructs.

Table 3. Fornell-Larcker criterion results for discriminant validity.

Construct	CR	AVE	Knowledge	Ability	Beliefs/Affect
Knowledge	0.872	0.631	0.794	0.682	0.657
Ability	0.895	0.640	0.682	0.800	0.713
Beliefs/Affect	0.863	0.612	0.657	0.713	0.782

4.2. Current Status of Creative Teaching Competence

Descriptive statistics revealed that the overall CTC of the surveyed high school EFL teachers was at a moderate level (M = 3.38, SD = 0.75). Among the three subdimensions, an unbalanced developmental trajectory was observed: teachers scored relatively highest in the Beliefs/Affect dimension (M = 3.43, SD = 0.97), followed by the Ability dimension (M = 3.37, SD = 0.94), while the Knowledge dimension received the lowest scores (M = 3.33, SD = 0.94). This trend prelimi-

narily highlights the intrinsic professional tensions EFL teachers face in exam-oriented environments, characterized by a willingness to innovate but a lack of cutting-edge knowledge reserves (Table 4).

Table 4. Independent samples t-test for urban and rural teachers.

Dimension	Urban (n = 131)		Rural (n = 175)		t-value	*p*-value
	M	*SD*	*M*	*SD*		
Knowledge	3.66	0.91	2.78	0.59	7.12	<0.001
Ability	3.86	0.94	2.86	0.59	8.21	<0.001
Beliefs/Affect	3.76	0.92	3.07	0.59	5.23	<0.001

- Urban-Rural Ecological Divide: Independent samples t-tests indicated highly significant structural differences between urban and rural high school in-service teachers. Urban teachers scored significantly higher across all dimensions with large effect sizes, including Knowledge ($t = 7.12$, $p < 0.001$, Cohen's d = 1.14), Ability ($t = 8.21$, $p < 0.001$, Cohen's d = 1.27), and Beliefs/Affect ($t = 5.23$, $p < 0.001$, Cohen's d = 0.89), compared to their rural counterparts.
- Professional Development Stages (Titles): One-way ANOVA revealed no statistically significant differences in the overall CTC ($F = 1.24$, $p = 0.275$) nor in its sub-dimensions across different professional titles.

4.3. Contextual and Demographic Differences

4.3.1. Differences across the Urban-Rural Divide

Independent samples t-tests indicated statistically significant differences between urban and rural high school in-service teachers. Urban teachers scored higher across all dimensions with small-to-medium effect sizes, including Knowledge ($t(304) = 2.83$, $p = 0.005$, Cohen's $d = 0.33$, 95% CI [0.10, 0.56]), Ability ($t(290.49) = 2.32$, $p = 0.021$, Cohen's $d = 0.26$, 95% CI [0.04, 0.49]), and Beliefs/Affect ($t(304) = 1.98$, $p = 0.049$, Cohen's $d = 0.23$, 95% CI [0.00, 0.46]). These findings suggest that the urban-rural ecological divide is associated with observable, though moderate, disparities in teachers' creative teaching capabilities.

4.3.2. Differences across Professional Titles

A one-way ANOVA was conducted to examine the differences in overall CTC scores among in-service EFL teachers across varying professional titles. The results revealed no statistically significant differences in creative teaching competence across the different title groups ($F(3, 302) = 1.089$, $p = 0.354$). Furthermore, the effect size was negligible ($\eta^2 = 0.011$, 95% CI [0.000, 0.033]), indicating that professional development stages, as represented by professional titles, do not explain a meaningful proportion of the variance in teachers' creative teaching competence. This non-significant statistical finding corroborates the structural constraints discussed later in this study.

5. Discussion

5.1. Deconstructing Creative Teaching: Theoretical Corroboration

Through rigorous psychometric procedures, this study successfully developed and validated the Tripartite Framework of EFL teachers' CTC. The exceptional CFA fit indices powerfully refute the traditional, reductionist view that equates "creative teaching" merely with "enlivening classroom atmosphere." Instead, it is proven to be a highly complex, multidimensional construct where deep-seated pedagogical beliefs inextricably merge with explicit technological and methodological knowledge. This empirically corroborates the applicability of McClelland's (1973) Iceberg Model in educational settings and underscores the necessity of integrating the TPACK framework into explicit knowledge structures in the digital era.

5.2. The "High Will, Low Reserve" Dilemma: An Ecological Explanation

The finding that teachers scored highest in Beliefs/Affect (3.43) but lowest in Knowledge (3.33) empirically substantiates a profound professional dilemma. Viewed through the lens of ecological teacher agency (Priestley et al., 2015), although Chinese teachers strongly identify with the innovative ethos of the new curriculum reform at a deep belief level (the projective dimension), the immense pressure of exam preparation poses severe practical constraints (the practical-evaluative dimension). This ecology deprives teachers of the time and cognitive bandwidth required to absorb cutting-edge digital technologies and pedagogical theories, leaving their innovative intentions trapped as superficial motivations rather than robust classroom praxis.

5.3. Bridging the Contextual Divide: Systemic Constraints and the Erasure of Agency

The authentic data revealed two highly critical ecological phenomena, offering a novel perspective on teacher professional development:

First, a comprehensive and profound urban-rural gap was identified. Rural teachers are disadvantaged not only in explicit knowledge and ability but also significantly lower in their implicit creative "Affect." This indicates that unequal resource distribution and heavy administrative burdens act as a form of structural constraint that not only limits rural teachers' "objective capabilities" to implement innovation but also erodes their "subjective mindset" to pursue it.

Second, and most unexpectedly, the professional title variable did not yield any significant improvement in CTC ($p > 0.05$). This breaks the traditional linear assumption that "richer teaching experience equates to higher creativity," and compellingly exposes the powerful assimilating force of the macro "high-stakes testing ecology." Functioning as a systemic constraint, the highly standardized exam-oriented culture universally and indiscriminately suppresses the creative agency of all teachers, regardless of whether they are novices or seasoned seniors. The "iterational dimension" represented by senior titles fails to translate into breakthrough

creativity when confronted with overwhelming institutional pressures.

6. Conclusion and Implications

This study successfully constructed and validated a 36-item Creative Teaching Competence (CTC) scale for in-service high school EFL teachers, comprising three distinct dimensions: Knowledge, Ability, and Beliefs/Affect. The comprehensive psychometric evaluations confirmed the scale's robust reliability and construct validity, providing a standardized and reliable measurement tool for future empirical research in this domain.

The application of this scale revealed valuable empirical insights into the contextual factors associated with teachers' creative teaching. Notably, the findings highlighted a significant urban-rural disparity, where urban in-service teachers demonstrated moderately higher CTC scores across all dimensions compared to their rural counterparts. Furthermore, no significant differences in overall CTC were found across different professional titles. These structural patterns suggest that unequal educational resource distribution and deeply rooted exam-oriented school cultures may act as contextual constraints that negatively associate with the enactment of teacher agency. It appears that environmental and structural support, rather than individual career stage alone, plays a critical role in facilitating creative pedagogical capacity.

To effectively enhance the creative teaching competence of in-service EFL teachers, relying solely on individual-level skills training may be insufficient. Policymakers and educational administrators are encouraged to consider broader ecological support measures. These could include diversifying evaluation systems to balance high-stakes testing metrics and providing robust digital pedagogical support networks. Cultivating a more supportive and resourceful professional environment could help mitigate the contextual constraints observed in this study, thereby better fostering the innovative agency of in-service teachers across various career stages and particularly within marginalized rural school contexts.

It is important to acknowledge that this study relies on a cross-sectional, self-reported design. Therefore, the contextual differences observed—such as the urban-rural divide and the non-significant variance across professional titles—should be strictly interpreted as significant associations rather than direct causal evidence. While the data reasonably suggest that environmental factors may act as structural constraints, they do not imply a deterministic suppression or complete erasure of teacher agency. Future longitudinal designs or qualitative case studies are recommended to further untangle the complex causal mechanisms underlying the continuous development of creative teaching competence.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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