

From Beliefs to Practice: Unravelling the Mediation of Innovative Teaching in the Professional Competence of Art Instructors

Rationale

LuGeng Sun*

English as an International Language Program, Graduate School, Chulalongkorn University
*6688808920@student.chula.ac.th

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Abstract

Situated within the transformative landscape of higher art education in China, the professional evolution of the instructor has emerged as the critical vehicle for pedagogical reform. Despite the acknowledged centrality of the educator, a conspicuous lacuna remains regarding the specific mechanisms by which latent Teaching Beliefs are operationalized into technical Instructional Design Competence within aesthetic disciplines. Grounded in the epistemological framework of Social Cognitive Theory, this study rigorously interrogates the structural interplay between internal cognition and external professional practice, positing Innovative Teaching as a pivotal mediating variable. Employing a robust quantitative methodology, data were accrued from a stratified sample of 350 art instructors across four disciplinary domains. Hierarchical regression analysis substantiated the proposed theoretical model, demonstrating that while teaching beliefs exert a significant direct influence on design competence, this relationship is partially mediated by the enactment of innovative teaching behaviours. Consequently, the findings illuminate a sophisticated trajectory wherein abstract pedagogical convictions propel the adoption of novel methodologies, the practice of which subsequently crystallizes tangible structural design proficiency. Theoretically, this research transcends binary distinctions of teacher-efficacy, validating a "doing-to-become" model of professional maturation where behavioural engagement acts as the catalyst for cognitive refinement. Practically, the study offers a scientific basis for re-engineering faculty development programs, advocating for strategic interventions that prioritize experiential innovation to bridge the prevailing dissonance between policy intent and classroom reality.

Keywords: Teaching Beliefs; Instructional Design Competence; Innovative Teaching; Art Education; Social Cognitive Theory

1. Introduction

1.1 Research Background and Motivation

Contemporary pedagogical discourse has witnessed a significant paradigm shift, moving resolutely away from the traditional, examination-oriented hegemony that prioritized rote memorization and elite selection. In the wake of comprehensive educational reforms, the focal point of the academic ecosystem has rightfully realigned toward the learner as the primary

subject, while the professional development of the educator has emerged as the critical vehicle for this transformation (Phommanee et al., 2023; Zhang, 2020). Consequently, the educator's role has transcended that of a passive executor of static curricula to become an active architect of the learning experience. Modern educators in colleges in China are now expected to inhabit multifaceted professional identities, functioning simultaneously as subject-matter experts, curriculum planners, researchers, and agents of reform (Luo, 2023; Melillán et al., 2023). This evolution necessitates that teachers rigorously engage in school-based curriculum construction, synthesizing regional characteristics and student competencies to orchestrate diverse pedagogical activities. Central to this professional metamorphosis is the construct of teaching beliefs. These cognitive structures are not merely abstract philosophies but are the determinants of instructional efficacy, serving as the antecedent variables that drive innovative teaching behaviours (Chang et al., 2024; Jia et al., 2023). While the mandate for innovation is clear, the specific instructional design competencies required to manifest these beliefs remain insufficiently explored. Thus, unravelling the intricate relationship between an instructor's latent teaching beliefs, their capacity for innovative delivery, and their technical instructional design competence is essential for establishing a scientific basis for professional development in the modern era (Bolden et al., 2019; Lyu et al., 2020).

The disciplines of art and humanities constitute a unique pedagogical domain, tasked not merely with knowledge transfer but with the cultivation of aesthetic literacy, personality development, and the internalization of cultural values (Hou & Moyao, 2023; Li, 2024). As culture is intrinsically predicated on creativity, art education serves as the conduit for fostering the critical thinking and creative problem-solving abilities necessary for cultural vitality. To effectively nurture these attributes, art instructors must adopt innovative teaching modalities as their fundamental structural framework, thereby guiding learners toward autonomous inquiry (Deng et al., 2021; Le, 2023). However, the translation of pedagogical objectives into classroom reality is heavily contingent upon the instructor's teaching beliefs. Research indicates that teaching behaviour is an explicit manifestation of implicit beliefs regarding the curriculum, the student, and the teacher's own professional identity (Li, 2021; Luo, 2023). While an instructor may theoretically endorse creativity, their actual classroom management and instructional design choices are governed by their deeply held convictions. A significant dissonance often exists between intended outcomes and practice. Therefore, it is imperative to investigate how teaching beliefs specifically influence the tangible skills of instructional design (Chang et al., 2024; Phommanee et al., 2023). Understanding this nexus is particularly critical in art education, where the "life force" of the subject matter, creativity, can only be sustained if the instructor possesses both the conviction to innovate and the design competence to structure that innovation effectively (Bolden et al., 2019; Luo, 2023).

Within the higher-education landscape of China, art instructors occupy a pivotal position as custodians of cultural heritage and facilitators of social development (Li, 2024; Lyu et al., 2020). They are charged with the dual mandate of preserving traditional artistic canons while simultaneously fostering the avant-garde thinking requisite for cultural evolution (Hou & Moyao, 2023; Lindsay, 2021). Despite this significant responsibility, a review of extant literature reveals a conspicuous lacuna regarding the professional competence of art teachers.

While substantial research has interrogated the instructional design capabilities of educators in English for Academic Purposes (EAP), STEM fields, and physical education, the specific competency profile of art instructors remains largely unexamined (Melillán et al., 2023; Phommanee et al., 2023). Furthermore, prior scholarship has predominantly focused on creativity as an isolated outcome, neglecting the foundational role of teaching beliefs as the genesis of such behaviours (Jia et al., 2023; Zhang, 2020). There is a paucity of empirical evidence elucidating the mechanism by which teaching beliefs translate into structural design competence, and whether innovative teaching behaviour acts as a mediating variable in this process (Chang et al., 2024; Luo, 2023). Consequently, this study is motivated by the urgent need to bridge these theoretical gaps (Le, 2023; Lyu et al., 2020). By rigorously examining the interplay between teaching beliefs, innovative teaching, and instructional design competence among art instructors in Chinese colleges, this research aims to validate a theoretical model that explains how internal beliefs are operationalized into professional practice (Li, 2021; Melillán et al., 2023). This investigation would specifically analyse demographic variances, direct correlations, and the mediating effects of innovation, thereby providing a robust, evidence-based framework for enhancing the quality of art education (Bolden et al., 2019; Phommanee et al., 2023).

1.2 Significance of the Study

The theoretical significance of this inquiry lies in its potential to address a conspicuous lacuna within the existing scholarship regarding the pedagogical architecture of art education (Andrews et al., 2019; Su & Yang, 2020). While the nexus between teaching beliefs and classroom behaviour is well-documented in general education, STEM, and EAP contexts, the specific domain of art instruction—which necessitates a delicate balance between aesthetic internalization and technical skill acquisition—remains theoretically under-theorized (Luo, 2023; Shi & Rao, 2022). By delineating the structural relationships between teaching beliefs, innovative teaching, and instructional design competence, this study contributes a nuanced theoretical framework that transcends the simplistic dichotomy of “teacher-centered” versus “student-centered” paradigms (Ganeeva & Anisimova, 2020; Liu et al., 2023). Specifically, it rigorously examines the premise that teaching beliefs act as the antecedent cognitive structures that necessitate innovative behavioural manifestations, which in turn crystallize into tangible instructional design competencies (Luo, 2023; Schulze et al., 2021). This investigation is pivotal for validating the mediating mechanism of innovative teaching, thereby offering a more sophisticated, evidence-based understanding of how abstract pedagogical convictions are operationalized into concrete professional skills (Boroughani et al., 2023; Yao & Shen, 2025). Furthermore, by situating this research within the context of colleges in China, the study enriches the global discourse on comparative education, offering insights into how cultural and systemic variables influence the translation of beliefs into practice in non-Western higher-education settings (Frake et al., 2023; Su & Yang, 2020).

From a practical perspective, the findings of this research hold substantial implications for the strategic development of the higher-education workforce, particularly within the arts and humanities (Ganeeva & Anisimova, 2020; Luo, 2023). As colleges in China undergo profound systemic reforms aimed at fostering student autonomy and creativity, the professional competence of the art instructor becomes the critical variable in ensuring educational quality

(Shi & Rao, 2022; Yao & Shen, 2025). By empirically verifying the pathways through which beliefs influence instructional design via innovation, this study provides a scientific basis for re-engineering faculty-development programs (Andrews et al., 2019; Liu et al., 2023). Educational administrators and policymakers can utilize these findings to move beyond generic training modules, instead implementing targeted interventions that cultivate specific innovative behaviours known to enhance design competence (Boroughani et al., 2023; Schulze et al., 2021). Moreover, understanding the demographic variables that moderate these relationships allows for the customization of professional-development trajectories, ensuring that interventions are commensurate with the specific career stages and backgrounds of diverse faculty members (Frake et al., 2023; Su & Yang, 2020). Ultimately, this research empowers educational stakeholders to foster a teaching corps that is not only ideologically aligned with modern reform mandates but possesses the requisite technical competence to execute them, thereby bridging the prevalent gap between policy intent and classroom reality (Luo, 2023; Yao & Shen, 2025).

1.3 Research Objectives

Predicated upon the aforementioned research motivation and the identified gaps in extant literature, this study aims to rigorously examine the structural interplay between internal cognition and external professional practice among art instructors. Specifically, the study seeks to achieve the following objectives: 1) to empirically ascertain the direct predictive relationship of art instructors' teaching beliefs on their instructional design competence, thereby establishing the extent to which latent convictions dictate technical planning skills; 2) to evaluate the influence of teaching beliefs on the adoption and execution of innovative teaching modalities, determining how pedagogical philosophy drives the diversification of instructional delivery; 3) to investigate the correlation between innovative teaching behaviours and instructional design competence, elucidating how the practice of innovation necessitates and refines structural design capabilities, and 4) to rigorously test and validate the mediating role of innovative teaching in the relationship between teaching beliefs and instructional design competence, thereby confirming the theoretical model that posits innovation as the catalytic mechanism translating abstract beliefs into concrete professional competence.

2. Literature Review

2.1 Theoretical Framework: SCT

Social Cognitive Theory, a seminal framework originally delineated by Bandura, serves as the primary epistemological lens for dissecting the complex interplay between internal cognitive states and professional pedagogical behaviours (Cansız & Cansız, 2019; Chung, 2022). Central to this theoretical perspective is the premise of reciprocal determinism, which posits that human functioning is the product of a dynamic interplay between personal factors, behavioural patterns, and environmental influences (Han & Lei, 2025; Li et al., 2023). Within the specific context of art instruction, teaching beliefs are conceptualized not merely as static attitudes but as a sophisticated internal cognitive system comprising an educator's pedagogical objectives, methodological preferences, and expectations regarding student acquisition (Reynolds et al., 2021; Qiu et al., 2021). These beliefs function as the cognitive nucleus

regulating how instructors perceive, process, and react to their educational environment (Jia et al., 2025; Küçükaydın et al., 2024). They are sculpted through a continuous process of interaction with the socio-cultural milieu, including personal educational histories and professional development experiences (Badri et al., 2017). Consequently, these deeply ingrained cognitive structures serve as critical antecedents to decision-making, dictating whether educators adhere to traditionalist, teacher-centric modalities or embrace autonomous, co-operative learning strategies (Naz & Murad, 2017; Tang et al., 2020). By framing teaching beliefs within this paradigm, it becomes evident that an instructor's internal value system is the paramount driver of their external behavioural choices, establishing the initial trajectory for their professional practice (Han & Lei, 2025; Zhang et al., 2020).

2.2 The Mediating Mechanism of Innovative Teaching in Instructional Design Competence

Extending the theoretical trajectory of Social Cognitive Theory, the relationship between teaching beliefs and instructional design capability is elucidated through the mediating role of innovative teaching (Liu et al., 2023; Naz & Murad, 2017). In this framework, innovative teaching is operationalized through the mechanisms of observational learning and cognitive modelling (Cansız & Cansız, 2019; Chung, 2022). Educators, functioning as active agents, assimilate novel methodologies by observing peer practices and adapting these strategies to their unique curricular architectures—a process that mirrors the imitative and adaptive learning phases described in social cognition (Li et al., 2023). Concurrently, instructional design capability represents the manifestation of high-level cognitive processing, necessitating the intricate synthesis of information, analysis of educational needs, and problem-solving protocols (Badri et al., 2017; Jia et al., 2025). The interaction among these variables is not linear but synergistic; innovative teaching acts as the pivotal conduit that translates abstract pedagogical beliefs into concrete instructional design competence (Tang et al., 2020; Zhang et al., 2020). As educators actively implement innovative strategies, they engage in a reflective cycle that validates and reshapes their core beliefs, thereby enhancing their cognitive capacity for sophisticated course design (Küçükaydın et al., 2024; Reynolds et al., 2021). Thus, innovation serves as the practical manifestation of belief, bridging the chasm between internal cognition and the tangible execution of instructional design, ultimately driving professional growth through a continuous loop of cognitive adjustment and behavioural refinement (Liu et al., 2023; Naz & Murad, 2017).

2.3 The Epistemic Determinants of Instructional Design Architecture

Contemporary scholarship within the higher education landscape increasingly acknowledges that an instructor's instructional design competence is not an isolated technical proficiency, but rather a manifestation of their deep-seated pedagogical beliefs (Li, 2025; Reynolds et al., 2021). This relationship is particularly salient in the arts and humanities, where disciplinary values and curricular flexibility necessitate a sophisticated alignment between abstract educational philosophy and concrete course architecture (Bingölbali et al., 2025; Haaker & Morgan-Brett, 2017). Empirical inquiries into blended and hybrid learning environments elucidate that instructors who prioritize constructivist tenets, specifically active learner engagement, social presence, and dialogic interaction, demonstrate superior capability in structuring complex learning tasks and feedback mechanisms (Dunn et al., 2024; Han & Na, 2025). Furthermore, research on project-based and flipped classroom models suggests that adherence to systematic design frameworks, such as ADDIE, is intrinsically linked to an epistemic orientation valuing experiential and practice-oriented learning (Chang et al., 2024; Naz & Murad, 2017). Institutional and disciplinary contexts further mediate this dynamic; where faculty operate within cultures that incentivize research-led teaching and professional

role expansion, there is a marked tendency for those with strong student-centered beliefs to invest more heavily in developing advanced design competencies (Ergün & Şeşen, 2021; Peng & Gao, 2019). Conversely, beliefs centered on didactic transmission often correlate with disparate or rudimentary design choices, limiting the efficacy of the learning environment. Consequently, drawing upon these theoretical convergences regarding the belief-competence nexus, the current research proposes the following hypothesis:

H1: The teaching beliefs of university arts instructors are positively associated with their instructional design competence.

2.4 Beliefs as Antecedents to Pedagogical Innovation

The enactment of innovative teaching practices is fundamentally rooted in the instructor's cognitive framework regarding the nature of knowledge and the role of the educator (Hu, 2025; Reynolds et al., 2021). Extensive literature characterizes teacher beliefs as "amplifiers and filters" that determine the extent to which professional knowledge and policy imperatives are translated into experimental classroom practice (Li, 2025; Sanz et al., 2023). In the specific context of arts education, where the curriculum privileges creativity and interpretive autonomy, beliefs that emphasize knowledge co-construction and critical thinking are strong predictors of a readiness to adopt novel methodologies (Intyaswati et al., 2021; Naz & Murad, 2017). Evidence indicates that instructors who conceptualize teaching as the facilitation of original meaning-making—rather than the passive transmission of established canons—are significantly more inclined to deploy inquiry-based methods, visual thinking strategies, and technology-enhanced collaborations (Chang et al., 2024; Sanz et al., 2023). Furthermore, scholarship on museum-based pedagogies and creative disciplines argues that inventive teaching is cultivated when instructors hold a worldview that supports heterogeneous student needs and participatory learning (Bingölbali et al., 2025; Han & Na, 2025). In contrast, rigid adherence to traditionalist paradigms tends to constrain the scope of pedagogical experimentation, even when external resources are abundant. Grounded in the evidentiary consensus that cognitive orientations dictate the boundaries of pedagogical experimentation, this study postulates the following hypothesis:

H2: The teaching beliefs of university arts instructors are positively associated with the enactment of innovative teaching practices.

2.5 Innovative Praxis as a Catalyst for Technical Proficiency

The relationship between innovative teaching and instructional design competence is frequently characterized in the literature as reciprocal and symbiotic, where innovation serves as a primary driver of professional competence (Bingölbali et al., 2025; Naz & Murad, 2017). Systematic reviews of advanced pedagogies, such as authentic assessment, problem-based learning, and technology-mediated instruction, reveal that the successful operationalization of these innovations mandates a sophisticated level of instructional planning and alignment (Chang et al., 2024; Dunn et al., 2024). The exigencies of implementing novel teaching strategies—such as orchestrating hybrid modalities or integrating complex digital tools for collaborative cases—compel instructors to refine their ability to analyze learner needs, sequence activities logically, and align assessment protocols with learning objectives (Han & Na, 2025; Li, 2025). Engagement in the praxis of innovation effectively functions as a mechanism for professional maturation, honing the instructor's technical capacity to design effective, evidence-based learning environments (Ergün & Şeşen, 2021; Hu, 2025). The literature suggests that the iterative process of experimenting with and refining innovative methods directly contributes to an elevation in overall design capabilities, transforming sporadic experimentation into systematic competence (Peng & Gao, 2019; Reynolds et al.,

2021). In accordance with the scholarly discourse identifying the implementation of novel pedagogies as a catalyst for structural proficiency, the present research proposes the following hypothesis:

H3: The use of innovative teaching by university arts instructors is positively associated with instructional design competence.

2.6 The Mediating Mechanism of Innovative Teaching

Synthesizing the aforementioned constructs, the literature points toward a mediated model wherein innovative teaching acts as the intervening mechanism linking abstract beliefs to concrete design competence (Li, 2025; Naz & Murad, 2017). While pedagogical beliefs provide the necessary motivational impetus for change, beliefs alone do not spontaneously translate into advanced design capabilities; rather, they propel instructors to engage in innovative teaching behaviors (Hu, 2025; Reynolds et al., 2021). It is through this experiential engagement—the "doing" of innovation—that instructional design competence is crystallized and refined (Bingölbali et al., 2025; Chang et al., 2024). Theoretical accounts of professional learning portray competence as a mosaic formed through reflective practice, implying that beliefs shape innovation behavior, and repeated engagement in innovative teaching consolidates instructional design competence over time (Dunn et al., 2024; Li, 2025). Empirical models in related educational psychology domains support this indirect pathway, suggesting that dispositional antecedents influence behavioral outputs, which in turn refine professional competencies (Ergün & Şeşen, 2021; Han & Na, 2025). This trajectory posits that innovation functions as the crucible wherein beliefs are tested and operationalized into durable skills. Premised on the theoretical framework wherein practice serves as the conduit between conviction and capability, the research advances the following hypothesis:

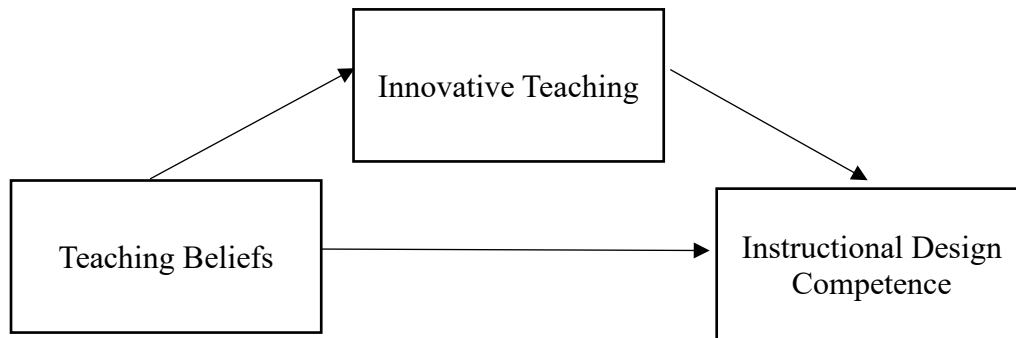
H4: Innovative teaching functions as a mediator linking instructors' teaching beliefs to their instructional design competence.

3. Methodology

3.1 Research Framework

The proposed conceptual architecture, visually delineated in the accompanying Figure 1 below, constructs a sophisticated logic of inquiry designed to interrogate the causal pathways linking internal cognition to professional technicality among art instructors. Predicated on the reciprocal determinism inherent in Social Cognitive Theory, the model positions Teaching Beliefs as the exogenous independent variable, functioning as the fundamental epistemic driver that governs professional orientation. It is hypothesized that these deep-seated pedagogical convictions exert a direct influence on the endogenous dependent variable, Instructional Design Competence, reflecting the immediate translation of abstract philosophy into concrete planning. However, the framework's pivotal theoretical contribution lies in the inclusion of Innovative Teaching as a mediating behavioral mechanism. This triangular configuration proposes that beliefs do not solely impact competence through a linear progression; rather, they propel instructors to engage in the active praxis of pedagogical innovation. It is within this experiential crucible of innovation—characterized by the adoption of novel methodologies and adaptive strategies—that the static potential of beliefs is operationalized and refined into dynamic instructional design capabilities. Consequently, the framework is designed to empirically validate the proposition that innovative teaching acts as the vital conduit, or transmission mechanism, through which latent educational values are converted into tangible, high-level professional competencies within the higher arts education sector.

Figure 1 Conceptual Research Framework

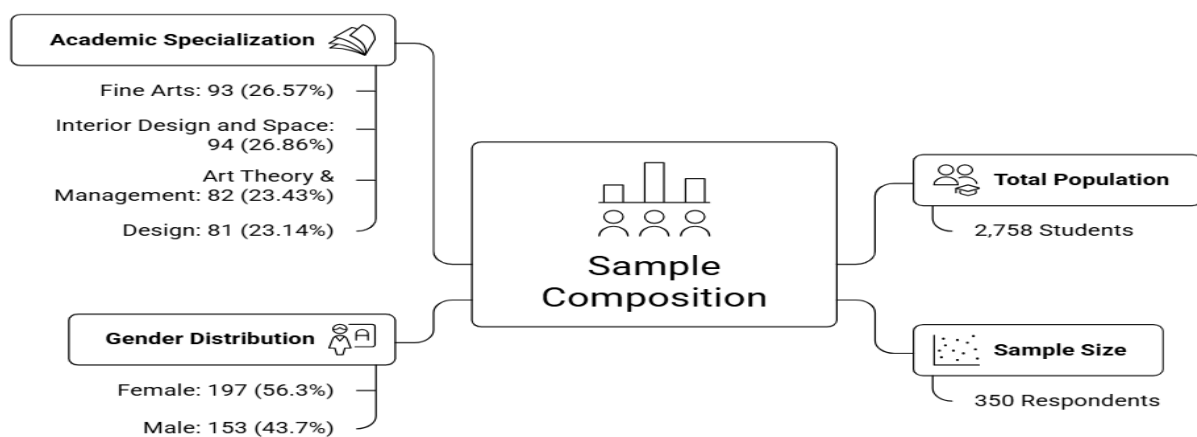


Note:

3.2 Population and Sample Size

The current empirical investigation was situated within the institutional context of a private university in China, specifically targeting the diverse ecosystem of its arts-based curriculum. The total population comprised 2,758 teachers enrolled across four distinct disciplinary domains: Fine Arts, Design, Art Theory & Management, and Interior Design and Space. To ascertain a statistically robust sample size capable of yielding valid inferences, a priori power analysis was conducted utilizing the G*Power statistical software (George & Mallery, 2024). Consequently, a final sample of 350 respondents was established, ensuring adequate representation of the broader cohort. In terms of demographic stratification, the gender distribution exhibited a slight female predominance, with 197 female participants (N=197; 56.3%) and 153 male participants (N=153; 43.7%). Furthermore, the sample was meticulously stratified by academic specialization to mirror the institutional composition: The Fine Arts program contributed 93 participants (N=93, 26.57%), followed closely by Interior Design and Space with 94 participants (N=94, 26.86%). Meanwhile, the Art Theory & Management and Design streams were represented by 82 (N=82, 23.43%) and 81 (N=81, 23.14%) participants, respectively. This balanced cross-section of the student body ensures that the subsequent analysis of innovative teaching mediation reflects a comprehensive spectrum of learner perspectives within the art education landscape.

Figure 2 Sample Composition and Demographic Stratification



3.3 Research Measurement Tools

To operationalize the theoretical constructs underpinning this study, a robust instrumentation protocol was established, employing adapted scales with demonstrated psychometric fidelity. The measurement of Teaching Beliefs was derived from the instrument originally developed by He and Liao (2005), refined through expert consultation to ensure ecological validity for the specific cohort of art instructors. This eighteen-item inventory is stratified into three distinct dimensions: Pedagogy and Teaching Materials, encompassing curriculum planning and assessment; Teacher-Student Relationships, focusing on inclusivity and interaction; and Teacher Role, addressing self-efficacy and responsibility. Respondents utilize a five-point Likert scale, where elevated aggregate scores signify a transition from traditionalist perspectives toward a more progressive, student-centered pedagogical orientation. The scale demonstrates exceptional internal consistency, with a reported Cronbach’s alpha of 0.930. Concomitantly, the assessment of Innovative Teaching draws upon the theoretical framework established by Lu et al. (2012), conceptualizing innovation as the adoption of novel instructional paradigms. This fifteen-item instrument is segmented into three factorial components: Teaching Style and Student Interaction, Respect and Personality Development, and Inspiration and Thinking Ability Cultivation. Validated with a Cronbach’s alpha of 0.924, the scale effectively measures the propensity for instructional novelty, scrutinizing the extent to which instructors leverage open-ended inquiry, contextualized learning, and metaphorical reasoning to foster cognitive agility in students. Finally, Instructional Design Ability is quantified using a uni-dimensional, nine-item scale adapted from Zhang (2016). This measure evaluates the instructor's competence in synthesizing learning objectives with resource allocation and structural organization. To ensure rigorous psychometric soundness, Exploratory Factor Analysis (EFA) was conducted for all variables. As evidenced by the Kaiser-Meyer-Olkin (KMO) measures of sampling adequacy, Teaching Beliefs (.928), Innovative Teaching (.924), and Instructional Design Ability (.857), and significant Bartlett's Tests of Sphericity ($p < .001$), the instruments possess robust construct validity, confirming their suitability for multivariate analysis. Table 1 synthesizes the relevant information concerning the measurement instruments utilised in the current study.

Table 1
Summary of Research Scales, Reliability, and Validity Indices

Title of the Scales	Authors (Year)	Dimensions	Items Number	Reliability (Cronbach’s α)	Validity (KMO / Sig.)
Teaching Beliefs	He and Liao (2005)	1) Pedagogy & Materials 2) Teacher-Student Relation 3) Teacher Role	18	.930	.928 / .000

Note 1: Significance level for Bartlett's Test of Sphericity is $p < .001$ for all variables.

Note 2: The table was compiled and organized by the researcher

Table 1*Summary of Research Scales, Reliability, and Validity Indices (Continue)*

Title of the Scales	Authors (Year)	Dimensions	Items Number	Reliability (Cronbach's α)	Validity (KMO / Sig.)
Innovative Teaching	Lu et al. (2012)	1) Style & Interaction 2) Respect & Development 3) Inspiration & Thinking	15	.924	.924 / .000
Instructional Design Competence	Zhang (2016)	Uni-dimensional	9	.901	.857 / .000

Note 1: Significance level for Bartlett's Test of Sphericity is $p < .001$ for all variables.

Note 2: The table was compiled and organized by the researcher

3.4 Research Process and Data Collection

The empirical phase of this investigation was meticulously operationalized through a rigorous data collection protocol designed to ensure both the reliability and validity of the resultant dataset, strictly adhering to established methodological standards in educational psychology. Utilizing Wenjuanxing, a premier digital survey administration platform, the research team facilitated a seamless and accessible interface for respondents, thereby maximizing engagement within the targeted demographic while ensuring data security. The sampling frame was strategically delimited to encompass instructors and relevant stakeholders within four specific arts-related undergraduate programs; this purposeful selection criterion was predicated on the necessity to isolate the unique pedagogical variables and professional competencies pertinent to higher education in the creative arts. The temporal boundaries of the data acquisition were strictly defined to ensure a consistent cross-sectional analysis, with the survey instrument being disseminated on September 24, 2025. The collection window remained open for precisely one week, concluding on October 1, 2025, a timeframe deemed sufficient to solicit a robust number of responses while mitigating the potential for historical maturation effects to influence participant beliefs. Upon the cessation of this period, a total of 368 questionnaires were garnered. To maintain the highest standards of statistical rigor, the raw data underwent a comprehensive data hygiene procedure prior to analysis. This preliminary screening involved a systematic review to identify anomalies, such as incomplete submissions, logical inconsistencies, or discernible patterns of response bias (e.g., straight-lining), which could compromise the integrity of the mediation analysis. Consequently, 18 responses were deemed invalid and were subsequently excised from the dataset to prevent statistical distortion. This exclusion process was vital to preserving the internal consistency of the study, resulting in a refined, high-quality sample. The meticulous process, from digital distribution via Wenjuanxing to filtering out invalid entries, demonstrates a steadfast commitment to the methodological precision expected in high-impact social science research. This solid foundation supports the subsequent exploration of the relationship between instructor beliefs and innovative teaching practices.

4. Results: Stepwise Regression Analysis

To scrutinize the structural relationships posited in the research framework and rigorously test the mediating role of Innovative Teaching, a hierarchical regression analysis was conducted utilizing the four-step protocol established by Baron and Kenny (1986). The analysis controlled for demographic covariates to isolate the variance attributable to the primary theoretical constructs.

Step 1 examined the total effect of the independent variable, Teaching Beliefs, on the dependent variable, Instructional Design Competence. As evidenced in Model 1, the model demonstrated robust statistical significance ($F=27.957, p < .001$), explaining 31.4% of the variance ($\text{Adjusted } R^2 = .314$). The results substantiated that Teaching Beliefs exert a strong positive influence on Instructional Design Competence ($\beta=.410, p<.001$), thereby validating H1.

Step 2 assessed the relationship between the independent variable and the mediator. Model 2 designated Innovative Teaching as the dependent variable. The model proved significant ($F=25.103, p<.001$), accounting for 29.5% of the variance ($\text{Adjusted } R^2=.295$). The analysis revealed a significant positive trajectory from Teaching Beliefs to Innovative Teaching ($\beta=.334, p < .001$), providing empirical support for H2.

Steps 3 and 4 involved entering both the independent variable and the mediator into the regression equation predicting Instructional Design Competence (Model 3). This model achieved the highest explanatory power ($F=31.470, p<.001$; $\text{Adjusted } R^2=.420$). Crucially, Innovative Teaching demonstrated a significant positive impact on Instructional Design Competence ($\beta=.468, p < .001$), supporting H3. Upon the introduction of the mediator, the direct effect of Teaching Beliefs on Instructional Design Competence remained significant but was notably attenuated, decreasing from $\beta=.410$ in Model 2 to $\beta=.162$ ($p<.05$) in Model 3. This reduction in the beta coefficient, while maintaining statistical significance, indicates that Innovative Teaching functions as a partial mediator in the relationship between Teaching Beliefs and Instructional Design Competence. Consequently, H4 is supported, suggesting that while beliefs directly inform competence, they also operate indirectly by fostering an innovative pedagogical praxis. Table 2 presents the hierarchical regression findings on teaching beliefs, innovative teaching, and instructional design competence, whilst Table 3 summarizes the hypothesis testing alongside the structural path analysis.

Table 2
Hierarchical Regression Analysis of Teaching Beliefs, Innovative Teaching, and Instructional Design Competence

Variables	Model 1 (Step 1)	Model 2 (Step 2)	Model 3 (Steps 3 & 4)
Dependent Variable	Inst. Design Competence	Innovative Teaching	Inst. Design Competence
Independent Variable			
Teaching Beliefs	.410***	.334***	.162*
Mediator			
Innovative Teaching	---	---	.468***

Note 1: * $p<.05$; ** $p<.01$; *** $p<.001$

Note 2: The table was compiled and organized by the researcher

Table 2
Hierarchical Regression Analysis of Teaching Beliefs, Innovative Teaching, and Instructional Design Competence (Continue)

Variables	Model 1 (Step 1)	Model 2 (Step 2)	Model 3 (Steps 3 & 4)
Model Summary			
R ²	.359	.327	.461
Adjusted R ²	.314	.295	.420
F	27.957***	25.103***	31.470***

Note 1: * $p < .05$; ** $p < .01$; *** $p < .001$

Note 2: The table was compiled and organized by the researcher

Table 3
Summary of Hypothesis Testing and Structural Path Analysis

Hypothesis	Path Relationship	Coefficient (β)	t-value / Sig.	Result	Evidence
H1	Teaching Beliefs → Instructional Design Competence	.410	$p < .001$	Supported	Model 2 confirms a strong direct effect
H2	Teaching Beliefs → Innovative Teaching	.334	$p < .001$	Supported	Model 5 confirms beliefs predict the mediator
H3	Innovative Teaching → Instructional Design Competence	.468	$p < .001$	Supported	Model 3 confirms the mediator affects the outcome
H4	Teaching Beliefs → Innovative Teaching → Instructional Design Competence	$\Delta\beta$.410 → .162	Supported	Partial Mediation. The direct effect of Beliefs on Competence remains significant but weakens ($p < .05$) when Innovative Teaching is added

Note: The table was compiled and organized by the researcher.

5. Discussion and Conclusion

The empirical outcomes of this investigation provide a robust validation of the hypothesized structural model, elucidating the intricate cognitive-behavioural mechanisms that underpin professional competence within the specialized domain of higher art education. Foremost, the findings corroborate the premise that teaching beliefs act as the foundational epistemic architecture for instructional design competence (He & Liao, 2005; Luo, 2023). This aligns with the theoretical tenets of Social Cognitive Theory, suggesting that an instructor's internal value system regarding creativity and student autonomy is not a passive psychological state but an active determinant of their technical planning capabilities (Cansiz & Cansiz, 2019; Su & Yang, 2020). However, the most salient contribution of this study lies

in the identification of innovative teaching as a partial mediator. The statistical evidence reveals that while beliefs hold a direct predictive power, their influence is significantly amplified when operationalized through innovative pedagogical praxis (Naz & Murad, 2017; Zhang et al., 2020). This suggests a symbiotic relationship wherein the act of innovating—experimenting with novel delivery methods and aesthetic inquiries—serves as a "professional crucible." In this space, abstract convictions are tested and refined, thereby crystallizing into tangible design competencies (Liu et al., 2023; Lyu et al., 2020). The partial mediation indicates that possessing progressive beliefs is a necessary but insufficient condition for mastery; it is the behavioural manifestation of these beliefs through innovation that significantly augments an art instructor's ability to architect complex, learner-centered environments (Le, 2023; Li, 2021). Consequently, this study bridges the theoretical chasm between cognition and competence, positioning innovation not merely as an outcome but as a critical generative process in professional development (Chang et al., 2024; Phommanee et al., 2023).

In synthesizing the trajectory from latent cognition to manifest capability, this research definitively establishes that the professional competence of art instructors in Chinese higher education is a multi-dimensional construct governed by a specific causal logic. The study has successfully demystified the "black box" of instructional design, proving that technical proficiency is deeply rooted in the instructor's pedagogical worldview and catalyzed by their engagement with innovative practices (Li, 2025; Luo, 2023). We conclude that the modernization of art education cannot be achieved through the isolation of technical skills training; rather, it requires a holistic evolution of the educator's professional identity (Badri et al., 2017; Jia et al., 2025). The validated model confirms that when art instructors internalize beliefs centered on student agency and creative co-construction, and subsequently enact these beliefs through innovative methodologies, they achieve a superior level of instructional design competence (Le, 2023; Naz & Murad, 2017). This triad—Beliefs, Innovation, and Competence—forms the essential scaffold for a responsive and effective art curriculum (Deng et al., 2021; Hou & Moyao, 2023). Ultimately, this research underscores that the art educator is not merely a custodian of tradition but an active designer of learning experiences, whose professional efficacy is contingent upon the alignment of their inner philosophy with their outer pedagogical experimentation (Guo et al., 2025; Han & Kyun Na, 2025).

6. Implications, Limitations and Future Research Directions

6.1 Theoretical Implications

The research extends the boundaries of Social Cognitive Theory by situating it within the unique ecological niche of art instruction (Cansiz & Cansiz, 2019; Qiu et al., 2021). By empirically verifying the mediating role of innovative teaching, the study contributes a nuanced framework that transcends binary distinctions between teacher-centered and student-centered paradigms (Bolden et al., 2019; Tang et al., 2020). It posits a dynamic model of professional growth where "doing" (innovation) mediates the translation of "thinking" (beliefs) into "competence" (design), offering a sophisticated lens through which to view teacher efficacy in creative disciplines (Chang et al., 2024; Jia et al., 2025).

6.2 Practical Implications

For educational administrators and policymakers, the findings necessitate a paradigmatic shift in faculty development strategies (Badri et al., 2017; Han & Lei, 2025). Traditional training programs that focus exclusively on the mechanics of course design are likely to yield suboptimal results if they fail to address the underlying teaching beliefs (He & Liao, 2005;

Luo, 2023). Professional development initiatives must therefore be re-engineered to function as dual-layered interventions: first, fostering a belief system that values pedagogical agility and student autonomy, and second, providing safe, experimental spaces for the enactment of innovative teaching (Liu et al., 2023; Naz & Murad, 2017). Universities should incentivize "innovation labs" where art instructors can prototype new methodologies, as this behavioural engagement is now proven to be the driver of structural design competence (Hou & Moyao, 2023; Lyu et al., 2020).

6.3 Limitations and Future Research Directions

While this inquiry offers significant insights into the professional architecture of art instructors, several methodological constraints warrant acknowledgement and delineate avenues for future scholarly pursuit.

1) **Geographical and Cultural Specificity:** The study was inextricably bound to the context of colleges in China (Hou & Moyao, 2023; Li, 2024). Consequently, the cultural nuances of the Chinese educational reform landscape may limit the generalizability of the findings to Western contexts or other non-Western educational systems with differing pedagogical traditions (Han & Lei, 2025; Luo, 2023). Future comparative studies could illuminate how cultural variables moderate the belief-competence nexus (Le, 2023; Su & Yang, 2020).

2) **Cross-Sectional Design:** The reliance on cross-sectional data precludes the establishment of definitive causal inference regarding the evolution of competence over time (Badri et al., 2017; Li, 2025). A longitudinal research design would be instrumental in mapping how teaching beliefs and innovative behaviours interact reciprocally over the course of an academic career (Cansiz & Cansiz, 2019; Chang et al., 2024).

3) **Self-Reported Metrics:** The dependence on self-reported questionnaires introduces the potential for common method variance and social desirability bias, particularly regarding self-assessments of innovation and competence (Guo et al., 2025; Jia et al., 2025). Future investigations would benefit from a mixed-methods approach, triangulating quantitative data with observational rubrics, peer reviews, and qualitative interviews to provide a more granular and objective assessment of instructional practice (Bolden et al., 2019; Phommanee et al., 2023).

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