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Interactive and Digital Pathways to Creativity: The Role of Classroom Interaction and Online Knowledge Sharing among Theatre Students in Beijing

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ABSTRACT

Creativity is a fundamental outcome of higher education, particularly in theatre disciplines where collaboration and interpretation are central to learning and performance. This study examines how classroom interaction and online knowledge sharing influence student creativity among theatre students in Beijing, China. Drawing on Constructivist Learning Theory and Social Cognitive Theory, a quantitative cross-sectional survey design was employed. Data were collected from 367 undergraduate theatre students using validated Likert-scale instruments and analyzed with Partial Least Squares Structural Equation Modeling (PLS-SEM). Results revealed that both classroom interaction ($\beta = 0.165$, $p < 0.001$) and online knowledge sharing ($\beta = 0.228$, $p < 0.001$) have positive and significant effects on student creativity, with the latter demonstrating a stronger predictive influence. These findings highlight the synergistic roles of interactive and digital learning environments in cultivating creative potential. Theoretically, the study integrates social and constructivist paradigms to explain how collaborative and technology-mediated learning enhance creativity. Practically, it offers guidance for theatre educators and policymakers to strengthen participatory pedagogy, digital collaboration, and interdisciplinary engagement. The research contributes empirical evidence from a non-Western performing arts context, reinforcing the importance of integrating social interaction and digital knowledge exchange in creativity-oriented education.

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KEYWORDS:

Theatre Education; Classroom Interaction; Online Knowledge Sharing; Student Creativity; Constructivist Learning Theory

INTRODUCTION

Background

Creativity is a core twenty-first-century outcome in higher education and especially salient in theatre, where collaborative meaning-making, improvisation, and interpretation are central to learning and performance. Yet comparative work suggests that creativity can be unevenly cultivated across systems; studies on adolescents' scientific versus artistic creativity highlight distinct cognitive profiles and developmental needs, underscoring why discipline-specific contexts like theatre merit focused inquiry (Zhang et al., 2020). Simultaneously, digital platforms have transformed how students connect, learn, and co-create knowledge. Social media and related tools enable ongoing dialogue, resource curation, and feedback loops that extend beyond class time, making networked collaboration a routine part of university learning (Rowan-Kenyon et al., 2016; Salmon et al., 2015).

Two learning processes are particularly relevant to theatre students' creative development: classroom interaction and online knowledge sharing. First, interactive classroom practices (student–student and student–teacher) support engagement, co-construction of understanding, and idea elaboration—conditions that align with creativity-supportive pedagogies (Aguilera & Ortiz-Revilla, 2021). Research on dialogic, collaborative environments shows social media can augment such interaction by scaffolding peer feedback, discussion, and joint problem-solving (Ansari & Khan, 2020; Rowan-Kenyon et al., 2016). Second, online knowledge sharing—the creation, exchange, and refinement of ideas via digital channels—has been theorized and observed to enrich learning communities and innovation, offering students diverse

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inputs that can fuel originality (Ma & Yuen, 2011; Vilarinho-Pereira et al., 2021). Work on enterprise and higher-education settings further documents links between social media-enabled knowledge flows and creative performance (Sun et al., 2020; Khan et al., 2021).

At the same time, the affordances of social platforms carry risks for creative learning when participation tilts toward consumption or mimicry rather than critical engagement. Studies on Chinese youth emphasize potential downsides of platform dynamics for deeper learning and self-expression, reinforcing the need for intentional, pedagogically guided use (Wu et al., 2024). Taken together, the literature suggests that theatre students' creativity may be shaped by how actively they interact in class and how effectively they share knowledge online, but these relationships require empirical testing in discipline-specific, non-Western contexts.

Problem Statement

Despite calls to move beyond instructor-centered, exam-oriented approaches, many classrooms still provide limited opportunities for dialogic participation that nurtures creativity (Aguilera & Ortiz-Revilla, 2021). This is consequential in theatre, where creativity emerges through rehearsal talk, feedback, and collaborative exploration; when interaction is constrained, students may default to replication rather than experimentation. Concurrently, while social technologies can strengthen collaborative learning, evidence within creative disciplines remains fragmented: some studies document gains in engagement and knowledge building (Ansari & Khan, 2020; Rowan-Kenyon et al., 2016), whereas others caution that platform use can skew toward superficial engagement that does not translate into original production (Wu et al., 2024).

Moreover, online knowledge sharing has been theorized as a mechanism for broadening idea pools and catalyzing innovative outcomes (Ma & Yuen, 2011; Vilarinho-Pereira et al., 2021), and empirical work links social media affordances to knowledge transfer and creative performance (Sun et al., 2020; Khan et al., 2021). Yet there is a paucity of focused studies examining whether these dynamics hold for theatre students' creativity, where aesthetic judgment, ensemble processes, and performance constraints interact in distinctive ways. Most creativity research in higher education is not tailored to the performing arts, and cross-system comparisons suggest that contextual factors matter for how creativity manifests (Zhang et al., 2020). Consequently, there is a clear need to test two foundational relationships in this population which are Classroom Interaction → Creativity, and Online Knowledge Sharing → Creativity. Addressing these gaps with discipline-specific evidence can clarify whether—and how—interactive learning processes and digital knowledge exchanges predict creative outcomes among theatre students.

Significance of the Study

In term if theoretical contribution, by modelling creativity as an outcome of interactional (classroom) and networked (online knowledge sharing) learning processes, the study integrates strands of research on STEAM/creativity-supportive pedagogy (Aguilera & Ortiz-Revilla, 2021), collaborative/social media learning in higher education (Ansari & Khan, 2020; Rowan-Kenyon et al., 2016), and knowledge sharing as a driver of innovation and creative performance (Ma & Yuen, 2011; Sun et al., 2020; Vilarinho-Pereira et al., 2021). Evidence from a theatre context extends the generalizability of these frameworks to a domain where creativity is inherently social and performative.

For practical implications, for instructors and program leaders, identifying whether classroom interaction and online knowledge sharing reliably predict creativity offers concrete levers for course and curriculum design. If effects are positive, programs can intensify structured, participatory activities (critiques, ensemble rehearsals, peer-led workshops) to boost interaction (Aguilera & Ortiz-Revilla, 2021); embed guided digital collaboration (discussion prompts, resource libraries, peer feedback protocols) to elevate the quality of knowledge exchanges (Ansari & Khan, 2020; Rowan-Kenyon et al., 2016); and align assessment with collaborative and original production rather than recall, leveraging platform affordances that have been tied to knowledge transfer and creative outcomes (Sun et al., 2020; Khan et al., 2021).

Policy and context relevance wise, situated evidence from theatre students contributes to broader debates about how to cultivate creativity in university settings navigating rapid platform adoption. It also speaks to concerns in the Chinese context about balancing technology-enabled learning with depth and originality (Wu et al., 2024), offering discipline-specific guidance on when and how interaction and online knowledge sharing matter most for creative development.

LITERATURE REVIEW

Theoretical Background

This study is grounded in two complementary theoretical perspectives—Constructivist Learning Theory and Social Cognitive Theory (SCT)—which together explain how interactive learning processes foster students' creativity in contemporary higher education. Both theories highlight learning as an active, socially situated, and reciprocal process rather than a passive transfer of information, making them especially relevant to theatre education where creativity develops through collaboration, performance, and reflection.

Constructivist Learning Theory

Constructivist Learning Theory proposes that knowledge is actively constructed through experience, interaction, and dialogue rather than transmitted from teacher to student (Hein, 1991; Zajda, 2023). Learners make meaning by connecting new

information to prior understanding, negotiating interpretations with peers, and reflecting on outcomes. Within a theatre classroom, this process is visible when students collectively analyse scripts, improvise scenes, and critique performances. Interaction—both student-to-student and student-to-teacher—serves as the mechanism through which learners internalize ideas, challenge assumptions, and generate new creative solutions.

Chuang (2021) and Srikan et al. (2021) emphasize that constructivist learning environments encourage problem solving, dialogue, and peer scaffolding—conditions proven to enhance creative thinking. By fostering open communication, mutual feedback, and co-creation, classroom interaction transforms the learning environment into a social arena for idea experimentation and divergent thought. Consequently, Constructivist Learning Theory provides the conceptual grounding for hypothesizing that active, participatory classroom interaction positively influences students' creativity.

Social Cognitive Theory (SCT)

While constructivism explains how creativity emerges through interpersonal engagement in physical classrooms, Social Cognitive Theory (Bandura, 2001; Luszczynska & Schwarzer, 2015) extends this reasoning to the digital sphere. SCT asserts that behavior results from a triadic reciprocal relationship among personal factors (cognition, self-efficacy), behavior, and environment. Individuals learn not only through direct experience but also by observing others and modelling their behaviors, a process particularly salient in online spaces where learners continuously encounter peers' ideas, performances, and feedback.

Applied to online knowledge sharing, SCT suggests that students' creative behaviors are shaped by environmental affordances of digital platforms (e.g., comment systems, peer visibility) and by cognitive-motivational factors such as self-efficacy and outcome expectations (Rana & Dwivedi, 2015; Al-Dokhny et al., 2021; Khan et al., 2021). When theatre students share resources, discuss performances, or exchange constructive critiques online, they engage in reciprocal reinforcement: social feedback boosts confidence and stimulates further experimentation. Over time, these mediated interactions cultivate observational learning and vicarious creativity, aligning with SCT's emphasis on learning through social modelling. Thus, online knowledge sharing embodies the core SCT mechanism linking social influence and creative performance.

Together, Constructivist Learning Theory and Social Cognitive Theory form a dual-process model of creativity development. Classroom interaction, rooted in constructivism, provides immediate experiential collaboration that nurtures idea formation and critical discourse. Online knowledge sharing, grounded in SCT, extends these interactions into digital networks where observation, imitation, and feedback continue the creative cycle. Integrating both frameworks supports a holistic understanding of how theatre students construct, exchange, and refine ideas across physical and virtual environments—ultimately enhancing their creative capacity.

Classroom Interaction and Creativity

Conceptual Overview

Classroom interaction plays a pivotal role in enhancing students' creativity, particularly in arts-based disciplines such as theatre, where collaboration and communication are integral to learning and performance. Interaction encompasses both peer-to-peer and teacher–student engagement that promotes idea exchange, dialogue, and constructive feedback (Johnson & Johnson, 1989; Wood, Bruner, & Ross, 1976). Within theatre education, such collaboration creates a dynamic environment where students can rehearse, critique, and refine artistic ideas, thereby fostering creative growth.

The Constructivist Learning Theory provides the primary foundation for understanding how interaction stimulates creativity. According to Hein (1991) and Zajda (2023), knowledge is actively constructed through social dialogue and experiential learning. In this sense, creativity is not an individual trait but a socially co-created process that emerges through engagement and participation. When theatre students interact with peers and instructors—through script interpretation, role-playing, or feedback sessions—they co-construct understanding and gain new perspectives, which trigger divergent thinking and original expression (Chuang, 2021).

Peer Interaction and Collaborative Learning

Peer collaboration enables students to challenge ideas, reflect on performances, and integrate multiple viewpoints. Cooperative Learning Theory (Johnson & Johnson, 1989) highlights that mutual support and shared goals can improve learning outcomes and innovation. Within theatre classrooms, peer interaction often manifests in group rehearsals, script analysis, and improvisational exercises. These processes expose students to alternative interpretations and problem-solving strategies, thereby strengthening both creative flexibility and aesthetic awareness (Slavin, 1996).

Empirical studies further confirm that interactive classroom environments encourage self-expression and experimentation. For example, research by Ansari and Khan (2020) and Sabah (2022) demonstrates that when students participate in discussion-based or performance-based collaborative learning, they report heightened engagement and creative motivation. Through direct peer feedback and shared creative tasks, students refine ideas, learn from others' artistic insights, and develop a deeper sense of creative autonomy.

Teacher Interaction and Guided Creativity

Teacher–student interaction also serves as a crucial catalyst for creativity. The Scaffolding Theory (Wood et al., 1976) posits

that educators guide learners through a gradual process of independence—providing support, questioning assumptions, and stimulating reflection. In theatre education, teacher feedback during performances, rehearsals, or script development helps students expand creative boundaries.

Chambers (1973) emphasized that teachers' creativity, openness, and aesthetic sensitivity are often mirrored by their students. Similarly, Zhao (2019) argues that China's traditional "do-after-me" pedagogy limits creativity, implying that more dialogic teacher–student interaction is needed to cultivate independent creative thinking. By creating space for inquiry and discussion, educators enable theatre students to explore new approaches to artistic production and overcome conformity to standardized styles.

Linking Classroom Interaction to Creativity

Integrating insights from constructivist and cooperative learning theories, classroom interaction can be understood as both a cognitive and social driver of creativity. Socially, interaction builds a collaborative culture of shared experimentation; cognitively, it supports reflection, problem solving, and divergent thinking. Through consistent peer and teacher interaction, theatre students acquire not only technical skills but also the confidence to take creative risks and generate original artistic concepts.

Hence, this study hypothesizes that:

H1: *Classroom interaction has a positive and significant relationship with creativity among theatre students.*

Online Knowledge Sharing and Creativity

Conceptual Overview

Online knowledge sharing refers to the creation, exchange, and refinement of information and ideas through digital media, enabling learners to collaborate asynchronously and synchronously beyond classroom boundaries (Ma & Yuen, 2011). In higher education, such sharing fosters an environment of open communication, collective reflection, and distributed creativity (Rowan-Kenyon et al., 2016). For theatre students, online platforms extend the rehearsal room into a continuous creative space where peers can critique performances, co-develop concepts, and access global artistic resources.

This process aligns with Social Cognitive Theory (SCT), which explains learning as a function of reciprocal interaction among personal factors, behavior, and environment (Bandura, 2001; Luszczynska & Schwarzer, 2015). Digital platforms provide a social environment where observation, imitation, and reinforcement occur continuously. Students who engage in online knowledge sharing can observe creative exemplars, receive feedback, and model innovative approaches, thereby enhancing creative self-efficacy and originality (Rana & Dwivedi, 2015; Al-Dokhny et al., 2021; Khan et al., 2021).

2.3.2 Online Platforms as Creative Learning Spaces

Social media tools such as discussion boards, collaborative apps, and short-video platforms allow theatre students to exchange performances, commentaries, and artistic resources in real time. Studies indicate that such digital interactions support reflective thinking, cross-disciplinary inspiration, and co-creation—key drivers of creativity (Vilarinho-Pereira et al., 2021; Sun et al., 2020). When students share rehearsal videos, for instance, peer comments act as formative feedback loops that help refine performance technique and artistic expression.

Empirical findings reveal that online collaborative learning enhances not only cognitive engagement but also intrinsic motivation for creative production. Khan et al. (2021) demonstrated that social-media-based collaboration strengthened both knowledge acquisition and creative performance among university students during the COVID-19 transition to digital learning. Similarly, Rowan-Kenyon et al. (2016) found that sustained online dialogue expanded students' social capital and creative confidence. These results suggest that structured online knowledge sharing can meaningfully contribute to creativity development.

Reciprocal Learning and Creative Self-Efficacy

From an SCT perspective, online knowledge sharing enhances creativity through two reinforcing mechanisms: **observational learning** and **self-efficacy**. Exposure to diverse creative outputs online allows students to internalize multiple problem-solving strategies, while social reinforcement—likes, comments, and peer recognition—strengthens their belief in their creative abilities (Bandura, 2001). Al-Dokhny et al. (2021) note that such perceived efficacy drives continued participation and innovation in digital learning environments. Consequently, the more students engage in reciprocal sharing, the more confident and experimental they become in their artistic work.

Linking Online Knowledge Sharing to Creativity

Online knowledge sharing thus provides theatre students with both informational diversity and motivational reinforcement, aligning environmental affordances with personal creative agency. When learners co-construct knowledge through digital exchanges, they expand their creative repertoire and sustain collaborative imagination across time and space. Grounded in Social Cognitive Theory and supported by empirical evidence, this study posits the following hypothesis:

H2: *Online knowledge sharing has a positive and significant relationship with creativity among theatre students.*

Conceptual Framework

This study integrates Constructivist Learning Theory and Social Cognitive Theory (SCT) to explain how interactive learning processes enhance theatre students' creativity (Figure 1). Based on Constructivist Learning Theory (Hein, 1991; Zajda, 2023), classroom interaction enables learners to construct knowledge through dialogue, reflection, and collaboration. Active peer and teacher engagement stimulates critical thinking and the generation of novel artistic ideas. Grounded in SCT (Bandura, 2001; Luszczynska & Schwarzer, 2015), online knowledge sharing represents learning through

observation, modelling, and social reinforcement in digital environments. By exchanging resources and feedback online, students strengthen creative confidence and performance. Accordingly, the framework proposes that both classroom interaction and online knowledge sharing positively influence theatre students' creativity.

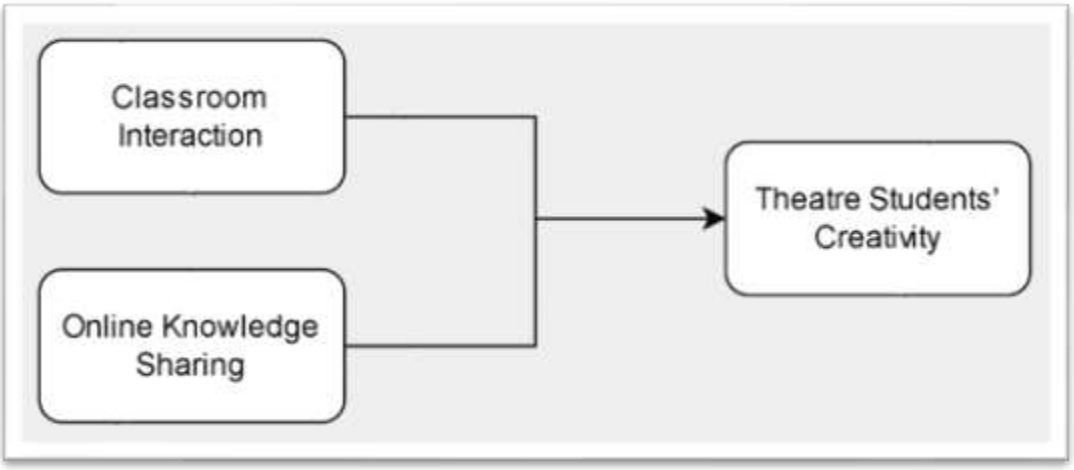

Figure 1. Conceptual Framework of Current Study

METHODOLOGY

Research Design

This study adopted a quantitative, cross-sectional, and positivist research design, aimed at empirically testing the hypothesized relationships between classroom interaction, online knowledge sharing, and theatre students' creativity. The positivist paradigm emphasizes objectivity, measurement, and statistical inference (Brewer et al., 1998; Turner & Bryant, 1986; Park et al., 2020). This approach is suitable because the constructs in this model are observable and quantifiable. A deductive strategy was employed, progressing from established theory to empirical validation through structured survey data. The cross-sectional design allows the capture of current attitudes and behavioral patterns among students at one point in time. Following Melnikovas (2018), methodological coherence was maintained by sequentially selecting the research philosophy, strategy, and data collection techniques under the "research onion" framework. This systematic design ensures the validity, replicability, and statistical generalizability of findings while minimizing researcher bias and interpretive subjectivity.

Population, Setting, and Sampling

The study focused on undergraduate theatre students enrolled in Beijing's higher education institutions, representing a population deeply engaged in creative arts education. Sampling was drawn from three leading universities: The Central Academy of Drama, Beijing Film Academy, and The National Academy of Chinese Theatre Arts. The population size was estimated at approximately 16,000 students. Based on the Krejcie and Morgan (1970) sample size determination table, a sample of 367 respondents was deemed sufficient to achieve 95% confidence with a 5% margin of error. Simple random sampling was used to ensure each student had an equal opportunity to participate, enhancing representativeness and reducing bias. The Beijing context was selected because of its concentration of top-tier arts institutions and its dual emphasis on traditional and digital modes of theatre education. This population provides a rich environment to explore how interactive learning and online engagement shape creativity in performance-oriented disciplines.

Measures

Data were collected through a structured self-administered questionnaire containing four sections: demographic profile, classroom interaction, online knowledge sharing, and creativity. All variables were measured using a five-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The items for classroom interaction were adapted from Al-Rahmi and Othman (2013), focusing on student–student collaboration, teacher–student dialogue, and constructive feedback within theatre contexts. Online knowledge sharing items were derived from Ma and Yuen (2011), measuring the extent to which students exchange information, ideas, and creative materials via social media and learning platforms. Creativity was assessed using adapted items from Ouakouak and Ouedraogo (2017), reflecting originality, flexibility, and problem-solving in artistic tasks. All items were modified slightly to fit the language and setting of Chinese theatre education, ensuring contextual relevance while retaining established psychometric properties. The questionnaire was prepared in bilingual format (English–Chinese) for clarity.

Pilot Testing, Reliability, and Validity

Prior to full-scale data collection, a pilot test was conducted with 50 theatre students to evaluate item clarity, response time, and internal consistency. Feedback indicated that minor linguistic adjustments were required to improve cultural clarity and item comprehension. The refined instrument was

subsequently validated through a measurement model in SmartPLS 4. Internal reliability was confirmed using Cronbach's alpha ($\alpha \geq 0.70$) and Composite Reliability ($CR \geq 0.70$), demonstrating internal consistency across constructs. Convergent validity was established when Average Variance Extracted ($AVE \geq 0.50$) was achieved for all variables, and discriminant validity was assessed using HTMT ratios (< 0.85) to ensure conceptual uniqueness. These criteria align with guidelines from Straub and Gefen (2004) and Hair et al. (2022) for ensuring measurement model quality. The pilot results confirmed that all constructs met the minimum psychometric thresholds, supporting the reliability and validity of the scales for the main data collection phase.

Data Collection Procedure

Data collection occurred over a four-week period using the Wenjuanxing online survey platform, widely used for academic research in China. Formal permission was obtained from university departments before dissemination. Invitations were distributed through institutional mailing lists and official WeChat groups targeting undergraduate theatre majors. Participants were provided with an introduction explaining the study's purpose, confidentiality assurances, and voluntary participation. Respondents who completed the survey were encouraged to answer honestly and without time pressure. Out of 400 distributed questionnaires, 367 valid responses were retained after excluding incomplete or patterned responses. This yielded a 91.8% effective response rate, indicating strong participant engagement. The online mode was selected for its accessibility, anonymity, and efficiency, particularly amid increased reliance on digital platforms in post-pandemic academic environments. Data were exported to SPSS and SmartPLS 4 for subsequent cleaning, coding, and analysis.

Data Analysis

Data analysis combined descriptive statistics in SPSS with Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS 4. Descriptive analysis summarized demographic characteristics, means, and standard deviations for all variables. Measurement validation followed Hair et al. (2022) criteria, examining indicator reliability, Cronbach's alpha, composite reliability, and AVE. Discriminant validity was assessed using Fornell–Larcker and HTMT criteria. Common method bias was evaluated through variance inflation factor (VIF) diagnostics, ensuring all values remained below 3.3. The structural model tested the hypothesized paths between classroom interaction, online knowledge sharing, and creativity using bootstrapping with 5,000 resamples to estimate path coefficients (β), t-values, and significance levels ($p < 0.05$). Model explanatory power was assessed through R^2 and f^2 values, indicating effect size and variance explained. Results were interpreted in accordance with empirical research standards for education and behavioural sciences.

Ethics

This study strictly followed research ethics protocols in accordance with institutional and national academic standards. Ethical approval was obtained from the participating universities before fieldwork. Respondents were informed about the study's objectives, their right to withdraw at any time, and the confidentiality of their data. Participation was voluntary and anonymous, with no identifying information collected. Data were stored securely in password-protected files and used solely for academic purposes. Respondents consented electronically prior to answering the questionnaire through a mandatory informed consent statement. All analyses were reported in aggregate form to ensure privacy. These measures uphold the ethical principles of respect, beneficence, and justice, ensuring that participants' welfare and integrity remained fully protected throughout the research process.

RESULTS AND ANALYSIS

Respondents' Demographic Profile

As shown in table 1, out of 388 respondents, 285 are female (73.45%) and 103 are male (26.55%), indicating a female-skewed sample. By year of study, the largest group is sophomores (33.0%), followed by freshmen (27.1%), juniors (24.7%), and seniors (15.2%). This distribution suggests broad representation across cohorts, with slightly heavier participation from lower years. Regarding academic specialization, Theatre Theory constitutes the largest major (29.9%), followed by Music & Dance (24.2%), Drama & Film Studies (19.3%), Fine Arts (15.2%), and Design (11.3%). Overall, the sample provides adequate heterogeneity across gender, year, and major, supporting subgroup description and, if needed, exploratory comparisons (e.g., gender or year differences) in subsequent analyses.

Table 1. Demographic Profile of Respondents

Variable	Category	Frequency (n)	Percent (%)
Gender	Male	103	26.55
	Female	285	73.45
Year of Study	Freshman (1st year)	105	27.10
	Sophomore (2nd year)	128	33.00

	Junior (3rd year)	96	24.70
	Senior (4th year)	59	15.20
Major/Discipline	Theatre Theory	116	29.90
	Music & Dance	94	24.20
	Drama & Film Studies	75	19.30
	Fine Arts	59	15.20
	Design	44	11.30

Constructs Reliability and Validity

Table 4.2 presents the internal consistency reliability results for all constructs used in this study. The Cronbach's alpha (α) values range from 0.957 to 0.978, while composite reliability (rho_C) and rho_A values range between 0.958 and 0.980. According to Hair et al. (2022), reliability coefficients above 0.70 are considered acceptable, and those exceeding 0.90 demonstrate excellent internal consistency. The results indicate that all three latent constructs—Classroom Interaction, Online Knowledge Sharing, and Student Creativity—exhibit high reliability and measurement stability. This suggests that the items within each construct are highly correlated and consistently measure their respective theoretical dimensions. Although reliability values above 0.95 may indicate slight redundancy, they are acceptable for this study, given the multidimensional nature of creativity-related constructs. Overall, the findings confirm that the measurement model achieves strong reliability, providing a robust foundation for subsequent validity and structural model assessments.

Table 2. Internal Consistency Reliability Results

Construct	Cronbach's α	rho_A	Composite Reliability (rho_C)
Classroom Interaction	0.961	0.962	0.967
Online Knowledge Sharing	0.957	0.958	0.963
Student Creativity	0.978	0.978	0.980

Path Coefficient Analysis

Table 4.3 presents the results of the structural path analysis conducted using PLS-SEM. The results indicate that both Online Knowledge Sharing and Classroom Interaction have significant and positive effects on Student Creativity. Specifically, Online Knowledge Sharing ($\beta = 0.228$, $t = 6.189$, $p < 0.001$) demonstrates a stronger predictive influence compared to Classroom Interaction ($\beta = 0.165$, $t = 4.177$, $p < 0.001$).

The findings suggest that students who frequently engage in sharing knowledge and creative ideas through online platforms tend to exhibit higher levels of creative performance. Meanwhile, effective classroom interaction, involving open dialogue, peer collaboration, and constructive feedback, also fosters creativity but to a relatively lesser extent.

These outcomes confirm the hypothesized model, emphasizing that interactive learning environments—both in-person and digital—serve as significant determinants of creativity among theatre students. The results align with Social Cognitive Theory and Constructivist Learning Theory, which posit that active participation, collaboration, and social exchange are central to creative skill development.

Table 4.3. Structural Model Results

Relationship	β (Original Sample)	Sample Mean	Standard Deviation	t-value	p-value
Online Knowledge Sharing → Student Creativity	0.228	0.231	0.037	6.189	0.000
Classroom Interaction → Student Creativity	0.165	0.166	0.039	4.177	0.000

DISCUSSION

This study examined the influence of classroom interaction and online knowledge sharing on student creativity among theatre students in Beijing. Both independent variables demonstrated significant and positive effects on creativity, with online knowledge sharing ($\beta = 0.228$, $p < 0.001$) exerting a stronger effect than classroom interaction ($\beta = 0.165$, $p < 0.001$). These findings confirm that creativity in performing arts education is not merely the result of individual talent but is also shaped by

interactive learning processes, social engagement, and digital collaboration.

Classroom Interaction and Creativity

The positive relationship between classroom interaction and creativity aligns with the principles of Constructivist Learning Theory (Hein, 1991; Zajda, 2023), which emphasize that knowledge is actively constructed through dialogue, reflection, and shared experience. Theatre classrooms that encourage discussion, feedback, and peer collaboration provide fertile ground for creative exploration and aesthetic development.

The result corroborates earlier research indicating that participatory and interactive learning enhances students' creative potential (Cropley, 2019; Stutesman et al., 2022). When theatre students engage in interpretive performance and critique sessions, they integrate multiple perspectives, fostering divergent thinking and originality. Furthermore, these findings reinforce the idea that creativity flourishes in psychologically safe and interactive environments where students can take intellectual risks without fear of evaluation.

Online Knowledge Sharing and Creativity

The significant influence of online knowledge sharing on student creativity supports Social Cognitive Theory (Bandura, 2001; Luszczynska & Schwarzer, 2015), which highlights learning through observation, modelling, and reciprocal interaction. Through digital platforms such as WeChat groups, Douyin, and learning forums, theatre students exchange ideas, performances, and feedback that stimulate creative thought.

This finding is consistent with prior studies showing that social media–based collaboration promotes creative engagement and self-efficacy (Al-Rahmi et al., 2017; Khan et al., 2021; Tang et al., 2023). Online environments extend the traditional classroom, allowing continuous dialogue and access to diverse aesthetic resources. By observing and emulating peers' creative outputs, students internalize new techniques, which reinforces both creative confidence and imaginative performance.

Moreover, the stronger path coefficient for online knowledge sharing suggests that digital networks increasingly complement or even surpass in-person learning in cultivating creative behaviour among Generation Z learners, who are accustomed to multimodal, media-rich learning environments.

Theoretical and Contextual Implications

From a theoretical standpoint, this study contributes to the integration of Constructivist Learning Theory and Social Cognitive Theory in the context of theatre education. The findings demonstrate that creativity can be enhanced when constructive classroom engagement and socially mediated online learning function synergistically.

Contextually, these results provide empirical evidence from Chinese higher education, a system often characterized by exam-oriented and teacher-centered traditions (Zhao, 2019; Ghaleb, 2024). The emergence of positive, interaction-driven creativity outcomes indicates a shift toward more dialogic and student-centered learning cultures in arts education.

The study also highlights the value of digital transformation in creative pedagogy. By fostering structured yet flexible online knowledge-sharing spaces, institutions can encourage continuous creative dialogue beyond physical classrooms, aligning with post-pandemic educational reforms and the growing digital literacy of art students.

Practical Implications

The findings of this study yield several important practical implications for theatre educators, curriculum designers, and higher education policymakers in China and beyond. The positive and significant effects of both classroom interaction and online knowledge sharing on student creativity emphasize the importance of creating learning environments that encourage active participation and collaboration. In theatre education, creativity does not emerge in isolation but rather through social exchange, reflection, and co-creation. Therefore, instructors should design classroom activities that stimulate dialogue, peer critique, and collective problem-solving. Encouraging students to work together on performance interpretation, improvisation, and creative storytelling can help transform the classroom into a space of dynamic artistic exploration.

Equally significant is the role of digital engagement. The stronger effect of online knowledge sharing suggests that integrating technology into arts education can greatly enhance creative expression and learning continuity. Educators should leverage online platforms such as WeChat, Douyin, or university learning management systems to facilitate ongoing discussions, video sharing, and feedback exchanges among students. These tools allow learners to showcase their creative work, receive peer evaluations, and gain exposure to diverse artistic perspectives. Such digital spaces also extend the boundaries of the classroom, enabling sustained learning and creative collaboration beyond scheduled sessions.

Furthermore, institutions should invest in professional development programs that prepare educators to adopt hybrid pedagogical approaches, combining traditional performance instruction with interactive digital methods. Training in digital pedagogy can help instructors manage online discussions effectively, assess creativity in multimedia formats, and cultivate students' digital literacy alongside artistic skill. Administrators may also consider implementing interdisciplinary workshops where theatre, film, music, and design students collaborate through both physical and virtual media. This cross-disciplinary engagement encourages innovation and helps students develop the collaborative competencies demanded by contemporary creative industries.

Finally, policymakers and curriculum planners should recognize creativity as a core competency in arts education and integrate digital collaboration as a formal component of

teaching and assessment. By supporting interactive, technology-enabled, and student-centred pedagogies, higher education institutions can nurture a generation of theatre professionals who are not only artistically skilled but also digitally adaptive and globally connected. Collectively, these practical measures can transform the learning experience into one that is participatory, networked, and conducive to sustained creative growth.

CONCLUSION AND FUTURE RESEARCH DIRECTIONS

This study investigated the effects of classroom interaction and online knowledge sharing on student creativity among theatre students in Beijing, integrating Constructivist Learning Theory and Social Cognitive Theory as the guiding frameworks. The findings revealed that both predictors exert significant and positive influences on creativity, with online knowledge sharing emerging as the stronger determinant. These results confirm that creativity in arts education is deeply shaped by social and cognitive processes that occur through interactive participation, reflective dialogue, and the digital exchange of ideas.

The results reinforce the premise that constructive learning environments—characterized by active communication and peer collaboration—are vital to stimulating creative thought. Within the theatre context, interaction provides opportunities for students to negotiate meaning, explore emotional expression, and refine performance through feedback. Equally, the role of online knowledge sharing reflects the growing integration of digital technology into creative pedagogy. By engaging with peers on social platforms, students gain access to broader artistic perspectives and learn to adapt their creative ideas through observation and emulation. Collectively, these mechanisms enhance both the cognitive and affective dimensions of creativity, supporting a holistic model of artistic development.

From a theoretical standpoint, this research contributes to creativity studies by demonstrating how constructivist and social cognitive paradigms intersect within performing arts education. It highlights that creativity arises not solely from individual capacity but also from the social and digital ecosystems that nurture idea generation and experimentation. The study adds to the limited body of empirical evidence on creativity development in Chinese higher education, providing localized insights into how interactive learning and digital engagement are transforming traditional theatre pedagogy.

Practically, the findings urge theatre educators to cultivate interactive classroom climates and embed online collaboration into course design. Blended and hybrid models of instruction should be promoted to sustain creative engagement both inside and outside the classroom. Institutional policies that encourage interdisciplinary collaboration, digital resource sharing, and creative evaluation systems can further support innovation-driven education. Such measures align with China's broader educational reforms aimed at enhancing creative competence in response to global cultural and technological shifts.

Despite its contributions, this study is not without limitations. The cross-sectional design restricts causal inference, and the sample was limited to theatre students in Beijing, which may limit generalizability. Future studies could adopt longitudinal or mixed method designs to explore how creative skills evolve over time and under varying instructional contexts. Further research could also incorporate mediating variables such as aesthetic ability, creative self-efficacy, or digital engagement intensity to deepen understanding of the mechanisms linking interactivity and creativity.

In conclusion, this study underscores that creativity in the performing arts thrives through meaningful interaction and knowledge sharing—both face-to-face and online. By embracing pedagogies that merge human connection with technological affordances, theatre education can cultivate the next generation of artists who are imaginative, adaptive, and responsive to the evolving digital era.

REFERENCES

1. Aguilera, D., & Ortiz-Revilla, J. (2021). STEM vs. STEAM Education and Student Creativity: A Systematic Literature Review. Education Sciences, 11(7), 331. https://doi.org/10.3390/educsci11070331
2. Al-Dokhny, A., Drwish, A., Alyoussef, I., & Al-Abdullatif, A. (2021). *Students' intentions to use distance education platforms: Expanding the Technology Acceptance Model through Social Cognitive Theory.* Electronics, 10(23), 2992.
3. Ansari, J. A. N., & Khan, N. A. (2020). Exploring the role of social media in collaborative learning – the new domain of learning. Smart Learning Environments, 7(1), 1–16. https://slejournal.springeropen.com/articles/10.1186/s40561-020-00118-7
4. Bandura, A. (2001). *Social Cognitive Theory: An agentic perspective.* Annual Review of Psychology, 52(1), 1–26.
5. Brewer, J., Newman, I., & Benz, C. R. (1998). *Qualitative-Quantitative Research Methodology.* Contemporary Sociology, 28(2), 245.
6. Chambers, J. A. (1973). *College teachers: Their effect on creativity of students.* Journal of Educational Psychology, 65(3), 326–334.
7. Chuang, S. (2021). The applications of constructivist learning theory and social learning theory on adult continuous development. Performance Improvement, 60(3), 6–14.

8. Hein, G. E. (1991). *Constructivist Learning Theory.* Institute for Inquiry.
9. Johnson, D. W., & Johnson, R. T. (1989). *Cooperation and Competition: Theory and Research.* Interaction Book Company.
10. Khan, M. N., Ashraf, M. A., Seinen, D., Khan, K. U., & Laar, R. A. (2021). Social Media for Knowledge Acquisition and Dissemination: The Impact of the COVID-19 Pandemic on Collaborative Learning Driven Social Media Adoption. Frontiers in Psychology, 12. https://doi.org/10.3389/fpsyg.2021.648253
11. Krejcie, R. V., & Morgan, D. W. (1970). *Determining sample size for research activities.* Educational and Psychological Measurement, 30(3), 607–610.
12. Luszczynska, A., & Schwarzer, R. (2015). *Social Cognitive Theory.* In *Fac Health Sci Publ* (pp. 225–251).
13. Luszczynska, A., & Schwarzer, R. (2015). *Social Cognitive Theory.* In *Fac Health Sci Publ* (pp. 225–251).
14. Ma, W. W. K., & Yuen, A. H. K. (2011). Understanding online knowledge sharing: An interpersonal relationship perspective. Computers & Education, 56(1), 210–219. https://doi.org/10.1016/j.compedu.2010.08.004
15. Melnikovas, A. (2018). *Adapting the research onion for futures studies.* Journal of Futures Studies, 23(2), 29–44.
16. Ouakouak, M. L., & Ouedraogo, N. (2017). *Antecedents of employee creativity and organisational innovation: An empirical study.* International Journal of Innovation Management, 21(07), 1750060.
17. Park, Y. S., Konge, L., & Artino, A. R. (2020). *The positivism paradigm of research.* Academic Medicine, 95(5), 690–694.
18. Rana, N. P., & Dwivedi, Y. K. (2015). *Citizen's adoption of an e-government system: Validating extended Social Cognitive Theory.* Government Information Quarterly, 32(2), 172–181.
19. Rana, N. P., & Dwivedi, Y. K. (2015). *Citizen's adoption of an e-government system: Validating extended Social Cognitive Theory (SCT).* Government Information Quarterly, 32(2), 172–181.
20. Rowan-Kenyon, H. T., Martínez Alemán, A. M., Gin, K., Blakeley, B., Gismondi, A., Lewis, J., McCready, A., Zepp, D., & Knight, S. (2016). *Social Media in Higher Education.* ASHE Higher Education Report, 42(5), 7–128. https://doi.org/10.1002/aehe.20103
21. Sabah, N. M. (2022). *The Impact of Social Media-Based Collaborative Learning Environments on Students' Use Outcomes in Higher Education.* International Journal of Human–Computer Interaction, 1–23.
22. Salmon, G., Ross, B., Pechenkina, E., & Chase, A.-M. (2015). The space for social media in structured online learning. Research in Learning Technology, 23(1), 28507. https://doi.org/10.3402/rlt.v23.28507
23. Slavin, R. E. (1996). *Research on Cooperative Learning and Achievement: What We Know, What We Need to Know.* Contemporary Educational Psychology, 21(1), 43–69.
24. Srikan, P., Pimdee, P., Leekitchwatana, P., & Narabin, A. (2021). *A Problem-Based Learning and Teaching Model using a Cloud-Based Constructivist Learning Environment to Enhance Creative Thinking.* International Journal of Interactive Mobile Technologies, 15(22), 68–80.
25. Straub, D., & Gefen, D. (2004). *Validation guidelines for IS positivist research.* Communications of the AIS, 13, 380–427.
26. Sun, Y., Wang, C., & Jeyaraj, A. (2020). Enterprise social media affordances as enablers of knowledge transfer and creative performance: An empirical study. Telematics and Informatics, 51, 101402. https://doi.org/10.1016/j.tele.2020.101402
27. Turner, J. H., & Bryant, C. G. A. (1986). *Positivism in social theory and research.* Social Forces, 65(2), 567.
28. Vilarinho-Pereira, D. R., Koehler, A. A., & de Souza Fleith, D. (2021). Understanding the Use of Social Media to Foster Student Creativity: A Systematic Literature Review. Creativity: Theories – Research – Applications, 8(1), 124–147. https://doi.org/10.2478/ctra-2021-0009
29. Wood, D., Bruner, J. S., & Ross, G. (1976). *The role of tutoring in problem solving.* Journal of Child Psychology and Psychiatry, 17, 89–100.
30. Wu, Y., Xue, Y., Zhao, X., Han, S.-B., & Wu, W. (2024). Unravelling the veil of appearance anxiety: Exploring social media use among Chinese young people. BMC Psychology, 12(1). https://doi.org/10.1186/s40359-023-01495-7
31. Zajda, J. (2023). *Social Constructivism to Improve Students' Motivation.* In *Globalisation and Dominant Models of Motivation Theories in Education* (pp. 63–79). Springer Nature Switzerland.
32. Zhang, X., Cheng, L., Dai, D. Y., Tong, W., & Hu, W. (2020). Adolescents with different profiles of scientific versus artistic creativity: Similarity and difference in cognitive control. Thinking Skills and Creativity, 37, 100688. https://doi.org/10.1016/j.tsc.2020.100688
33. Zhao, W. (2019). *Epistemological flashpoint in China's classroom reform: (How) can a "Confucian do-after-me pedagogy" cultivate critical thinking?* Journal of Curriculum Studies, 52(1), 101–117.