The Effects of Creative Dance Courses on Learning Motivation among Sophomore Dance Students in Chengdu: A Study Based on Self-Determination Theory and the Theory of Multiple Intelligences

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Abstract

This study investigated the impact of creative dance courses on the learning motivation of sophomore dance students in Chinese higher education, using Self-Determination Theory (SDT) and Multiple Intelligences (MI) as a framework. A mixed-methods study incorporated survey data from 300 students and thematic interviews with 15 participants. The findings demonstrated that creative dance dramatically increased intrinsic motivation through autonomy and competence fulfillment, while also enhancing extrinsic motivation, especially among male students. Gender appeared as a significant moderator, with female students responding more to intrinsic drivers like emotional expression and male students being more impacted by recognition and performance rewards. Further analysis revealed genre-specific differences, with ballet associated with increased extrinsic drive, contemporary dance fostering intrinsic engagement, and folk dance enhancing both cultural identity and teamwork. Qualitative research verified these tendencies, with emotional release, peer collaboration, and teacher feedback serving as significant motivators. The findings expand on SDT and MI theory by illustrating how creative dance engages numerous motivational pathways, with practical implications for building gender-responsive, genre-specific, and autonomy-supportive pedagogy in Chinese higher education.

Keywords: Creative Dance Education; Learning Motivation; Self-Determination Theory; Multiple Intelligences; Gender Differences

Introduction

Creative dance has evolved as an effective teaching tool that encourages expression, inventiveness, and teamwork. Unlike traditional technique–based training, it allows students to move freely, engage emotionally with the subject, and improve their cognitive and social skills. While widely used in global arts education to encourage autonomy and resilience, its position in Chinese higher education is limited. Investigating how creative dance improves academic achievements and student well–being coincides with the larger goals of educational reform.

Chinese dance programs continue to emphasize technical practice, standardized choreography, and performance grading, which promote competence but frequently overlook self–expression and psychological requirements. Current reforms advocate for more student–centered and emotionally supportive approaches, with creative dance positioned as a way to balance technical skill with creativity, cultural identity, and lifetime involvement in the arts.

Self–Determination Theory (SDT) and Multiple Intelligences (MI) provide a framework for investigating how creative dance affects learning motivation. SDT emphasizes autonomy, competence, and relatedness, whereas MI focuses on bodily–kinesthetic and interpersonal intelligences, both of which are important in dance education. Together, they argue that creative dancing improves technical skill, psychological growth, and social connection. However, research on creative dance in Chinese higher education is limited, particularly on motivation and gender disparities. This study fills these gaps by investigating how creative dance influences learning motivation among sophomore dance students in Chengdu, utilizing SDT and MI as guiding theories.

Literature Review

Self–Determination Theory (SDT) is a popular framework for understanding student motivation, emphasizing autonomy, competence, and relatedness as prerequisites for intrinsic engagement (Deci & Ryan, 1985, 2000). These needs are met in creative dance through independent movement choices, mastery–promoting feedback, and group collaboration, all of which foster higher intrinsic motivation and reduce anxiety when compared to rigid, externally controlled training (Chen & Zhang, 2022; Flanagan & Gregory, 2015).

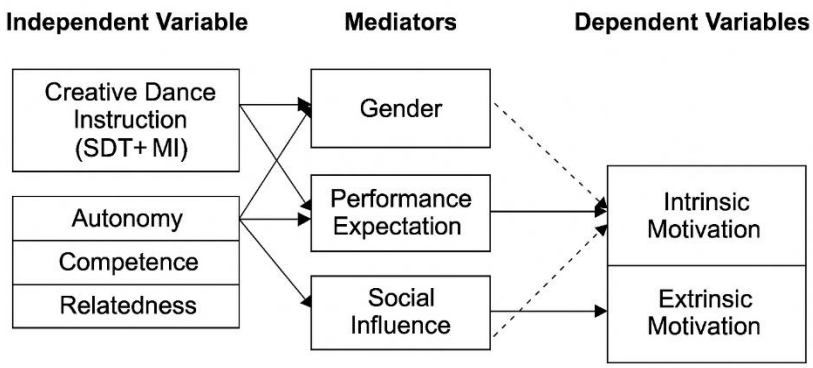
Gardner's Multiple Intelligences (MI) theory supports SDT by emphasizing bodily–kinesthetic and interpersonal intelligences, all of which are essential for dance learning (Gardner, 1983). According to research, bodily–kinesthetic intelligence promotes adaptation and improvisation, whereas interpersonal intelligence fosters empathy and collaboration (Dai & Sun, 2021; Miller & Kang, 2024). MI–based techniques have been connected to increased self–awareness, expressiveness, and communication, resulting in higher learning satisfaction and motivation (Wang & Chen, 2025). Together, SDT and MI present creative dance as a complete concept that incorporates both technical and psychological development.

Gender influences motivational tendencies in dancing. According to research, female students are more likely to exhibit internal drive and sustained interest, whereas male students respond more to external rewards and competitive recognition. These differences imply that various genders may perceive identical learning situations differently, highlighting the importance of gender–responsive pedagogy in ensuring equal participation.

Despite the importance of SDT, MI, and gender perspectives, research on creative dance in Chinese higher education is still restricted. Existing research focuses mostly on creative outcomes, mental health, or technical performance (Liu & Tang, 2024; Zhang & Liu, 2024; Sayers, 2025), without explicitly examining motivational processes. The current study tackles this gap by combining SDT and MI in an integrated framework to investigate how creative dance improves learning motivation among sophomore students in Chengdu, with a focus on gender differences.

Conceptual Framework

Based on Self–Determination Theory (Deci & Ryan, 1985) and Multiple Intelligences Theory (Gardner, 1983), the conceptual framework demonstrates how creative dance courses influence student motivation by meeting psychological needs and activating bodily–kinesthetic and interpersonal intelligences. Gender and dancing genre serve as moderating variables, influencing the level and direction of drive. The theory posits that creative dance training boosts both internal and extrinsic motivation by increasing autonomy, competence, and relatedness while also engaging key intelligences associated with various dance genres and learner preferences.



Research Methodology

1. Population and Sample

The study sample included sophomore dance students enrolled in creative dance classes at three public institutions in Chengdu, China. A total of 300 students were chosen using stratified sampling to represent institutional diversity. Eligibility required at least one semester of creative dance experience to guarantee that participants had adequate exposure to the curriculum. For the qualitative component, 15 students (8 female, 7 male) were recruited using maximum variation sampling to gather varied opinions based on gender, dance genre, and academic background.

2. Data Collection

A systematic questionnaire derived from established SDT–based scales was used to collect quantitative data, evaluating intrinsic and extrinsic motivation, and autonomy, competence, and relatedness, using 3–6 items on a 5–point Likert scale. A pilot test with 30 students validated clarity and reliability (Cronbach's alpha >.80), and the entire dataset was analyzed in SPSS 26.0 and AMOS 24.0 using structural equation modeling (SEM), with gender serving as a moderator. Qualitative data were gathered by 30–45 minute semi–structured interviews in studio classes, facilitated by SDT and MI. All interviews were consent–based, transcribed verbatim, and thematically analyzed using Braun and Clarke's framework; two researchers coded independently with over 85% intercoder agreement, and findings were revised through peer debriefing to ensure rigor.

3. Instrument Reliability and Validity

A pilot study of 30 sophomore students was undertaken to assess reliability and validity. Cronbach's alpha values above 0.80 for all subscales, indicating high internal consistency. Exploratory

factor analysis confirmed construct validity (KMO = 0.871; Bartlett's test p <.001; factor loadings > 0.60). Five academic specialists in dance instruction reviewed the content and made minor adjustments to assure its legitimacy. Together, these procedures demonstrated that the questionnaire was reliable and adequate for the primary study.

4. Ethical Approval and Consent Procedures

The Academic Ethics Committee of the Dance College, Sichuan Conservatory of Music, approved this study on September 10, 2024 (IRB Number: SCM2024–EDU–009). Before data collection, participants were given written informed consent forms that explained the study's aims, voluntary participation, withdrawal rights, and confidentiality. Explicit agreement was obtained for interview recordings. All procedures adhered to the Declaration of Helsinki and institutional ethics.

5. Data Analysis

Quantitative data was examined with SPSS 26.0 and AMOS 24.0. Descriptive statistics were initially computed, followed by structural equation modeling (SEM) to investigate the direct and indirect effects of creative dance on internal and extrinsic motivation, with gender serving as a moderator. Model fit was evaluated using indices like CFI and RMSEA. Qualitative data from interviews was transcribed and processed thematically using Braun and Clarke's six–phase framework. Two researchers coded independently, with intercoder agreement over 85%, and peer debriefing was employed to fine–tune interpretations and assure analytic rigor.

Research Results

Structural equation modeling (SEM) was used to investigate the links between creative dance training, psychological requirements (autonomy, competence, relatedness), learning motivation (intrinsic and extrinsic), and performance results. The model fit well (CFI = 0.90–0.95; RMSEA = 0.05–0.07) and identified mediating and moderating pathways between instructional design and learner attributes.

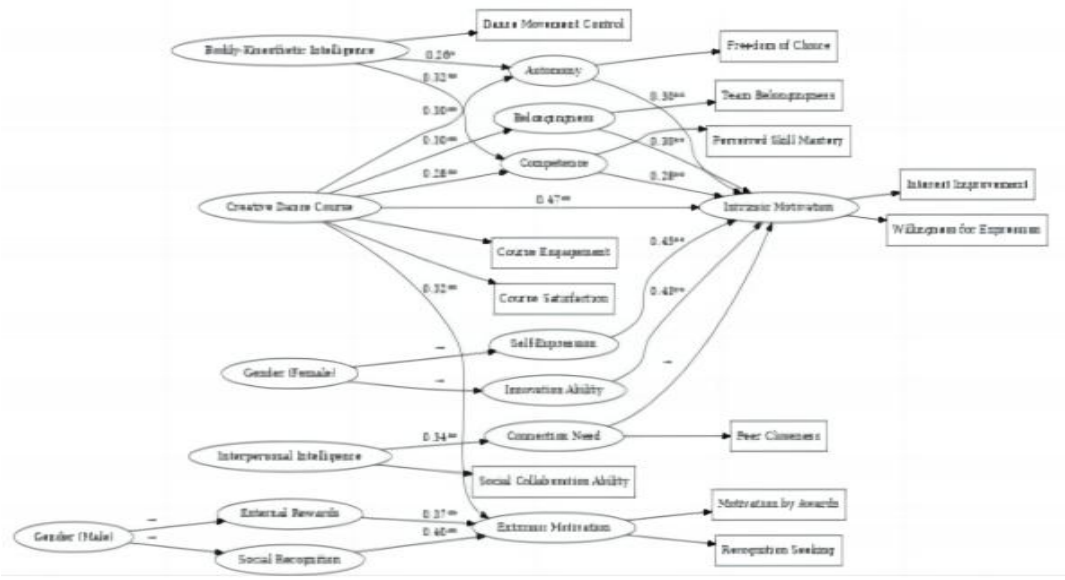


Figure 1 Structural equation model

A summary of the four hypotheses tested showed each was supported.

Hypothesis	Description	β Value	p Value	Support
H1	Creative dance courses significantly affect intrinsic and extrinsic motivation	0.45	<0.01	Supported
H2	Basic psychological needs mediate the effect of creative dance on motivation	–	<0.05	Supported
H3	Gender moderates the relationship between dance courses and motivation	0.35	<0.01	Supported
H4	Different dance types have differentiated effects on intrinsic and extrinsic motivation	0.4	<0.01	Supported

Table 1 Hypothesis Testing results & Descriptive Statistics of key variables (N=300)

Descriptive statistics revealed excellent student motivation, with intrinsic motivation (M = 4.12, SD = 0.57) outpacing extrinsic motivation (M = 3.76, SD = 0.63). Autonomy received the highest score (M = 4.05), followed by competence (M = 3.98) and relatedness (M = 3.91). A G*Power analysis indicated that the sample size (N = 300) was adequate, and reliability and validity tests supported the model structure.

Regression analysis revealed that creative dancing has a significant impact on both inner and extrinsic motivation. Intrinsic motivation was significantly more impacted (β = 0.45, p <.01) than extrinsic motivation (β = 0.30, p <.05), with both pathways exhibiting good fit (CFI = 0.92–0.95; RMSEA = 0.05–0.07).

Path	β value	Fit index
Creative dance course → Intrinsic motivation	0.45	= 0.92, RMSEA = 0.07
Creative dance course → Extrinsic motivation	0.30	= 0.95, RMSEA = 0.05

Table 2 Results of direct effect analysis

These findings indicate that creative dance classes are more effective at encouraging self-expression, engagement, and autonomy than at eliciting external motivational cues like reward or recognition.

Gender-based moderation indicated different motivational processes. Male students reported stronger extrinsic motivation (β = 0.35, p <.01), but female students reported higher intrinsic motivation (β = 0.50, p <.01). Both gender-specific models had good fit (CFI = 0.92–0.93; RMSEA = 0.05–0.06).

support differentiated motivational needs in creative dance education.

Path	β value	value	Fit index
Male students: Influence of extrinsic motivation	0.35	<0.01	= 0.92, RMSEA = 0.05
Female students: Influence of intrinsic motivation	0.50	<0.01	= 0.93, RMSEA = 0.06

Table 3 Results of gender moderation effect analysis

Effects that were distinctive to a genre also emerged. Ballet had stronger extrinsic drive (β = 0.28, p <.01), while modern dance had more intrinsic motivation (β = 0.40, p <.01), and folk dance had both intrinsic and extrinsic motivation (β = 0.35, p <.05). All models have an acceptable fit (CFI > 0.90; RMSEA < 0.08).

Dance type	β value	p value	Motivation type	Fit index
Ballet	0.28	<0.01	Extrinsic motivation	CFI = 0.90, RMSEA = 0.07
Modern dance	0.40	<0.01	Intrinsic motivation	CFI = 0.93, RMSEA = 0.06
Folk dance	0.35	<0.05	Internal and extrinsic motivation combined	CFI = 0.91, RMSEA = 0.07

Table 4 The impact of different dance types on motivation

The qualitative study supported the quantitative findings by emphasizing the psychological mechanisms that drive motivation in creative dance. Students regularly identified autonomy, creativity, and enjoyment as key components of intrinsic drive, with statements like "I can dance whatever I want" and "I feel like I am truly myself when dancing freely." They also said inventing innovative moves and participating in less demanding lessons made the courses more fulfilling. Simultaneously, important extrinsic motivators included peer collaboration, teacher appreciation, and stage performance. Statements such as "We had such a great rhythm designing dances together" and "I feel proud and shining on stage" demonstrated how social identity and external validation fueled students' desire to engage and succeed.

Discussion

This study used structural equation modeling (SEM) and qualitative topic analysis to investigate the motivational effects of creative dance education. The findings indicated that creative dance considerably promotes both intrinsic and extrinsic motivation in students, with subtle variations depending on gender and dance genre.

The quantitative findings revealed that students' intrinsic drive was most powerfully aroused when they participated in improvisation and personal choreography. These kinds of expression corresponded to the three psychological demands identified in Self–Determination Theory (SDT): autonomy, competence, and relatedness. The SEM results revealed significant route coefficients, confirming the favorable association between creative dance instruction and intrinsic involvement.

Students expressed a sense of ownership, satisfaction, and independence in shaping their learning, highlighting the significance of autonomy–supportive environments.

Extrinsic motivation was also positively affected, especially among male pupils. Structured dance, stage performance, and teacher feedback provided environments in which recognition, achievement, and external rewards encouraged effort. Although intrinsic motivation remained greater overall, the introduction of extrinsic motivation increased participation in performance–based tasks, particularly among male students who were more responsive to competitive or recognition–based incentives.

The study also discovered substantial gender differences. Female students reported higher emotional and aesthetic ties to dancing, resulting in increased intrinsic drive. Male pupils, on the other hand, were more open to structured expectations, praise, and goal–oriented feedback. These findings indicate that various teaching strategies are required to address diverse motivational demands among genders.

Motivational impacts differed depending on the dance genre. Ballet teaching enhances extrinsic motivation because it emphasizes skill and discipline. Modern dance, which emphasizes customization and innovation, was the most successful at increasing intrinsic motivation. Folk dancing influenced both types of motivation by blending cultural identification and group dynamics. These distinctions mean that educators should choose or balance dancing forms based on the motivational effects they hope to achieve.

Conclusions

This study found that creative dance instruction in higher education improves various aspects of student motivation. Creative dance addresses key psychological requirements by encouraging autonomy, creativity, emotional expression, and social interaction, and increasing both internal and external learning engagement.

The findings support Self–Determination Theory in the context of dance education and broaden its application by including dance genre and gender as moderating variables. The study also provides empirical evidence for Howard Gardner's theory of multiple intelligences, namely kinesthetic and

interpersonal intelligences, since students displayed improved body awareness, teamwork, and introspective insight.

By finding both universal and varied motivational pathways, the study suggests a layered model of dance education that incorporates individual strengths, social context, and artistic design. These contributions provide a more detailed, context-sensitive explanation of motivation in aesthetic learning contexts.

Suggestions

1. Teachers should use open-ended activities like improvisation, spontaneous dance, and student-led choreography. These approaches encourage student autonomy, boost intrinsic motivation, and foster a sense of control and engagement in the learning process.

2. Gender-based motivational differences should be considered when designing teaching approaches. Boys respond better to task-oriented feedback and achievement systems, but girls are more motivated by emotional expression and collaborative learning. Differentiated educational tactics are required to satisfy various demands.

3. Dance course design should incorporate a number of genres to elicit a range of motivated responses. Ballet promotes technical discipline and extrinsic drive, whereas modern dance encourages creativity and intrinsic engagement. Folk dance promotes both cultural identity and group participation.

4. Group choreography, peer evaluation, and team performances are examples of collaborative learning structures that can help students develop interpersonal intelligence and a sense of belonging. These social components have a significant impact on student motivation and participation.

5. A supportive classroom environment should take precedence over performance-based pressure. Teachers should acknowledge individual work, encourage creative risk-taking, and discourage highly competitive techniques that may diminish students' innate passion in dancing.

6. The course should include reflective techniques such as journals, debates, and peer assessments. These activities assist students connect with their own motivations and promote the development of metacognitive skills during the learning process.

7. Creative dance education should be integrated with other disciplines in liberal arts and general education. Interdisciplinary integration with subjects such as psychology, education, and cultural studies can improve dance's cognitive, emotional, and social worth in addition to its physical performance.

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