Motivation, Learning Climate, and Student Engagement in Dance Education: A Conceptual Framework Grounded in Self-Determination Theory

Di Yang[a]*, Chiew Phaik Phee[b]

[a,b]*Malaysia University of Science and Technology (MUST), Block B, Encorp Strand Garden Office, No. 12, Jalan PJU 5/5, Kota Damansara, 47810 Petaling Jaya, Selangor, Malaysia*
[a]*Xinghai Conservatory of Music, Shahe Campus, No. 48, Xianlie Dongheng Road, Tianhe District, Guangzhou, Guangdong 510500, China*
[a]*Email: yang.di@phd.must.edu.my,* [b]*Email: cheryl.phee@must.edu.my*

Abstract

Dance education is a complex and embodied learning domain that integrates physical skill development, emotional expression, and cultural meaning-making. While prior research has examined motivation, learning climate, and student engagement independently, limited attention has been given to their integrated functioning within dance education, particularly in non-Western and collectivist contexts. Grounded in Self-Determination Theory (SDT), this conceptual article proposes an integrative framework that explains how motivational orientations and perceived learning climate jointly shape behavioral, cognitive, and emotional engagement among undergraduate dance students. Drawing on SDT, Astin's Theory of Involvement, and Kuh's Theory of Engagement, the article argues that autonomous motivation fosters deeper engagement, that autonomy- and relatedness-supportive learning climates directly enhance engagement, and that learning climate functions as a contextual amplifier of motivational processes. Special attention is given to dance education in collectivist cultural settings, where relatedness, group identity, and cultural heritage may intensify motivational and engagement dynamics.

By synthesizing existing literature and advancing theoretically grounded propositions, this article contributes to motivation and engagement theory, extends SDT into dance education, and offers pedagogical insights for culturally responsive teaching in higher education arts programs. Directions for future empirical research are also discussed.

Keywords: dance education; self-determination theory; learning climate; student engagement; motivation; conceptual framework.

1. Introduction

Dance education occupies a distinctive position within higher education due to its integration of physical discipline, artistic creativity, emotional expression, and cultural meaning-making. Unlike many academic disciplines that primarily emphasize cognitive knowledge acquisition, dance education requires sustained bodily engagement, affective involvement, reflective interpretation, and social interaction [1,2]. Students are expected not only to master technical skills but also to develop expressive capacity, aesthetic judgment, and artistic identity through embodied practice and performance [3]. As a result, learning in dance education is inherently complex, multidimensional, and deeply situated within both pedagogical and cultural contexts.

In recent decades, dance education has increasingly been institutionalized within universities worldwide, transitioning from conservatory-based or apprenticeship models to academically structured degree programs [4]. This shift has heightened scholarly interest in understanding the educational processes that support effective learning, persistence, and development among dance students. Within this context, student engagement has emerged as a central construct, widely recognized as a key predictor of learning quality, academic success, and retention in higher education [5]. However, engagement in dance education cannot be understood solely through conventional indicators such as attendance or task completion. Instead, it encompasses sustained physical effort in demanding training routines, cognitive engagement through reflective and interpretive processes, and emotional engagement rooted in enjoyment, passion, and a sense of belonging to the artistic community [6,7].

Motivation plays a particularly critical role in shaping engagement in dance education. Dance training is physically intensive, emotionally vulnerable, and often characterized by continuous evaluation and performance pressure [9]. Students must cope with fatigue, injury risk, self-doubt, and public scrutiny, while maintaining long-term commitment to artistic growth. Under such conditions, the quality of students' motivation—whether driven by intrinsic enjoyment, internalized values, external pressure, or obligation—has profound implications for how they engage with learning [8]. Research across educational and performance domains consistently shows that students who are autonomously motivated demonstrate greater persistence, deeper learning, and more positive emotional experiences than those whose motivation is controlled or externally regulated [10,11]. Despite this recognition, research on motivation in dance education remains relatively limited and fragmented. Existing studies have often focused on individual motivational factors, such as intrinsic interest or achievement goals, without sufficiently considering how these motivations interact with broader learning environments [12,13]. Recent investigations have begun to extend Self-Determination Theory to specialized contexts, including online dance education and university dancesport programs [31,32]. Moreover, much of the available literature is grounded in

Western, individualistic contexts, where autonomy is typically conceptualized as personal choice and self-expression [14]. This raises important questions about the applicability of existing motivational models to dance education in collectivist cultural settings, where group harmony, relational interdependence, and cultural continuity are emphasized [15].

Equally important to students' motivational experiences is the learning climate created by instructors and institutions. The learning climate encompasses instructional practices, interpersonal relationships, and normative expectations that shape how students experience learning [16]. In dance education, the learning climate is particularly influential due to the close physical proximity between instructors and students, the emotionally expressive nature of training, and the collaborative demands of ensemble performance [1]. Students' perceptions of instructor support, respect, and relational warmth can significantly affect their willingness to take creative risks, express emotions through movement, and remain engaged despite challenges [9]. A growing body of research across educational contexts indicates that supportive learning climates—characterized by autonomy support and relatedness support—enhance students' motivation and engagement [17,18]. Autonomy-supportive instructors encourage initiative, acknowledge students' perspectives, and provide meaningful rationales for learning activities, while relatedness-supportive environments foster a sense of belonging, mutual respect, and emotional safety [8]. Recent empirical work in Asian university settings has further highlighted the role of perceived teacher relatedness support in fostering learning motivation among dance students [32]. However, in dance education, these pedagogical dimensions are often underexamined, and their interaction with student motivation remains insufficiently theorized, particularly within higher education settings [13].

Furthermore, learning climates are not culturally neutral. Pedagogical practices and interpersonal norms are shaped by cultural values and traditions, influencing how autonomy, authority, and relatedness are understood and enacted [19]. In collectivist cultural contexts, such as many regions in China, relatedness support and collective identity may play a particularly salient role in shaping students' engagement [14]. Dance education in these contexts often serves as a medium for cultural transmission, reinforcing shared values, historical narratives, and group cohesion [20]. Students' engagement may therefore be driven not only by personal interest or career aspirations but also by a sense of cultural responsibility and collective belonging [15].

Guangdong Province provides a salient example of this dynamic. As a region with rich traditional dance heritage, including forms such as Yingge dance, Guangdong's undergraduate dance programs emphasize both technical training and cultural preservation [21]. Students are socialized into dance practices that embody regional identity and collective values, positioning dance education as both an artistic and cultural endeavor. Within such contexts, motivation and engagement are likely shaped by the interplay between individual psychological processes and culturally embedded learning environments. Yet, existing theories of motivation and engagement offer limited guidance for understanding these interactions.

Self-Determination Theory (SDT) provides a robust and widely validated framework for examining motivation in educational settings. By conceptualizing motivation along a continuum from intrinsic motivation to amotivation and emphasizing the role of psychological need satisfaction, SDT offers valuable insights into why students engage deeply or disengage from learning [8]. SDT has been successfully applied in physical education, sport,

and general education contexts, demonstrating strong explanatory power across domains [11]. However, its application to dance education—particularly within collectivist cultural settings—remains underdeveloped [9], although emerging studies have begun to explore its relevance in Asian higher education contexts [31,32].

In addition, while SDT highlights the importance of social contexts for motivation, existing applications often treat learning climate as a background variable rather than a central, interactive component of engagement. There is a need for conceptual models that explicitly integrate motivational orientations and learning climate to explain how engagement emerges and is sustained in complex learning environments such as dance education [16]. This integration is particularly important for performance-based disciplines, where emotional safety, relational trust, and cultural meaning are integral to learning.

Given these gaps, there is a clear need for a theory-driven, integrative perspective that brings together motivation, learning climate, and student engagement within dance education. Rather than offering incremental empirical findings, conceptual work is needed to synthesize existing literature, clarify relationships among key constructs, and articulate propositions that can guide future research and practice [22]. Conceptual articles play a critical role in advancing theory by identifying overlooked mechanisms, boundary conditions, and contextual factors that empirical studies may later test and refine.

Accordingly, the purpose of this conceptual article is to propose an integrative framework explaining how motivational orientations and perceived learning climate jointly shape behavioral, cognitive, and emotional engagement in undergraduate dance education. Grounded in Self-Determination Theory [8] and informed by Astin's Theory of Involvement [23] and Kuh's Theory of Engagement [5], the framework positions learning climate as both a direct contributor to engagement and a contextual moderator of motivational processes. Special attention is given to collectivist cultural contexts, where relational dynamics and cultural identity may intensify the effects of learning climate on motivation and engagement.

By advancing this framework, the article seeks to make three primary contributions. First, it extends motivation theory into dance education, an under-theorized domain characterized by embodied, emotional, and cultural learning. Second, it reconceptualizes learning climate as a dual pedagogical and cultural construct that shapes how motivation is translated into engagement. Third, it offers a culturally sensitive perspective on student engagement, highlighting the importance of relational and collective dimensions in higher education arts programs. Through these contributions, the article aims to provide a theoretical foundation for future empirical research and to inform pedagogical practices that foster meaningful, sustained engagement in dance education.

2. Theoretical Foundations of Motivation and Learning Climate

This section establishes the theoretical foundations underpinning the proposed conceptual framework by examining motivation and learning climate as core determinants of student engagement in dance education. Drawing primarily on Self-Determination Theory, the section first outlines key motivational processes relevant to higher education and performance-based learning. It then extends this discussion by conceptualizing motivation as an embodied and culturally situated process, emphasizing the role of bodily experience, emotional expression,

and cultural meaning in dance education. Finally, the section reconceptualizes learning climate as a cultural–pedagogical system that integrates instructional practices with relational and cultural dynamics. Together, these theoretical perspectives provide a comprehensive foundation for understanding how motivation and learning environments interact to shape engagement in embodied and culturally embedded educational contexts.

2.1 Self-Determination Theory and Motivation in Education

Self-Determination Theory (SDT) is one of the most influential and extensively validated frameworks for understanding human motivation in educational contexts [8,10]. Developed by Deci and Ryan, SDT conceptualizes motivation not merely in terms of its quantity but, more importantly, in terms of its quality—that is, the extent to which motivation is autonomous or controlled. This qualitative distinction is particularly relevant for learning environments that require sustained effort, emotional investment, and identity development, such as dance education [1,2].

While SDT has been extensively applied in physical education and sport psychology [9,11], its specific application to the nuanced domain of dance education requires deeper critical analysis. Previous studies in general education have established a clear link between autonomy-supportive teaching and student engagement [16,18]. However, these studies often prioritize cognitive outcomes, potentially overlooking the somatic and emotional dimensions unique to artistic training [1,3]. Within the limited scope of dance-specific research, Quested and Duda provided seminal longitudinal evidence linking basic psychological need satisfaction to the prevention of burnout among elite dancers [12]. Yet, this research focused primarily on well-being and health outcomes rather than the multidimensional construct of student engagement in higher education settings [5,7]. Furthermore, while recent studies have examined motivation in university dance and dancesport contexts [31,33], there remains a significant gap in understanding how these motivational processes interact with the broader learning climate in non-Western contexts. Most prior research treats motivation as an individual variable, isolated from the cultural–pedagogical system that shapes it [4]. At the core of SDT is the assumption that individuals possess three basic psychological needs—autonomy, competence, and relatedness—whose satisfaction is essential for optimal motivation, engagement, and well-being [8,25]. Autonomy refers to the experience of volition and psychological freedom in one's actions; competence involves feeling effective and capable of mastering challenges; and relatedness reflects a sense of belonging and connection with others. Educational environments that support these needs are more likely to foster autonomous forms of motivation, whereas environments that thwart these needs tend to elicit controlled motivation or a motivation [10,25].

SDT conceptualizes motivation along a self-determination continuum [8,10]. At the most self-determined end lies intrinsic motivation, whereby individuals engage in an activity for inherent enjoyment or interest. At the opposite end is amotivation, characterized by a lack of intention, perceived competence, or value, often resulting in disengagement or withdrawal. Between these extremes lie varying forms of extrinsic motivation. Identified regulation occurs when individuals accept the personal importance of an activity, while integrated regulation represents a fully internalized form where the activity aligns with one's values and sense of self. In contrast, introjected regulation involves internal pressures such as guilt, while external regulation is driven by rewards or punishments [24].

Research consistently demonstrates that autonomous motivation is associated with adaptive learning outcomes, including persistence, deep cognitive processing, and psychological well-being [16,23,25]. In contrast, controlled motivation is often linked to anxiety, emotional exhaustion, and surface-level engagement [12,24]. These patterns are particularly relevant for dance education, where learning relies on sustained physical practice and emotional vulnerability [1,13]. However, existing applications of SDT in dance have largely focused on Western contexts or treated motivation as an individual trait. This highlights the need for a model that accounts for how embodied learning and cultural values interact with psychological needs to shape motivation and engagement.

2.2 Motivation as an Embodied and Cultural Process

While Self-Determination Theory provides a robust framework for understanding the quality of motivation, its application to dance education requires an explicit consideration of embodiment and culture. Motivation in dance education cannot be fully understood as a purely cognitive or psychological construct; rather, it is deeply intertwined with bodily experience, emotional expression, social interaction, and cultural meaning [26,27].

Dance learning engages the body as both a medium and an object of learning, rendering motivation inseparable from physical sensation and affective states. Embodied cognition theories emphasize that cognitive processes are grounded in bodily action and lived experience [26,27]. In dance education, students' motivational experiences are shaped by how their bodies feel, move, and respond within instructional environments. Physical enjoyment, bodily mastery, fatigue, and pain all contribute to students' willingness to engage persistently [1]. Intrinsic motivation often emerges from embodied pleasure in movement and rhythmic synchrony, frequently described through the concept of flow [28]. Conversely, when bodily experiences are associated with discomfort, injury risk, or excessive emotional regulation, motivation may shift toward controlled forms, undermining engagement Reference [12,29,30].

Beyond embodiment, motivation in dance education is also culturally situated. Dance is a cultural practice carrying symbolic meanings, aesthetic values, and historical narratives [4,20]. Cultural psychology perspectives suggest that motivation is constructed through participation in culturally meaningful activities rather than solely through individual preference or choice [14,19]. In collectivist cultural contexts, motivation is often oriented toward relational goals, social responsibility, and cultural continuity rather than individual self-expression alone Reference [15,19]. Within such contexts, autonomous motivation may involve volitional participation in socially valued practices rather than independence from social norms [8].

For dance students, this may manifest as integrated regulation rooted in cultural identification, where engagement aligns with shared values and communal identity. Emerging research in Chinese dance education highlights how pedagogies emphasizing cultural transmission and heritage preservation foster experiences of autonomy and relatedness [20,21]. For example, in Guangdong Province, students may experience motivation as a responsibility to preserve regional dance heritage (e.g., Yingge dance), reflecting a culturally embedded form of integrated regulation [21].

Identity development represents another key dimension through which embodiment and culture shape motivation.

Dance students construct their identities through prolonged engagement with training and performance, gradually internalizing dance as part of their self-concept [1,2]. Cultural context further shapes this process by providing narratives that define what it means to be a dancer and what forms of dedication are valued [20]. Despite the importance of these dimensions, much motivation research continues to prioritize cognitive appraisals, overlooking the bodily and cultural realities of learning. Integrating embodiment and culture into motivational theory allows for a more nuanced understanding of how autonomous motivation is experienced and sustained in dance education.

2.3 Learning Climate as a Cultural–Pedagogical System

The learning climate represents a central contextual factor shaping students' motivational experiences and engagement in educational settings. Broadly defined, learning climate refers to students' perceptions of instructional practices, interpersonal relationships, and normative expectations within a learning environment Reference [16]. Rather than being a static backdrop, the learning climate functions as a dynamic system through which pedagogical strategies, social interactions, and cultural values are communicated and internalized. In dance education, where learning is embodied, relational, and expressive, the learning climate plays an especially influential role in shaping how students experience motivation and engagement.

From a Self-Determination Theory perspective, learning climates are evaluated in terms of their capacity to support or thwart students' basic psychological needs for autonomy, competence, and relatedness [8]. Autonomy-supportive climates acknowledge students' perspectives, provide meaningful rationales, and encourage initiative, while controlling climates rely on pressure, surveillance, and external regulation [10]. Competence-supportive environments offer optimal challenges, constructive feedback, and opportunities for skill mastery, whereas competence-thwarting climates emphasize criticism and social comparison. Relatedness-supportive climates foster warmth, trust, and belonging, enabling students to feel emotionally safe and socially connected.

In dance education, these dimensions of learning climate are deeply intertwined with pedagogical traditions and instructor–student relationships. Dance instruction often involves close physical proximity, direct bodily demonstration, and frequent performance evaluation, intensifying the emotional and relational aspects of learning Reference [1]. As a result, students' perceptions of instructor intentions, tone, and interpersonal sensitivity can significantly influence their motivational orientations. When instructors create environments characterized by respect, empathy, and encouragement, students are more likely to experience autonomous motivation and sustained engagement [12]. Recent explorations in ballet pedagogy have further illuminated how autonomy support—or its thwarting—manifests through interpersonal dynamics and instructional styles in hierarchical dance settings [12].

However, learning climate in dance education cannot be understood solely through pedagogical behaviors; it must also be situated within broader cultural frameworks. Pedagogical norms, power relations, and expectations of authority are culturally embedded, shaping how autonomy, discipline, and relationality are enacted and interpreted Reference [19]. In many dance traditions, particularly those rooted in collectivist cultures, hierarchical structures and strong instructor authority are normalized and even valued as mechanisms for transmitting cultural knowledge

and artistic standards [20]. Contemporary studies of Chinese tertiary dance educators highlight how these norms influence meanings of teaching, often prioritizing relational harmony and cultural transmission over individualized autonomy [21].

In collectivist contexts, such as Chinese higher education, learning climates often emphasize relational harmony, respect for authority, and collective responsibility [14]. Within these settings, autonomy support may not manifest as unrestricted choice but rather as guided participation in culturally meaningful practices. Students may experience autonomy through alignment with shared goals and values rather than through individual self-expression alone [8]. Consequently, learning climates that balance instructional authority with relational support may be particularly effective in fostering autonomous motivation. Empirical evidence from university dancesport programs in Asian contexts supports the heightened role of perceived teacher relatedness support in enhancing students' learning motivation [32].

Relatedness assumes heightened importance within collectivist learning climates. Dance education frequently involves ensemble work, synchronized movement, and shared performance goals, reinforcing collective identity and mutual dependence among students. A learning climate that promotes peer support, mutual respect, and collaborative learning can strengthen students' sense of belonging and emotional engagement [6]. Conversely, climates characterized by excessive competition or favoritism may undermine relatedness and contribute to anxiety or disengagement.

Competence support within dance education is also culturally mediated. Feedback practices, performance evaluations, and standards of excellence reflect cultural norms regarding effort, perseverance, and achievement. In some cultural contexts, critical feedback is perceived as a sign of care and commitment to excellence, while in others it may be experienced as discouraging or controlling [15]. Students' interpretations of competence-related feedback therefore depend on both pedagogical delivery and cultural framing.

Viewing learning climate as a cultural–pedagogical system highlights its role as an active mechanism shaping motivational internalization. Rather than merely influencing behavior, learning climates communicate values, expectations, and identities that students gradually adopt. Through repeated interactions, students learn what is valued, how success is defined, and what it means to be a competent and committed dancer within a particular cultural context [3].

Despite its importance, research on learning climate in dance education remains limited, with most studies focusing on isolated instructional behaviors rather than systemic interactions between pedagogy and culture [13]. Existing models often treat learning climate as a unidimensional construct, neglecting the ways in which cultural norms shape students' interpretations of instructional practices. This gap underscores the need for integrative conceptual frameworks that account for both pedagogical and cultural dimensions of learning climate.

Conceptualizing learning climate as a cultural–pedagogical system offers several advantages. First, it aligns with SDT's emphasis on social context while extending it to account for cultural variability. Second, it provides a foundation for understanding why similar instructional practices may yield different motivational outcomes across

cultural settings. Third, it clarifies how learning climates can moderate the relationship between students' motivational orientations and their engagement in learning.

In summary, learning climate in dance education functions as a culturally embedded pedagogical system that shapes students' motivation and engagement through its support of psychological needs, relational dynamics, and value transmission. Recognizing the cultural–pedagogical nature of learning climate is essential for developing theory-driven models of engagement in dance education and for informing instructional practices that foster meaningful, sustained participation in artistic learning.

3. Student Engagement in Dance Education

Building on the theoretical foundations outlined in the previous section, this section conceptualizes student engagement in dance education as a multidimensional construct encompassing behavioral, cognitive, and emotional dimensions. Recognizing the unique characteristics of dance learning, the section moves beyond traditional academic definitions of engagement to account for sustained physical effort, reflective meaning-making, and affective involvement. Each dimension of engagement is examined in relation to the embodied, expressive, and collaborative nature of dance education, highlighting how engagement manifests in performance-based learning environments. This multidimensional conceptualization provides a necessary basis for examining how motivation and learning climate influence engagement through distinct yet interrelated pathways.

3.1 Behavioral Engagement in Dance Education

Behavioral engagement refers to students' observable participation in learning activities, including effort, persistence, attendance, and active involvement in instructional tasks [6]. Within higher education, behavioral engagement has been consistently linked to academic achievement, skill development, and retention [5]. In dance education, behavioral engagement assumes heightened significance due to the physically demanding and practice-intensive nature of learning, where skill acquisition and artistic development depend on sustained bodily participation.In the context of dance education, behavioral engagement extends beyond mere presence in class to encompass active physical effort, disciplined practice routines, and commitment to rehearsal and performance schedules. Students are required to engage repeatedly in technically demanding movements, often under conditions of physical fatigue and time pressure. High levels of behavioral engagement are reflected in students' willingness to invest energy in practice, persist through technical challenges, and adhere to rigorous training expectations [3]. Recent studies in higher education dance programs have further emphasized how sustained physical participation contributes to holistic development, including motor competence and persistence in demanding training regimes [3,15].

Motivational quality plays a critical role in shaping behavioral engagement in dance education. Research grounded in Self-Determination Theory suggests that autonomously motivated students are more likely to demonstrate sustained effort and persistence, even when tasks are difficult or physically demanding [8]. In contrast, students whose engagement is driven primarily by external pressures, such as fear of negative evaluation or compulsory attendance requirements, may comply behaviorally in the short term but are less likely to sustain engagement over

time [10]. Emerging applications of SDT in specialized dance forms, such as hip-hop training at the university level, illustrate how autonomous motivation enhances physical persistence and behavioral adherence to intensive routines [15].

Behavioral engagement in dance education is also influenced by the learning climate. Autonomy-supportive and competence-supportive environments encourage students to take ownership of their learning and view effort as meaningful rather than obligatory [16]. Instructors who provide clear structure, constructive feedback, and opportunities for skill progression can enhance students' willingness to engage actively in training. Conversely, controlling climates characterized by excessive criticism or rigid enforcement of rules may undermine students' motivation and reduce genuine engagement [12].

The embodied nature of dance further distinguishes behavioral engagement from that observed in more cognitively oriented disciplines. Physical engagement involves not only observable effort but also kinaesthetic awareness, bodily discipline, and the management of physical strain. Students' engagement decisions are shaped by how their bodies respond to training demands, including experiences of pain, injury risk, and recovery [9]. When students perceive that instructors acknowledge and respect these embodied experiences, they are more likely to remain behaviorally engaged.

Cultural context also shapes behavioral engagement in dance education. In collectivist learning environments, engagement may be driven by shared responsibility to the group, respect for instructors, and commitment to collective performance goals [14]. Students may demonstrate high levels of behavioral engagement as an expression of group loyalty and cultural obligation, even when personal enjoyment fluctuates. While such engagement can support discipline and persistence, its sustainability depends on whether students also experience autonomy and relatedness within the learning climate [8]. Contemporary research on Chinese higher education folk dance programs highlights how culturally embedded practices reinforce behavioral commitment through collective identity and cultural transmission [20].

Despite its importance, behavioral engagement alone provides an incomplete picture of students' learning experiences in dance education. High levels of observable participation may coexist with low emotional investment or superficial cognitive processing. Therefore, behavioral engagement must be considered alongside cognitive and emotional dimensions to fully understand how students engage with dance learning. Recognizing the distinctive characteristics of behavioral engagement in dance education lays the foundation for examining its interaction with motivation, learning climate, and other forms of engagement in the subsequent sections.

3.2 Cognitive Engagement in Dance Education

Cognitive engagement refers to the degree to which students invest in understanding, processing, and meaning-making during learning activities. It encompasses the use of deep learning strategies, self-regulation, reflective thinking, and the willingness to exert mental effort to master complex tasks [6]. In higher education, cognitive engagement has been associated with conceptual understanding, critical thinking, and long-term knowledge retention [5]. Although dance education is often perceived as primarily physical, cognitive engagement plays a

critical role in supporting technical mastery, artistic interpretation, and creative development.

In dance education, cognitive engagement involves more than memorizing movement sequences or executing techniques. Students are required to interpret choreographic intent, analyze movement quality, and integrate feedback into embodied practice. Reflective processes such as self-evaluation, mental imagery, and problem-solving are central to refining performance and developing expressive nuance [2]. Recent investigations have highlighted the importance of these processes in higher education contexts, including the use of reflective practices among pre-service dance educators and the integration of mental imagery to enhance interpretive depth [2,16]. Cognitively engaged dance students actively consider how and why movements are performed, rather than merely replicating them.

Self-Determination Theory provides important insights into the motivational foundations of cognitive engagement. Autonomously motivated students are more likely to adopt deep learning strategies, seek understanding, and engage in self-regulated learning behaviors [8]. In dance education, intrinsic motivation and identified regulation may encourage students to explore movement possibilities, experiment with creative solutions, and reflect critically on their learning experiences. In contrast, controlled motivation may lead students to focus narrowly on meeting external expectations, limiting cognitive exploration and innovation [10]. Contemporary applications of SDT in technology-enhanced dance learning environments further demonstrate how autonomous motivation supports deeper cognitive processing and self-regulation [31].

Learning climate also plays a pivotal role in shaping cognitive engagement. Autonomy-supportive environments that encourage questioning, exploration, and personal interpretation can enhance students' willingness to engage cognitively with dance learning [16]. Instructors who invite students to reflect on movement choices, discuss artistic intentions, and articulate learning goals create conditions conducive to deeper cognitive processing. Conversely, highly prescriptive instructional approaches that prioritize imitation over understanding may restrict opportunities for cognitive engagement [1].

Cognitive engagement in dance education is further shaped by the embodied nature of learning. Mental processes are closely linked to bodily awareness, as students continuously adjust movements based on proprioceptive feedback and spatial perception [26]. Techniques such as mental rehearsal and imagery illustrate how cognitive strategies are integrated with physical practice to enhance performance quality [28]. Recent studies on embodied cognition in dance have reinforced this integration, showing how trait representations and kinesthetic feedback facilitate higher-order cognitive involvement during movement creation and interpretation [26,27]. These embodied cognitive processes highlight the inseparability of mind and body in dance learning.

Cultural context influences how cognitive engagement is expressed and valued. In collectivist educational settings, cognitive engagement may emphasize mastery of established forms, adherence to stylistic conventions, and understanding of cultural symbolism embedded in dance movements [20]. Students may engage cognitively by internalizing cultural narratives and aesthetic principles rather than by prioritizing individual experimentation. Such forms of engagement are not necessarily superficial but reflect culturally grounded approaches to learning and meaning-making [14].

Despite its importance, cognitive engagement in dance education has received limited empirical attention compared to behavioral engagement. Research has often focused on observable performance outcomes, overlooking the cognitive processes that underpin artistic development. A conceptual emphasis on cognitive engagement highlights the need to recognize reflective, interpretive, and self-regulatory dimensions of dance learning.

In summary, cognitive engagement in dance education involves sustained mental investment in understanding, interpreting, and refining embodied practice. It is shaped by motivational quality, instructional climate, embodied experience, and cultural context. Recognizing the central role of cognitive engagement provides a more comprehensive understanding of how students learn and develop within dance education and underscores the importance of pedagogical practices that support deep, reflective learning.

3.3 Emotional Engagement in Dance Education

Emotional engagement refers to students' affective responses to learning activities, including interest, enjoyment, enthusiasm, anxiety, and a sense of belonging [6]. Within higher education, emotional engagement is increasingly recognized as a critical component of learning, as emotions influence motivation, persistence, and cognitive processing [30]. In dance education, emotional engagement assumes a particularly central role because emotional expression is not only an outcome of learning but also a fundamental means through which learning occurs.

Dance education requires students to access, regulate, and communicate emotions through bodily movement. Students are often expected to convey narrative, mood, and expressive intention, making emotional involvement integral to performance and artistic development [1]. Positive emotional engagement, such as enjoyment, passion, and aesthetic pleasure, can enhance students' immersion in learning and reinforce autonomous motivation [28]. Recent investigations into affective engagement through choreography have demonstrated how structured creative processes amplify positive emotional responses and immersion [28]. Conversely, negative emotional experiences, including fear of evaluation, performance anxiety, and emotional exhaustion, may undermine engagement and well-being [9]. Studies examining the psychological costs of passion in dance highlight how intense emotional investment can lead to heightened anxiety and strain, particularly among dedicated students [9].

Self-Determination Theory offers a useful lens for understanding emotional engagement in dance education. Autonomous motivation is associated with more positive emotional experiences, including enjoyment, interest, and vitality, whereas controlled motivation is often linked to anxiety, tension, and emotional strain [8]. When students engage in dance learning because it aligns with their interests or values, emotional engagement tends to be more sustainable and enriching. In contrast, when engagement is driven by external pressures or fear of failure, emotional involvement may become burdensome rather than energizing [10].

The learning climate plays a crucial role in shaping emotional engagement. Relatedness-supportive environments characterized by warmth, trust, and respect can foster emotional safety, enabling students to express vulnerability and take creative risks [16]. In dance education, where students' bodies and emotions are publicly visible, emotional safety is essential for authentic expression and sustained engagement. Instructors who demonstrate

empathy, provide encouragement, and cultivate inclusive classroom norms can enhance students' emotional engagement and resilience [12].

Emotional engagement in dance education is also influenced by cultural context. Cultural norms shape how emotions are expressed, regulated, and valued within educational settings [14]. In collectivist cultures, emotional engagement may be closely tied to relational harmony and collective identity. Students may experience pride, responsibility, or emotional fulfillment through contributing to group performances and upholding cultural traditions [20]. Such emotionally grounded motivations can strengthen engagement, particularly when aligned with supportive learning climates.

At the same time, emotional demands in dance education can lead to emotional labor, defined as the regulation of emotions to meet expressive or professional expectations [29]. While emotional labor may enhance performance quality, it can also contribute to stress and burnout if not adequately supported. Empirical research among Chinese dance students has shown that emotional labor strategies mediate relationships between self-consciousness, work strain, and flow experiences, underscoring its significance in collectivist contexts [29]. Recent studies further indicate that effective emotion regulation in dance positively predicts expressive capacity and adaptive engagement [30]. Learning climates that acknowledge emotional challenges and provide coping resources can mitigate negative emotional outcomes and promote adaptive engagement [30].

Despite its importance, emotional engagement has often been underrepresented in models of student engagement, particularly in higher education arts disciplines. A conceptual focus on emotional engagement highlights the need to consider affective experiences as central, rather than peripheral, to learning in dance education. Emotional engagement interacts with behavioral and cognitive dimensions, shaping how students invest effort, process information, and persist over time.

In summary, emotional engagement in dance education encompasses students' affective involvement in learning, including enjoyment, anxiety, and a sense of belonging. It is shaped by motivational quality, learning climate, embodied experience, and cultural norms. Recognizing emotional engagement as a core dimension of dance learning provides a more holistic understanding of student engagement and sets the stage for examining how motivation and learning climate jointly influence engagement within an integrated conceptual framework.

4. Conceptual Framework Development

This section integrates motivation, learning climate, and student engagement into a coherent conceptual framework designed to explain engagement processes in undergraduate dance education. Drawing on Self-Determination Theory and engagement theory, the section first outlines motivational pathways to behavioral, cognitive, and emotional engagement. It then conceptualizes learning climate as both a direct predictor of engagement and a contextual condition that shapes how motivation is translated into engagement. Finally, the section advances a moderation perspective, proposing that the strength of motivation–engagement relationships depend on the degree to which learning climates support students' psychological needs and cultural identities. Together, these propositions form an integrative framework that captures the dynamic and context-sensitive nature

of engagement in embodied and culturally situated learning environments.

4.1 Motivational Pathways to Student Engagement

Motivation constitutes a primary psychological mechanism through which students' engagement in learning is initiated, sustained, and regulated. Within educational research, motivation is widely recognized as a foundational antecedent of behavioral, cognitive, and emotional engagement [6,5]. In dance education, where learning demands prolonged physical effort, emotional investment, and identity commitment, the nature of students' motivation is especially consequential for how engagement unfolds across its multiple dimensions.

Self-Determination Theory provides a nuanced account of motivational pathways by distinguishing between autonomous and controlled forms of motivation [8]. Autonomous motivation—including intrinsic motivation and well-internalized extrinsic motivation—supports engagement by fostering a sense of volition, meaning, and personal relevance. When students perceive dance learning as enjoyable, valuable, or aligned with their identities, they are more likely to invest sustained effort, engage in reflective practice, and experience positive emotions during learning. Controlled motivation, by contrast, relies on external pressure or internal compulsion and often results in compliance without genuine engagement [10].

In terms of behavioral engagement, autonomously motivated dance students are more likely to persist in physically demanding training, maintain disciplined practice routines, and remain committed despite setbacks such as fatigue or technical difficulty [11]. Because autonomous motivation is associated with personal endorsement of learning activities, effort is experienced as purposeful rather than obligatory. Controlled motivation may generate short-term behavioral compliance but is less likely to sustain long-term participation in the absence of external regulation.

Motivation also shapes cognitive engagement by influencing students' willingness to invest mental effort and adopt deep learning strategies. Autonomously motivated students are more inclined to engage in reflective thinking, problem-solving, and self-regulated learning, seeking to understand movement principles and artistic intent rather than merely reproducing choreography [8]. In contrast, controlled motivation may narrow students' focus to performance outcomes or instructor approval, limiting exploration and critical reflection [10].

Emotional engagement represents another key pathway through which motivation influences learning. Autonomous motivation is associated with positive affective experiences such as enjoyment, interest, and vitality, which enhance immersion in dance learning and reinforce continued participation [28]. Recent studies in university DanceSport programs have further demonstrated how harmonious passion, aligned with autonomous motivation, positively predicts multidimensional engagement, including emotional dimensions moderated by contextual factors [33]. Conversely, controlled motivation is often linked to anxiety, fear of evaluation, and emotional exhaustion, particularly in performance-oriented environments like dance education [9]. These emotional responses can either amplify or undermine students' overall engagement.

Importantly, motivational pathways to engagement in dance education are shaped by embodiment and cultural context. As discussed earlier, motivation in dance is grounded in bodily experience and cultural meaning.

Integrated regulation may be especially influential when students internalize dance as part of their artistic or cultural identity, leading to high levels of engagement across behavioral, cognitive, and emotional dimensions [3], Reference [20]. In collectivist contexts, motivation aligned with shared values and group goals may further strengthen engagement by connecting individual effort to collective purpose [14]. Emerging empirical work in need-supportive dance classrooms confirms that satisfaction of autonomy, competence, and relatedness needs amplifies these motivational pathways, resulting in heightened behavioral persistence and emotional vitality [12].

Despite strong theoretical support for motivation–engagement linkages, motivation alone does not fully explain variability in student engagement. Students with similar motivational orientations may display different levels of engagement depending on how learning environments support or constrain their psychological needs. This suggests that motivation operates within a broader contextual system, where pedagogical and cultural factors shape how motivational resources are translated into observable engagement.

Accordingly, this conceptual framework positions motivation as a proximal driver of student engagement while recognizing that its effects are contingent upon contextual conditions. Understanding motivational pathways to engagement provides a necessary foundation for examining how learning climate influences, amplifies, or attenuates these pathways—an issue addressed in the subsequent sections.

4.2 Learning Climate as a Direct Predictor of Student Engagement

Beyond its influence on students' motivation, the learning climate functions as a direct predictor of student engagement across behavioral, cognitive, and emotional dimensions. Educational research consistently demonstrates that students' perceptions of instructional practices and interpersonal relationships shape how they participate in and experience learning, independent of their initial motivational orientations [16,5]. In dance education, where learning is relational, embodied, and emotionally expressive, the learning climate exerts a particularly strong influence on engagement outcomes. Recent qualitative inquiries into needs-supportive dance classrooms have substantiated these direct effects, illustrating how supportive environments foster sustained participation and emotional investment [12].

Autonomy-supportive learning climates encourage students to take initiative, express personal interpretations, and feel a sense of ownership over their learning processes. When instructors acknowledge students' perspectives, offer meaningful choices, and provide rationales for training activities, students are more likely to engage actively and persistently in dance learning [8]. Such environments foster behavioral engagement by framing effort as self-endorsed rather than imposed, increasing students' willingness to invest physical energy in practice and rehearsal. Empirical examinations in ballet pedagogy further reveal that autonomy-supportive practices directly enhance initiative and expressive commitment, even in traditionally hierarchical settings [12].

Competence-supportive climates also play a critical role in shaping engagement. In dance education, skill acquisition requires incremental mastery and continuous feedback. Learning climates that provide clear structure, optimal challenges, and constructive feedback enhance students' perceptions of competence, which in turn supports sustained engagement [10]. When students feel capable of meeting technical and expressive demands,

they are more likely to engage cognitively with learning tasks and persist through difficulties [11].

Relatedness support is particularly salient in dance education due to the collaborative nature of training and performance. Learning climates characterized by warmth, trust, and mutual respect foster emotional engagement by creating a sense of belonging and emotional safety [16]. Students who feel valued and supported by instructors and peers are more willing to take creative risks, express vulnerability, and engage authentically with dance learning [12]. In contrast, climates marked by favoritism, harsh criticism, or social exclusion can undermine emotional engagement and lead to withdrawal or surface participation. Contemporary studies in university dancesport programs affirm that perceived teacher relatedness support directly promotes motivational and engagement outcomes in higher education dance contexts [32].

Cultural context further shapes how learning climate influences engagement. In collectivist educational settings, learning climates that emphasize relational harmony, collective goals, and shared responsibility may directly enhance engagement by aligning instructional practices with culturally valued norms [14]. For dance students, engagement may be strengthened when learning environments affirm cultural identity and emphasize the collective significance of performance [20]. Such climates can promote high levels of behavioral and emotional engagement even among students with varying individual motivations.

Importantly, learning climate effects are not limited to emotional or relational dimensions but extend to cognitive engagement as well. Instructional practices that encourage reflection, dialogue, and interpretive exploration create opportunities for deeper cognitive processing and meaning-making [16]. In dance education, inviting students to articulate movement intentions, reflect on performance experiences, and engage in peer feedback can directly enhance cognitive engagement.

In summary, the learning climate functions as a powerful contextual determinant of student engagement in dance education. Through its support of autonomy, competence, and relatedness, as well as its alignment with cultural values, the learning climate directly influences how students invest effort, process information, and experience emotions in learning. Recognizing the learning climate as a direct predictor of engagement underscores its central role in shaping educational outcomes and sets the stage for examining its interactive effects with motivation in the subsequent section.

4.3 Learning Climate as a Moderator of Motivation–Engagement Relationships

While motivation and learning climate each exert direct influences on student engagement, their effects are not independent. Rather, the learning climate shapes how students' motivational orientations are translated into behavioral, cognitive, and emotional engagement. Conceptualizing learning climate as a moderating factor provides a more dynamic and context-sensitive understanding of engagement processes, particularly in complex learning environments such as dance education [16,8].

From a Self-Determination Theory perspective, the impact of autonomous motivation on engagement is amplified when learning environments support students' basic psychological needs [10]. In autonomy-supportive climates, students who are intrinsically motivated or who have internalized the value of dance learning are afforded

opportunities to act on their motivational resources. Such environments enable motivated students to express initiative, explore creative interpretations, and persist through challenges, thereby strengthening the motivation–engagement linkage [11]. Recent qualitative analyses of needs-supportive dance classrooms illustrate this amplification, showing how supportive climates enhance the translation of autonomous motivation into deeper expressive and persistent engagement [13].

Conversely, in controlling or need-thwarting learning climates, even autonomously motivated students may experience constrained engagement. Excessive external control, rigid instructional practices, or lack of emotional support can suppress students' willingness to invest effort and take creative risks, weakening the positive effects of autonomous motivation [10]. In dance education, where emotional safety and expressive freedom are central to learning, unsupportive climates may prevent motivated students from fully engaging, particularly at emotional and cognitive levels. Explorations of autonomy thwarting in ballet teaching highlight how hierarchical or controlling styles diminish the benefits of existing motivation, leading to restricted creative and emotional involvement [12].

The moderating role of learning climate is also evident for controlled motivation. In supportive climates, students whose motivation is partially controlled may gradually internalize learning values, leading to improved engagement over time [8]. For example, students initially motivated by external expectations may come to identify with dance learning when instructors provide meaningful rationales and foster relational support. In contrast, in unsupportive climates, controlled motivation is more likely to result in surface-level engagement, compliance without commitment, or eventual disengagement [11].

This moderation logic is especially relevant in dance education due to its embodied and emotionally demanding nature. Students' willingness to engage physically and emotionally depends not only on their motivation but also on whether the learning climate permits vulnerability and creative expression. Learning climates characterized by trust, empathy, and respect can buffer the negative emotional effects of performance anxiety and evaluation pressure, enabling motivated students to remain engaged [9].

Cultural context further intensifies the moderating role of learning climate. In collectivist settings, learning climates that emphasize relational harmony, instructor care, and collective identity may strengthen the alignment between students' culturally grounded motivations and their engagement [14]. When learning environments affirm cultural values and provide relational support, motivation rooted in cultural identification is more likely to translate into sustained engagement [20]. Recent empirical work in university dancesport programs supports this, demonstrating how perceived teacher relatedness support moderates motivational pathways, particularly in relational-oriented cultural contexts [32]. Conversely, learning climates that disregard cultural norms may disrupt this alignment, weakening motivation–engagement relationships.

Importantly, the moderating effects of learning climate may vary across dimensions of engagement. Emotional engagement, in particular, is highly sensitive to relational and affective aspects of the learning environment. Cognitive engagement may be more strongly influenced by autonomy support and instructional structure, while behavioral engagement may depend on a combination of motivational quality and competence support.

Recognizing these differentiated pathways underscores the complexity of engagement processes in dance education.

In summary, learning climate functions not only as a direct predictor of engagement but also as a critical moderator that shapes how motivation is expressed in learning behavior, cognition, and emotion. By integrating motivation and learning climate within a moderation framework, this conceptual model offers a nuanced explanation of student engagement in dance education and provides a foundation for future empirical testing. This integrative perspective acknowledges that motivation alone is insufficient to sustain engagement without supportive contextual conditions, particularly in embodied and culturally situated learning environments.

5. Theoretical Contributions

This conceptual article makes several important theoretical contributions to the literature on motivation, learning climate, and student engagement, with particular relevance to dance education and other performance-based disciplines. By integrating Self-Determination Theory with engagement theory and situating these frameworks within embodied and cultural contexts, the article advances understanding in key areas.

5.1 Extending Motivation Theory to Embodied Arts Education

The article extends the application of Self-Determination Theory (SDT) to dance education by explicitly incorporating embodiment and emotional expression into motivational processes. While SDT has been widely applied in general education, physical education, and sport contexts [8,11], its use in dance education has remained limited and often fragmented. Recent empirical extensions, such as those exploring need support in dance classrooms and online contexts, have begun to address embodied dimensions [12,13]. This article addresses persistent gaps by conceptualizing motivation as an embodied process shaped by bodily experience, emotional labor, and artistic identity development.

By emphasizing how intrinsic motivation and integrated regulation are grounded in physical sensation, expressive flow, and cultural identification, the framework broadens SDT's explanatory scope beyond cognitively oriented learning activities. This contribution responds to calls for more context-sensitive applications of motivation theory that acknowledge the unique characteristics of creative and performance-based learning environments [9,13].

5.2 Reconceptualizing Learning Climate as a Cultural–Pedagogical System

This article reconceptualizes learning climate as a cultural–pedagogical system rather than a set of isolated instructional behaviors. Existing research often operationalizes learning climate narrowly, focusing on autonomy support or instructor behaviors without adequately considering cultural norms, power relations, and value transmission [16]. The present framework integrates pedagogical practices with cultural context, highlighting how learning climates communicate meanings about authority, belonging, and identity.

This reconceptualization advances theory by explaining why similar instructional practices may produce different motivational and engagement outcomes across cultural settings [14]. In collectivist contexts, autonomy support

may manifest through guided participation and relational alignment rather than individual choice, and relatedness support may play a more central role in sustaining engagement. Contemporary explorations in ballet and higher education dance pedagogy further illustrate these cultural variations in need support and thwarting [12,13]. By incorporating these cultural dimensions, the article provides a more nuanced and inclusive understanding of learning climate processes in higher education.

5.3 Clarifying the Mechanisms of the Moderated Model

A central theoretical output of this framework is the clarification of *how* learning climate acts as a "contextual amplifier" or "buffer." Previous engagement models have often treated context and individual traits as additive factors. The proposed framework clarifies that in dance education; the learning climate radically alters the *quality* of engagement derived from motivation.

Specifically, the framework proposes that:

- **The Amplification Effect:** For autonomously motivated students, a high relatedness-supportive climate does not merely add to engagement; it *amplifies* emotional engagement by validating the student's artistic identity. This clarifies why some highly motivated students still disengage in "cold" or highly competitive environments—motivation requires a supportive climate to be fully translated into engagement.
- **The Buffering Effect:** Crucially, the framework suggests that a positive learning climate can mitigate the negative effects of controlled motivation (e.g., external pressure). If a student is driven by external regulation (e.g., passing an exam), a supportive climate can facilitate the internalization of these external demands, gradually shifting them toward integrated regulation. This distinction offers a necessary clarification for dance educators: the goal is not just to "motivate" students, but to construct a climate that converts existing motivation into sustained, embodied engagement

5.4 Integrating Cultural Context into Engagement Theory

The article contributes to engagement theory by foregrounding the role of culture in shaping motivational internalization and engagement processes. Although engagement is often treated as a universal construct, cultural psychology research suggests that engagement is expressed and valued differently across cultural contexts [14]. By situating engagement within collectivist cultural settings, particularly Chinese dance education, the framework demonstrates how cultural values such as relational harmony, collective responsibility, and cultural continuity can intensify engagement when supported by appropriate learning climates [20].

This culturally grounded perspective enhances the theoretical relevance of engagement research for non-Western contexts and underscores the importance of culturally responsive pedagogy in higher education. It also opens avenues for comparative research examining how engagement processes vary across disciplines and cultural settings.

The framework further clarifies the "results" of integrating culture into SDT. While classic SDT posits universality, this framework suggests that the *means* of need satisfaction are culturally distinct. In the proposed

model, "Autonomy" in a collectivist dance context (e.g., Guangdong folk dance) is discussed not as "independence" but as "volitional alignment" with group goals. This theoretical distinction clarifies contradictory findings in previous studies where "strict" teaching styles in Asian contexts did not necessarily lead to disengagement, provided that relatedness support was high.

5.5 Summary of Contributions

In summary, this article contributes to theory by:

- extending motivation theory to embodied and artistic learning,
- reconceptualizing learning climate as a cultural–pedagogical system,
- advancing a moderated model of student engagement, and
- integrating cultural context into engagement theory.

Together, these contributions provide a coherent theoretical foundation for future empirical research and offer a conceptual lens for understanding engagement in complex, embodied, and culturally situated educational environments.

6. Practical Implications for Dance Education

Although this article is conceptual in nature, the proposed framework offers several important practical implications for dance education in higher education. By highlighting the joint roles of motivation and learning climate in shaping behavioral, cognitive, and emotional engagement, the framework provides guidance for instructors, curriculum designers, and institutions seeking to foster sustained and meaningful student engagement in dance programs.

6.1 Creating Autonomy-Supportive Instructional Practices

Dance instructors play a central role in shaping students' motivational experiences. Autonomy-supportive teaching practices can enhance students' sense of volition and ownership over learning, even within structured and tradition-bound dance training. Instructors can support autonomy by acknowledging students' perspectives, offering meaningful rationales for technical exercises, and allowing space for personal interpretation within choreographic constraints [16,8]. Recent applications in creative dance pedagogy demonstrate that student-centered approaches, emphasizing choice and bodily exploration, effectively promote autonomy development and intrinsic motivation [2,16]. For example, inviting students to reflect on how specific movements convey emotional or cultural meaning can strengthen identified and integrated regulation.

Importantly, autonomy support does not imply the absence of structure or discipline. In dance education, clear expectations, consistent routines, and high standards are essential for skill development. Autonomy support can be integrated with structure by explaining the purpose of rigorous training and framing effort as a shared commitment to artistic excellence rather than as external control [10].

6.2 Supporting Competence Through Feedback and Scaffolding

Competence support is critical for sustaining engagement in physically and technically demanding learning environments. Instructors should provide feedback that is constructive, specific, and focused on improvement rather than solely on evaluation. Emphasizing progress and mastery can help students interpret challenges as opportunities for growth, enhancing persistence and cognitive engagement [11].

Scaffolding learning tasks by gradually increasing complexity allows students to experience success while developing technical and expressive skills. In dance education, this may involve breaking complex choreography into manageable components or offering alternative pathways for students with different physical capabilities. Such practices can reduce anxiety and support emotional engagement.

6.3 Fostering Relatedness and Emotional Safety

Relatedness support is particularly salient in dance education due to the emotional and expressive nature of learning. Instructors can foster relatedness by cultivating respectful and inclusive classroom climates, encouraging peer collaboration, and addressing interpersonal conflicts sensitively [12]. Creating spaces where students feel emotionally safe to express vulnerability is essential for authentic artistic engagement. Empirical evidence from university dancesport contexts underscores how perceived teacher relatedness support directly enhances learning motivation and emotional resilience [32].

Institutions can support relatedness by promoting mentoring relationships, ensemble-based learning, and collaborative performance opportunities. These practices reinforce a sense of belonging and collective identity, which are especially important in collectivist cultural contexts [14].

6.4 Integrating Cultural Responsiveness into Pedagogy

The framework underscores the importance of culturally responsive pedagogy in dance education. Instructors should recognize and value the cultural backgrounds and traditions embedded in dance forms, particularly in programs that emphasize cultural heritage. Integrating cultural narratives, historical context, and community engagement into curricula can enhance students' identification with dance learning and strengthen integrated regulation [20]. Contemporary reforms in Chinese dance education highlight how innovative pedagogies that preserve cultural heritage while incorporating sustainable practices foster deeper cultural identification and engagement [20,21].

In collectivist settings, emphasizing collective goals and cultural continuity can align motivation with culturally valued outcomes. However, instructors should also remain attentive to individual students' needs and aspirations, balancing collective identity with personal growth [15].

6.5 Implications for Curriculum Design and Institutional Policy

At the institutional level, curricula should be designed to support holistic engagement across behavioral, cognitive,

and emotional dimensions. This may include incorporating reflective assignments, peer feedback sessions, and opportunities for creative exploration alongside technical training. Providing resources for injury prevention, mental health support, and career development can further enhance students' capacity to remain engaged over time.

Institutions should also invest in professional development for dance educators, focusing on motivationally supportive teaching practices and cultural competence. Recent SDT-informed interventions in creative dance teaching emphasize the value of training programs that address instructors' dilemmas in autonomy, competence, and relatedness support [25]. By aligning institutional policies with the principles outlined in this framework, higher education programs can create learning environments that sustain engagement and support students' artistic and personal development.

6.6 Summary of Practical Implications

In summary, the conceptual framework offers actionable guidance for fostering student engagement in dance education through autonomy-supportive instruction, competence scaffolding, relatedness support, and cultural responsiveness. By attending to both motivational quality and learning climate, educators and institutions can create environments that promote meaningful, sustained engagement in embodied and culturally situated learning.

7. Limitations and Constraints

While this article proposes a comprehensive framework for understanding student engagement in dance education, several constraints and limitations must be acknowledged to contextualize its theoretical boundaries and guide future research.

7.1 Conceptual Nature and Lack of Empirical Validation

The primary limitation of this study is its conceptual nature. The relationships proposed between motivational orientations, learning climate, and student engagement are theoretical propositions derived from synthesizing existing literature, [5,12]. While grounded in robust theories, these pathways—particularly the moderating role of learning climate—have not yet been subjected to direct empirical testing within this specific framework. Consequently, the "results" discussed here represent hypothesized dynamics rather than observed causalities. Future research must operationalize these constructs to statistically validate the proposed structural equation model (Figure 1).

7.2 Measurement Constraints in Embodied Contexts

A significant constraint in applying this framework lies in the limitations of existing measurement tools. Standard instruments for measuring student engagement (e.g., those used in general education) often rely on self-report surveys that prioritize cognitive and behavioral indicators visible in traditional classrooms. These tools may fail to capture the *embodied* and *somatic* aspects of engagement unique to dance, such as "flow" states, physical pain management, and non-verbal emotional expression, [30]. The framework assumes that emotional engagement can

be accurately assessed, yet current methodological limitations in capturing "felt body" experiences may constrain the empirical verification of the model.

7.3 Cultural Scope and Generalizability

The framework explicitly integrates collectivist cultural values, drawing heavily on examples from Chinese higher education and dance heritage contexts, [21]. While this provides necessary cultural responsiveness, it imposes a constraint on generalizability. The specific dynamics of "relatedness support" acting as a primary driver of engagement may function differently in highly individualistic Western Conservatory models, where competition and individual artistic "voice" are often prioritized over group harmony. Therefore, the proposed moderation effects of culture should be interpreted with caution when applied to diverse global contexts without local adaptation.

7.4 Focus on Undergraduate Higher Education

The scope of this framework is constrained to undergraduate dance education. It does not account for the developmental differences present in K-12 dance education or the professional vocational sector. Undergraduate populations face unique developmental pressures regarding career identity and academic integration, which strongly influence their motivational profiles. The framework may not fully account for the engagement dynamics of recreational dancers or professional company members, whose environmental constraints and motivational drivers differ significantly from university students.

8. Conclusion

This conceptual article advances understanding of student engagement in undergraduate dance education by integrating motivation, learning climate, and cultural context within a unified theoretical framework. Drawing on Self-Determination Theory, engagement theory, and cultural psychology, it conceptualizes engagement as a multidimensional construct—encompassing behavioral, cognitive, and emotional dimensions—and positions motivation and learning climate as interdependent drivers in embodied and culturally situated environments.

The framework emphasizes motivational quality's central role in students' effort investment, reflective learning, and positive emotional experiences during dance education. Autonomous forms, particularly intrinsic motivation and integrated regulation, serve as critical resources for sustaining engagement in physically demanding and emotionally expressive contexts [8]. Motivation alone, however, cannot fully explain engagement without considering the enacting learning climate.

By reconceptualizing learning climate as a cultural–pedagogical system, the article highlights how instructional practices, relational dynamics, and cultural values jointly shape outcomes. Climates supporting autonomy, competence, and relatedness directly enhance engagement and moderate motivation–engagement relationships, especially in collectivist contexts where relational harmony and cultural identity dominate [14,16].

Beyond dance education, the framework holds broader implications for performance-based and creative

disciplines in higher education. Foregrounding embodiment, emotional engagement, and cultural context challenges cognitively dominant engagement accounts and advocates holistic, context-sensitive approaches to educational theory and practice. It underscores culturally responsive pedagogy's importance in fostering meaningful engagement across diverse environments.

In conclusion, this article delivers a theoretically grounded, integrative perspective on student engagement in dance education, laying a foundation for future empirical research and pedagogical innovation. Aligning motivational processes with supportive learning climates and cultural meaning enables educators and institutions to better nurture students' sustained engagement, artistic development, and well-being in higher education dance programs.

Figure 1 below illustrates a conceptual model in which students' motivational orientations influence behavioral, cognitive, and emotional engagement in dance education, with learning climate operating as both a direct predictor of engagement and a moderator of motivation–engagement relationships within culturally situated learning environments.
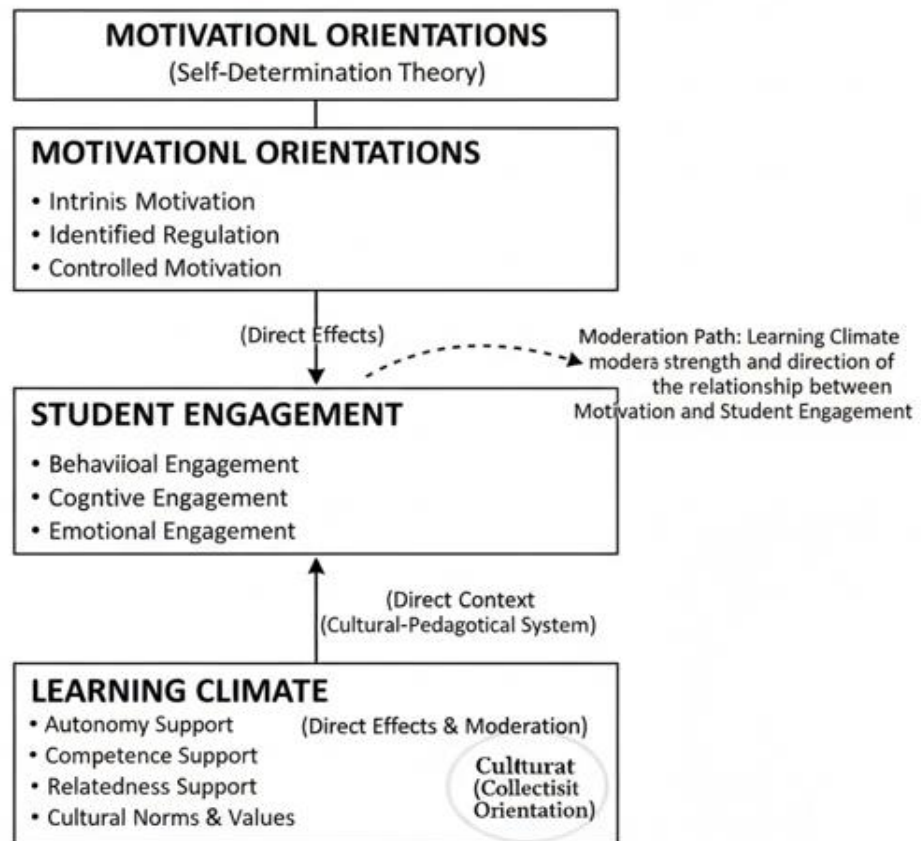
Figure 1: Conceptual Model of Student Engagement in Dance Education

References

[1] K. E. Bond and S. W. Stinson, ""It's work, work, work, work": Young people's experiences of effort and engagement in dance," *Res. Dance Educ.*, vol. 8, no. 2, pp. 155–183, 2007, doi: 10.1080/14647890701580004.

[2] J. Smith-Autard, *The Art of Dance in Education*, 2nd ed. London, U.K.: A & C Black, 2002.

[3] D. Risner, "Dance education matters: Rebuilding postsecondary dance education for twenty-first century relevance and resonance," *J. Dance Educ.*, vol. 10, no. 4, pp. 95–110, 2010, doi: 10.1080/15290824.2010.10387173.

[4] D. Risner and T. Anderson, *Dance, Culture, and Education*. New York, NY, USA: Routledge, 2012.

[5] G. D. Kuh, J. Kinzie, J. A. Buckley, B. K. Bridges, and J. C. Hayek, *Piecing Together the Student Success Puzzle: Research, Propositions, and Recommendations*. San Francisco, CA, USA: Jossey-Bass, 2008.

[6] J. A. Fredricks, P. C. Blumenfeld, and A. H. Paris, "School engagement: Potential of the concept, state of the evidence," *Rev. Educ. Res.*, vol. 74, no. 1, pp. 59–109, 2004, doi: 10.3102/00346543074001059.

[7] S. F. Lam *et al.*, "Understanding and measuring student engagement in school: The results of an international study from 12 countries," *Sch. Psychol. Q.*, vol. 26, no. 2, pp. 213–226, 2011, doi: 10.1037/a0024347.

[8] R. M. Ryan and E. L. Deci, *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. New York, NY, USA: Guilford Press, 2017.

[9] J. E. Hancox, E. Quested, N. Ntoumanis, and C. Thøgersen-Ntoumani, "Putting self-determination theory into practice: Application of adaptive motivational principles in the exercise domain," *J. Sport Exerc. Psychol.*, vol. 39, no. 1, pp. 33–48, 2017, doi: 10.1123/jsep.2016-0174.

[10] E. L. Deci and R. M. Ryan, *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. New York, NY, USA: Guilford Press, 2016.

[11] N. Ntoumanis, V. Barkoukis, D. F. Gucciardi, and D. K. C. Chan, "Linking self-determination theory and achievement goal theory in sport: A person-centered approach," *J. Sport Exerc. Psychol.*, vol. 39, no. 3, pp. 171–183, 2017, doi: 10.1123/jsep.2016-0254.

[12] E. Quested and J. L. Duda, "Antecedents of burnout among elite dancers: A longitudinal test of basic needs theory," *Psychol. Sport Exerc.*, vol. 12, no. 2, pp. 159–167, 2011, doi: 10.1016/j.psychsport.2010.09.006.

[13] E. Urmston and I. J. Aujla, "Teacher–student relationships and motivation in dance education: A

systematic review," *Res. Dance Educ.*, vol. 22, no. 1, pp. 3–24, 2021, doi: 10.1080/14647893.2020.1736871.

[14] H. R. Markus and S. Kitayama, "Culture and the self: Implications for cognition, emotion, and motivation," *Psychol. Rev.*, vol. 98, no. 2, pp. 224–253, 1991, doi: 10.1037/0033-295X.98.2.224.

[15] J. Wang and S. Liu, "Cultural values and student engagement in Chinese higher education," *Higher Educ. Res. Dev.*, vol. 38, no. 3, pp. 1–15, 2019, doi: 10.1080/07294360.2019.1576598.

[16] J. Reeve, "A self-determination theory perspective on student engagement," in *Handbook of Research on Student Engagement*, S. L. Christenson, A. L. Reschly, and C. Wylie, Eds. New York, NY, USA: Springer, 2012, pp. 149–172, doi: 10.1007/978-1-4614-2018-7_7.

[17] A. E. Black and E. L. Deci, "The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A self-determination theory perspective," *Sci. Educ.*, vol. 84, no. 6, pp. 740–756, 2000, doi: 10.1002/1098-237X(200011)84:6<740::AID-SCE4>3.0.CO;2-3.

[18] J. Reeve and H. Jang, "What teachers say and do to support students' autonomy during a learning activity," *J. Educ. Psychol.*, vol. 98, no. 1, pp. 209–218, 2006, doi: 10.1037/0022-0663.98.1.209.

[19] G. Hofstede, *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations Across Nations*, 2nd ed. Thousand Oaks, CA, USA: Sage, 2001.

[20] E. Wilcox, *Revolutionary Bodies: Chinese Dance and the Socialist Legacy*. Oakland, CA, USA: Univ. California Press, 2019.

[21] Z. Yanshan, "Regional dance heritage and higher education in Guangdong Province," *J. Chinese Dance Studies*, vol. 6, no. 2, pp. 45–58, 2019.

[22] T. Jaakkola, "Designing conceptual articles: Four approaches," *Quest*, vol. 72, no. 1, pp. 18–26, 2020, doi: 10.1080/00336297.2019.1610373.

[23] A. W. Astin, "Student involvement: A developmental theory for higher education," *J. Coll. Student Dev.*, vol. 40, no. 5, pp. 518–529, 1999.

[24] R. Benabou and J. Tirole, "Intrinsic and extrinsic motivation," *Rev. Econ. Stud.*, vol. 70, no. 3, pp. 489–520, 2003, doi: 10.1111/1467-937X.00253.

[25] C. P. Niemiec and R. M. Ryan, "Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice," *Theory Res. Educ.*, vol. 7, no. 2, pp. 133–144, 2009, doi: 10.1177/1477878509104318.

[26] M. Sheets-Johnstone, *The Primacy of Movement*, 2nd ed. Amsterdam, The Netherlands: John Benjamins,

2011.

[27] F. J. Varela, E. Thompson, and E. Rosch, *The Embodied Mind: Cognitive Science and Human Experience*. Cambridge, MA, USA: MIT Press, 1991.

[28] M. Csikszentmihalyi, *Flow: The Psychology of Optimal Experience*. New York, NY, USA: Harper & Row, 1990.

[29] A. R. Hochschild, *The Managed Heart: Commercialization of Human Feeling*. Berkeley, CA, USA: Univ. California Press, 1983.

[30] R. Pekrun and L. Linnenbrink-Garcia, Eds., *International Handbook of Emotions in Education*. New York, NY, USA: Routledge, 2014.

[31] M.-T. Li, "Investigating psychological motivations to use online physical learning: A theoretical study in the dance education," *Psychol. Res. Behav. Manag.*, vol. 16, pp. 3095–3105, 2023, doi: 10.2147/PRBM.S421766.

[32] W. Dong, C. Xiang, A. Y. Kamaruddin, S. K. Syed Ali, Z. Yang, and X. Wang, "The relationship between perceived teacher relatedness-support behavior (RSB) and learning motivation of dancesport students in universities," *Sci. Rep.*, vol. 14, Art. no. 28043, 2024, doi: 10.1038/s41598-024-79507-8.

[33] Z. Huang, J. Zhu, Y. Yuan, and X. Li, "The effect of passion on the engagement of university students specializing in DanceSport: the moderating role of gender," *Front. Psychol.*, vol. 16, Art. no. 1615585, 2025, doi: 10.3389/fpsyg.2025.1615585.