

A Multidimensional Conceptual Framework for Enhancing Beginner Piano Achievement: Integrating Self-Determination Theory and Sociocultural Perspectives in the Chinese "Piano Craze" Context

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Abstract

The rapid expansion of piano learning participation in China, commonly known as the "Piano Craze" (*gangqin re*), has transformed piano education into a significant sociocultural and educational phenomenon. Despite increasing enrolment in beginner piano programmes, many learners experience declining motivation, emotional stress, excessive parental pressure, and early discontinuation. This troubling reality has left educators and families searching for practical, theoretically grounded solutions to sustain children's passion for piano learning, making an in-depth exploration of this topic both timely and necessary. Existing studies often examine psychological or sociocultural influences separately, resulting in fragmented understandings of beginner piano achievement. Therefore, this conceptual paper proposes a multidimensional framework integrating Self-Determination Theory (SDT) and Vygotsky's Sociocultural Theory (SCT) to explain beginner piano achievement within the Chinese context. Grounded in SDT, the framework emphasizes autonomy, competence, and relatedness as key drivers of intrinsic motivation. Simultaneously, SCT positions parents and teachers as cultural agents who provide scaffolding within the learner's Zone of Proximal Development (ZPD). The framework further incorporates an ADDIE-based Piano Motivation Model (PMM) to operationalize culturally responsive instructional strategies. Beginner piano achievement is conceptualized across three dimensions: technical playing skills, emotional engagement, and musical expression. The proposed framework contributes theoretically and practically by offering a holistic approach to sustainable, motivating, and psychologically supportive beginner piano education in China. Unlike prior isolated research, this work bridges motivational psychology and sociocultural research gaps, and its actionable intervention model can be directly adopted by piano instructors, parents and educational

institutions, bringing tangible improvements to the current examination-dominated piano education ecosystem.

Keywords: Beginner Piano Achievement, Self-Determination Theory, Sociocultural Theory, Chinese Piano Craze, Parental Involvement, Piano Motivation, Addie Model

Introduction

Over the past three decades, China has experienced unprecedented growth in piano learning participation, a phenomenon widely described as the “Piano Craze” (Bai, 2021). The piano has become more than a musical instrument within contemporary Chinese society; it represents educational aspiration, cultural sophistication, middle-class identity, and future social mobility. Rapid economic development, educational competition, and increasing parental investment in extracurricular learning have contributed significantly to the expansion of piano education across urban China (Ho, 2023).

The Piano Craze reflects broader sociocultural transformations within Chinese society. Many Chinese parents perceive piano learning as an avenue for cultivating discipline, cognitive development, creativity, and academic competitiveness (Cheng et al., 2024). Consequently, piano education is frequently embedded within examination-oriented educational cultures emphasizing achievement, perseverance, and measurable performance outcomes. Piano examinations, competitions, and public performances often function as indicators of educational success and family cultural capital (Kong, 2023).

Despite the widespread popularity of beginner piano learning, many young learners encounter motivational challenges, emotional pressure, inconsistent practice habits, and declining long-term engagement. Research indicates that excessive parental control, performance anxiety, rigid instructional approaches, and examination-oriented learning environments may negatively influence children’s emotional experiences in piano learning (Kong, 2021; Zhang et al., 2023). Furthermore, beginner learners frequently experience tension between externally imposed expectations and intrinsic enjoyment of music-making. This widespread dilemma has hindered the long-term development of piano education in China and aroused widespread concern among music education practitioners.

Existing music education research has examined beginner piano achievement from various perspectives, including parental involvement, motivation, practice behaviours, instructional strategies, and sociocultural influences. However, many studies investigate these variables independently, resulting in fragmented understandings of beginner piano learning processes. There remains limited theoretical integration between motivational psychology and sociocultural perspectives within the Chinese piano education context. It is urgent to build an integrated theoretical system to interpret and solve practical problems in local piano teaching.

Grounded in Self-Determination Theory (SDT) (Deci & Ryan, 1985, 2000) and Vygotsky’s Sociocultural Theory (Vygotsky, 1978), this paper proposes a multidimensional conceptual framework for enhancing beginner piano achievement in the Chinese Piano Craze context. SDT emphasizes learners’ psychological needs for autonomy, competence, and relatedness as fundamental drivers of intrinsic motivation and sustained engagement.

Simultaneously, Sociocultural Theory conceptualizes learning as socially mediated through interactions with parents, teachers, and cultural environments.

The framework positions parents as “cultural agents” who provide scaffolding within learners’ Zone of Proximal Development (ZPD). Additionally, the paper integrates an ADDIE-based Piano Motivation Model (PMM) intervention (Branch, 2009) to operationalize culturally responsive and psychologically supportive instructional design. The paper aims to:

- i. Examine the sociocultural characteristics of the Chinese Piano Craze.
- ii. Explore the relevance of Self-Determination Theory in beginner piano learning.
- iii. Analyse sociocultural influences affecting beginner piano achievement.
- iv. Propose an integrated multidimensional conceptual framework.
- v. Discuss implications for piano pedagogy, parental involvement, and instructional design.

By synthesizing motivational psychology, sociocultural theory, and instructional design principles, the paper contributes a holistic framework for understanding and enhancing beginner piano achievement in contemporary Chinese music education. This research not only enriches the cross-cultural application of classic psychological and educational theories but also provides a set of operable teaching solutions tailored to China’s unique cultural background, filling the research gap of integrated theoretical research in local beginner piano education.

Literature Review

The Chinese “Piano Craze” Phenomenon

The Chinese “Piano Craze” (*gangqin re*) represents one of the most influential developments in contemporary global music education (Bai, 2021; Ho, 2023). As highlighted by Bai (2021), piano learning in China has evolved from an elite cultural activity into a mainstream educational aspiration associated with middle-class advancement, holistic cultivation (*suzhi jiaoyu*), and social mobility. The rapid expansion of private music studios, graded examination systems (*kaoji*), and community music programmes demonstrates the scale of piano education participation across Chinese society (Bai, 2021; Chang & Panicker, 2024). However, the educational ecosystem surrounding the Piano Craze is also characterized by several structural and pedagogical tensions (Cheng et al., 2024; Kong, 2021). Instrumental training frequently emphasizes rigid examination preparation, rote memorization, technical perfection, and authoritarian teacher-centred instruction (Ho, 2023). Such approaches, while often producing technically proficient students, may simultaneously contribute to diminished intrinsic motivation, performance anxiety, emotional disengagement, and early dropout among beginner learners (Cheng & Southcott, 2023; Franceschi & Ercegovac, 2022).

The pressure associated with maintaining family “face” (*mianzi*), fulfilling parental expectations, and achieving visible musical success may transform piano learning from a creative and expressive activity into a high-stress educational obligation (Kong, 2021; Zhang et al., 2023). These challenges not only affect student well-being but also influence the sustainability of music education enterprises due to high attrition rates among beginner learners (Qiushuo & Mustafa, 2025). Exploring effective ways to reverse this situation has become a key research focus in current music education.

From an educational management perspective, the Piano Craze therefore presents both opportunities and systemic challenges. Sustainable beginner piano achievement requires pedagogical models capable of balancing technical excellence with psychological well-being, creativity, emotional engagement, and culturally responsive instruction (Ho, 2023; Oades et al., 2021). The emergence of the Piano Craze in China represents one of the largest expansions of music education participation in modern history (Bai, 2021). Since China's economic reforms and increasing globalization in the late twentieth century, Western classical music has become associated with cultural sophistication, educational advancement, and middle-class identity (Kong, 2023). Piano ownership and formal music training increasingly symbolize family investment in children's future success (Cheng et al., 2024).

Several interconnected factors contributed to the growth of piano learning in China. First, rapid economic development enabled middle-class families to invest heavily in extracurricular education (Kong, 2023). Second, educational competition intensified parental concerns regarding holistic development and university admission advantages (Bai, 2021). Third, the popularity of internationally recognized Chinese pianists such as Lang Lang and Yundi Li inspired widespread public enthusiasm toward piano learning (Ho, 2023).

The Chinese piano education system is highly structured and examination-oriented (Chang & Panicker, 2024). Many students participate in graded examination systems administered by conservatories and music organizations. Achievement is frequently evaluated through technical proficiency, examination scores, competition participation, and public performances (Bai, 2021). Consequently, piano learning often becomes associated with measurable achievement rather than artistic exploration (Zheng & Leung, 2021).

Research indicates that Chinese parents commonly view piano education as a means of cultivating discipline, perseverance, cognitive development, and social distinction (Kong, 2021; Zhang et al., 2023). In Confucian-influenced educational cultures, effort, diligence, and obedience are highly valued (Zhou et al., 2020). While these values may support consistent practice behaviours, excessive emphasis on achievement and external rewards may negatively influence intrinsic motivation (Deci & Ryan, 2000; Guan & Luo, 2025). Moreover, the Piano Craze creates substantial psychological pressures for beginner learners. Many children experience tightly scheduled routines balancing school responsibilities, piano practice, examinations, and extracurricular commitments (Cheng et al., 2024). Under such conditions, beginner piano learning may become externally regulated rather than personally meaningful (Ryan & Deci, 2017).

These realities demonstrate the importance of examining beginner piano achievement not only from individual psychological perspectives but also through broader sociocultural frameworks (Vygotsky, 1978; Liu et al., 2025). Combining multiple theoretical perspectives to interpret practical problems will bring new insights to the reform of piano education.

Beginner Piano Achievement

Beginner piano achievement refers to the development of foundational musical competencies among novice piano learners during the early stages of formal instrumental instruction. These competencies include technical playing skills, music reading ability,

rhythmic accuracy, expressive performance, practice consistency, musical understanding, and motivational engagement (Burrows & Brown, 2019; Wong et al., 2023a). In contemporary music education research, beginner achievement is increasingly understood as a multidimensional construct encompassing cognitive, behavioural, emotional, and sociocultural dimensions of learning rather than merely examination scores or technical proficiency (Zheng & Leung, 2021). Redefining the connotation of piano learning achievement is the premise for optimizing current teaching modes.

Traditionally, beginner piano achievement has been evaluated primarily through measurable indicators such as graded examination performance, technical accuracy, repertoire completion, and competition participation (Bai, 2021). However, recent scholarship argues that successful beginner piano learning also involves the cultivation of positive musical identities, creativity, emotional well-being, self-confidence, and sustained interest in music-making (Ho, 2023; Cheng & Southcott, 2023). Consequently, achievement should not be conceptualized solely as performance excellence but also as the learner's capacity to experience meaningful, enjoyable, and psychologically supportive musical growth.

Within the proposed framework, beginner piano achievement is conceptualized across three interrelated dimensions:

Technical Playing Skills

Technical achievement includes the acquisition of foundational pianistic competencies such as finger coordination, posture, hand positioning, note reading, rhythmic precision, articulation control, and performance fluency (Wong et al., 2023b). These competencies form the basis for long-term musical development and are commonly emphasized within examination-oriented piano education systems in China (Chang & Panicker, 2024).

Emotional Engagement

Emotional engagement refers to learners' enjoyment, confidence, intrinsic motivation, persistence, and emotional connection toward piano learning (Deci & Ryan, 2000). Research indicates that emotionally engaged learners are more likely to demonstrate consistent practice habits, stronger resilience during technical challenges, and sustained long-term participation in music learning (Guan & Luo, 2025; Wieser & Müller, 2025). Conversely, emotionally stressful or excessively controlling learning environments may contribute to anxiety, burnout, and disengagement among beginner learners (Franceschi & Ercegovic, 2022). Maintaining positive emotional engagement is the core to helping beginners stick to piano learning.

Musical Expression

Musical expression involves the learner's ability to communicate emotion, shape phrasing, interpret musical meaning, and develop creativity through performance (Zheng & Leung, 2021). Contemporary music educators increasingly emphasize expressive development as an essential component of holistic musicianship rather than treating expression as secondary to technical mastery (Ho, 2023).

Numerous interconnected factors influence beginner piano achievement, reflecting the complex nature of musical learning within both educational and sociocultural contexts. These factors include instructional quality, teacher-student relationships, practice habits, parental involvement, learning motivation, socioeconomic background, cultural expectations, access to learning resources, peer interaction, and performance opportunities (Kong, 2021; Cheng et al., 2024). High-quality instruction and supportive teacher-student relationships may enhance learners' confidence, engagement, and technical development, while consistent practice habits contribute to skill acquisition and musical fluency. Parental involvement also plays a significant role, particularly within the Chinese Piano Craze context where parents frequently supervise practice routines and influence children's attitudes toward achievement and persistence. Additionally, socioeconomic background and access to educational resources may shape opportunities for formal training, instrument ownership, and participation in enrichment activities. Cultural expectations associated with academic success, discipline, and family honour further influence children's learning experiences and motivational orientations. Peer interaction and performance opportunities may also strengthen learners' confidence, social belonging, and musical identity development. Collectively, these factors demonstrate that beginner piano achievement is shaped through dynamic interactions between psychological, pedagogical, familial, and sociocultural influences.

Among these factors, motivation consistently emerges as one of the strongest predictors of persistence, engagement, and musical achievement (Ryan & Deci, 2017). Students who perceive piano learning as personally meaningful and psychologically rewarding are more likely to engage in deliberate practice, demonstrate self-regulation, and sustain long-term musical participation (Cheng & Southcott, 2023). Within Self-Determination Theory (SDT), intrinsic motivation develops when learners experience autonomy, competence, and relatedness within their learning environments (Deci & Ryan, 1985, 2000). However, beginner learners are particularly vulnerable to motivational decline due to repetitive practice routines, unrealistic parental expectations, technical frustration, authoritarian instruction, and examination-oriented learning cultures (Bai, 2021; Zhang et al., 2023). In the Chinese Piano Craze context, external pressures associated with achievement, family honour, and competitive educational environments may transform piano learning into an externally regulated activity rather than an intrinsically meaningful artistic experience (Kong, 2023). How to stimulate and maintain learners' intrinsic motivation has become the core problem to be solved in this study.

Sociocultural influences further shape beginner piano achievement. According to Vygotsky's Sociocultural Theory, musical learning develops through social interaction and guided participation within the learner's Zone of Proximal Development (ZPD) (Vygotsky, 1978). Parents and teachers therefore function as critical cultural mediators who influence children's motivation, practice behaviour, emotional experiences, and musical development (Liu et al., 2025). Effective scaffolding, emotional encouragement, and autonomy-supportive teaching practices may strengthen learner confidence and engagement, whereas excessively controlling approaches may undermine intrinsic motivation and emotional well-being (Wong et al., 2023a).

These realities demonstrate that beginner piano achievement should be understood as a dynamic and multidimensional process emerging through interactions between psychological motivation, sociocultural mediation, pedagogical support, and culturally situated learning experiences.

Self-Determination Theory

Self-Determination Theory (SDT), developed by Edward L. Deci and Richard M. Ryan, provides one of the most influential contemporary frameworks for understanding human motivation, engagement, psychological development, and well-being (Deci & Ryan, 1985, 2000; Ryan & Deci, 2017). SDT proposes that individuals possess three innate psychological needs, autonomy, competence, and relatedness which are essential for fostering intrinsic motivation, optimal functioning, and sustained participation in learning activities. When these psychological needs are adequately supported, learners are more likely to demonstrate higher levels of engagement, persistence, creativity, emotional well-being, and achievement (Ryan & Deci, 2017). This classic theory provides a mature psychological perspective for us to analyse the motivational problems of piano beginners.

Within music education, SDT has been widely applied to explain learners' motivation, practice behaviour, performance engagement, and long-term musical participation (Bonneville-Roussy & Evans, 2025; Wieser & Müller, 2025). The theory is particularly relevant for beginner piano learning because novice learners are highly sensitive to emotional support, instructional climate, parental expectations, and perceptions of success or failure during the early stages of skill development.

Autonomy

Autonomy refers to learners' perceptions of volition, choice, and personal agency within learning activities (Deci & Ryan, 2000). Importantly, autonomy does not imply complete independence or absence of guidance; rather, it involves learners feeling that their actions are self-endorsed and personally meaningful. In beginner piano education, autonomy may involve allowing learners opportunities to make age-appropriate choices regarding repertoire selection, practice strategies, expressive interpretation, performance activities, and personal learning goals.

Research indicates that autonomy-supportive teaching approaches enhance learners' intrinsic motivation, enjoyment, and long-term engagement in music learning (Guan & Luo, 2025; Cheng & Southcott, 2023). Teachers who encourage curiosity, acknowledge learners' feelings, provide meaningful explanations, and support student initiative may strengthen learners' sense of ownership toward musical learning. Similarly, parents who provide encouragement without excessive control may foster healthier motivational development.

Conversely, highly controlling instructional approaches, rigid examination-oriented teaching, and excessive parental pressure may undermine learners' autonomy and intrinsic engagement (Kong, 2021; Zhang et al., 2023). Within the Chinese Piano Craze context, beginner learners are frequently exposed to tightly regulated practice schedules, external performance expectations, and comparison-based achievement systems. Under such conditions, piano learning may become externally regulated rather than personally meaningful, potentially reducing enjoyment and increasing emotional stress.

Competence

Competence refers to individuals' perceptions of effectiveness, capability, and mastery in achieving desired outcomes (Ryan & Deci, 2017). In beginner piano learning, competence develops through progressive skill acquisition, achievable challenges, constructive feedback, guided practice, and successful performance experiences. Learners who perceive themselves as capable are more likely to demonstrate persistence, confidence, and self-regulated learning behaviours.

The development of competence is particularly important during the early stages of piano learning because beginners frequently encounter technical difficulties related to finger coordination, rhythm accuracy, note reading, posture, and hand independence (Wong et al., 2023a). Appropriate scaffolding and differentiated instruction may help learners experience manageable success while gradually increasing task complexity.

Research demonstrates that perceived competence strongly predicts music practice persistence, performance confidence, and achievement outcomes (Franceschi & Ercegovac, 2022; Virkkula, 2020). Positive reinforcement, process-oriented feedback, and realistic goal-setting may strengthen beginner learners' musical self-efficacy. In contrast, repeated criticism, unrealistic expectations, punitive teaching practices, and excessive comparison with peers may contribute to anxiety, self-doubt, and motivational decline.

Within examination-oriented educational cultures, competence is often narrowly defined through grades, competition outcomes, or technical perfection (Bai, 2021). However, SDT suggests that competence should also involve learners' perceptions of meaningful growth, progress, and mastery rather than solely external evaluation.

Relatedness

Relatedness refers to individuals' feelings of belongingness, emotional connection, and interpersonal support within social environments (Deci & Ryan, 2000). In piano education, relatedness emerges through positive teacher-student relationships, parental encouragement, peer interaction, collaborative musical activities, and supportive learning communities.

Music learning is inherently social and emotional. Beginner learners who feel emotionally understood, respected, and encouraged are more likely to develop confidence, enjoyment, and sustained commitment toward piano learning (Bonneville-Roussy & Evans, 2025). Positive teacher-student relationships may reduce performance anxiety and create psychologically safe learning environments where mistakes are viewed as part of the learning process rather than indicators of failure.

Parental involvement also plays a central role in fostering relatedness within beginner piano learning (Kong, 2021). In many Chinese families, parents actively supervise practice sessions, attend lessons, provide emotional support, and participate in children's musical development. When parental involvement is emotionally supportive and collaborative, learners may experience stronger motivation and emotional security. However, excessively controlling or achievement-focused parental behaviours may weaken relatedness and contribute to emotional pressure (Zhang et al., 2023).

Peer interaction and performance opportunities further contribute to relatedness by strengthening learners' social belonging and musical identity development. Group performances, ensemble participation, and supportive peer environments may increase learners' enjoyment and confidence in music-making.

Intrinsic and Extrinsic Motivation

A central distinction within SDT involves intrinsic and extrinsic motivation (Deci & Ryan, 1985). Intrinsic motivation refers to engaging in activities for inherent enjoyment, curiosity, interest, or personal satisfaction. Intrinsically motivated piano learners participate because they enjoy music-making, expressive performance, and personal musical growth.

In contrast, extrinsic motivation involves participation driven by external rewards, recognition, social approval, examination success, competition achievement, or avoidance of punishment. Within the Chinese Piano Craze context, piano learning is frequently influenced by strong extrinsic motivational pressures associated with graded examinations, competitions, parental expectations, and social comparison (Bai, 2021; Cheng et al., 2024).

Although extrinsic motivation may initially encourage participation and practice consistency, excessive external control may weaken intrinsic engagement over time (Ryan & Deci, 2017). Learners who perceive piano learning primarily as an obligation rather than a personally meaningful activity may become emotionally disengaged and less likely to sustain long-term musical participation.

Therefore, SDT provides valuable theoretical insights into how psychological need satisfaction influences beginner piano achievement. By supporting learners' autonomy, competence, and relatedness, teachers and parents may cultivate more motivating, emotionally supportive, and sustainable piano learning experiences.

Sociocultural Perspectives in Music Education

Sociocultural perspectives provide an important theoretical foundation for understanding beginner piano learning as a socially mediated and culturally situated process rather than solely an individual cognitive activity. Rooted in the work of Lev Vygotsky, Sociocultural Theory (SCT) conceptualizes learning and cognitive development as emerging through social interaction, cultural participation, and mediated experiences within specific historical and cultural contexts (Vygotsky, 1978). Combining SCT with SDT can help us interpret the complex cultural and social factors behind piano learning motivation in China. From this perspective, musical learning is shaped not only by individual abilities but also by interpersonal relationships, cultural values, institutional structures, and access to social and educational resources.

Central to SCT is the concept of the Zone of Proximal Development (ZPD), which refers to the gap between what learners can accomplish independently and what they can achieve with guidance from more knowledgeable others (Vygotsky, 1978). Within beginner piano education, more knowledgeable others may include teachers, parents, peers, and experienced musicians who provide guidance, modelling, emotional support, and instructional scaffolding. Through these mediated interactions, beginner learners gradually internalize musical knowledge, technical skills, and performance practices.

In the Chinese Piano Craze context, musical learning is deeply embedded within collectivist educational cultures emphasizing discipline, perseverance, obedience, diligence, and family honour (Ho, 2023). Consequently, children's piano learning experiences are strongly mediated by parental involvement, teacher authority, examination systems, and social comparison (Bai, 2021). Unlike purely individualistic conceptions of learning, piano achievement in China is often interpreted as a reflection of family commitment, parental sacrifice, and collective educational aspiration.

One important sociocultural construct influencing Chinese piano learning is filial piety (*xiao*), which is deeply rooted in Confucian educational traditions (Zhou et al., 2020). Filial piety emphasizes children's respect, obedience, and responsibility toward parents and elders. Within music education, children may express filial devotion through diligence, practice discipline, and achievement in piano examinations and performances. As a result, piano success may function not only as individual accomplishment but also as a symbolic representation of family honour and parental investment (Guo et al., 2022). Although these cultural values may strengthen perseverance and commitment, they may also contribute to heightened pressure and fear of failure among beginner learners.

Another important characteristic of Chinese beginner piano learning is parental co-participation. Unlike many Western educational models that emphasize learner independence, Chinese parents frequently function as active "home teachers" who supervise practice routines, monitor progress, communicate with teachers, and regulate children's learning behaviour (Kong, 2021; Zhang et al., 2023). Parents often invest substantial financial, emotional, and temporal resources into their children's musical education, viewing piano learning as an avenue for educational advancement and cultural cultivation (Kong, 2023).

Supportive parental involvement may strengthen practice consistency, emotional encouragement, and learner discipline (Qiushuo & Mustafa, 2025). However, excessive parental control, rigid expectations, and comparison-oriented parenting may create emotional tension and undermine learners' autonomy and relatedness needs (Deci & Ryan, 2000). Research indicates that overly controlling parental involvement may transform piano learning into an externally regulated activity driven by fear, obligation, or social pressure rather than intrinsic enjoyment (Cheng et al., 2024).

Within the framework proposed in this paper, parents are conceptualized as "cultural agents" who mediate children's musical experiences through scaffolding processes within the learner's ZPD. Effective scaffolding involves emotional encouragement, guided support, constructive feedback, collaborative participation, and gradual transfer of responsibility that promotes learner independence (Wong et al., 2023a). Rather than merely enforcing practice routines, supportive parents help children develop confidence, resilience, and positive musical identities. This view also puts forward new guidance for the role positioning of Chinese parents in children's piano learning.

Sociocultural perspectives further emphasize that music education is shaped by multiple interconnected environmental influences, including family values, teacher mediation, social interaction, institutional structures, community participation, and access to

cultural resources (Liu et al., 2025). Musical learning therefore occurs not in isolation but through participation within broader cultural ecosystems.

Cultural Capital and Piano Learning

The concept of cultural capital associated with Pierre Bourdieu is highly relevant to understanding the Piano Craze phenomenon. According to Bourdieu (1986), cultural capital refers to socially valued knowledge, skills, educational qualifications, and cultural competencies that contribute to social mobility and status reproduction. Within contemporary Chinese society, piano learning functions as a form of cultural capital symbolizing educational refinement, intellectual cultivation, artistic sophistication, and middle-class identity (Kong, 2023).

Consequently, many Chinese middle-class families invest heavily in piano education not solely for musical enjoyment but also to strengthen children's social competitiveness and future educational opportunities (Cheng et al., 2024). Piano participation therefore becomes socially valued beyond purely artistic outcomes, reinforcing the cultural significance of instrumental learning within family educational strategies.

Parental Involvement

Parental involvement significantly shapes beginner piano experiences and achievement outcomes. Parents commonly supervise daily practice routines, select teachers, finance lessons, monitor examination preparation, and establish expectations regarding performance achievement (Kong, 2021). Emotional encouragement and constructive involvement may strengthen learner discipline, motivation, and persistence. However, excessive parental control and achievement pressure may contribute to anxiety, resistance, and diminished intrinsic motivation (Zhang et al., 2023).

Within Confucian educational traditions, parental authority and academic expectations are strongly emphasized (Zhou et al., 2020). Consequently, beginner learners may experience tension between personal musical interests and parental aspirations. This tension becomes particularly visible within examination-oriented learning environments where external achievement indicators dominate definitions of success.

Teacher Mediation

Teachers serve as central mediators between sociocultural expectations and learners' personal musical experiences. Piano teachers influence learner motivation through pedagogical approaches, communication styles, emotional responsiveness, repertoire selection, feedback practices, and classroom climate (Wong et al., 2023b). Teacher-centred pedagogies emphasizing technical perfection, discipline, and examination preparation may contribute to performance-oriented learning environments with limited autonomy and creativity.

In contrast, learner-centred and autonomy-supportive approaches encouraging exploration, emotional expression, creativity, and collaborative learning may strengthen intrinsic engagement and emotional well-being (Guan & Luo, 2025). Teachers therefore play a crucial role in balancing technical achievement with psychological support and meaningful musical experiences.

Peer and Community Influence

Peer interaction and musical communities also contribute significantly to beginner piano learning. Group classes, ensemble participation, recitals, competitions, masterclasses, and online learning communities provide opportunities for collaboration, social comparison, peer modelling, and musical identity development (Ho, 2023). Positive peer environments may increase learners' confidence, belongingness, and enjoyment of music-making.

However, competitive environments emphasizing rankings and comparison may also increase performance anxiety and extrinsic motivation among beginner learners. The sociocultural environment surrounding piano education therefore simultaneously creates opportunities for musical growth and potential sources of psychological pressure.

Overall, sociocultural perspectives complement Self-Determination Theory by situating learner motivation, engagement, and achievement within broader cultural, relational, and institutional environments. While SDT explains the psychological mechanisms underlying motivation, SCT highlights how those motivational experiences are shaped through social interaction, cultural participation, and mediated learning experiences within the Chinese Piano Craze context.

Integrating Self-Determination Theory and Sociocultural Perspectives

The proposed conceptual framework integrates Self-Determination Theory (SDT) and Sociocultural Theory (SCT) to provide a comprehensive explanation of beginner piano achievement within the Chinese Piano Craze context. While SDT explains the internal psychological mechanisms underlying learner motivation, SCT situates those motivational processes within broader cultural, relational, and educational environments. The integration of these theories enables a multidimensional understanding of how psychological need satisfaction, parental mediation, instructional practices, and sociocultural expectations interact to shape beginner piano learning experiences. This integrated theoretical perspective breaks through the limitations of single-theory research and is the core innovation of this study.

Grounded in Self-Determination Theory developed by Edward L. Deci and Richard M. Ryan, the framework emphasizes the satisfaction of learners' innate psychological needs for autonomy, competence, and relatedness as foundational drivers of intrinsic motivation and sustainable musical engagement (Deci & Ryan, 1985, 2000; Ryan & Deci, 2017). SDT posits that individuals demonstrate greater persistence, enjoyment, emotional well-being, creativity, and achievement when these psychological needs are adequately supported within educational environments. In music education contexts, psychological need satisfaction has been associated with stronger practice persistence, increased emotional engagement, and higher long-term participation in instrumental learning (Bonneville-Roussy & Evans, 2025; Wieser & Müller, 2025).

Within beginner piano learning, autonomy refers to learners' perceptions of ownership, volition, and meaningful choice in musical activities (Deci & Ryan, 2000). Autonomy-supportive piano instruction may include opportunities for repertoire selection, interpretive decision-making, collaborative goal-setting, and flexible practice approaches. Beginner learners who perceive greater autonomy are more likely to develop intrinsic

motivation and positive emotional engagement toward piano learning (Cheng & Southcott, 2023). Conversely, highly controlling instructional practices and excessive parental pressure may weaken learners' sense of agency and transform piano learning into an externally regulated obligation (Kong, 2021).

Competence refers to learners' perceptions of capability, mastery, and effectiveness in performing musical tasks (Ryan & Deci, 2017). Beginner piano learners develop competence through progressive skill acquisition, scaffolded instruction, achievable challenges, and constructive feedback. Research suggests that perceived competence strongly predicts practice persistence, musical self-efficacy, and achievement outcomes in instrumental learning (Franceschi & Ercegovac, 2022; Virkkula, 2020). In contrast, repeated experiences of criticism, failure, or unrealistic expectations may contribute to anxiety, reduced confidence, and motivational decline.

Relatedness refers to feelings of belongingness, interpersonal connection, and emotional support within learning environments (Deci & Ryan, 2000). In piano learning contexts, relatedness emerges through supportive teacher-student relationships, collaborative parent-child interactions, peer engagement, and positive learning communities. Research indicates that emotionally supportive learning environments significantly enhance learner engagement, confidence, and persistence in music education (Bonneville-Roussy & Evans, 2025). Beginner learners who feel understood, respected, and emotionally supported are more likely to sustain long-term musical participation.

The SDT perspective is integrated with the Sociocultural Theory of Lev Vygotsky, which conceptualizes learning as socially mediated and culturally situated (Vygotsky, 1978). SCT argues that cognitive development occurs through interactions with more knowledgeable others operating within the Zone of Proximal Development (ZPD). Musical knowledge, technical skills, learning behaviours, and motivational orientations are therefore shaped through participation in culturally organized social activities.

Within the Chinese Piano Craze context, beginner piano learning is deeply embedded within collectivist educational cultures emphasizing discipline, perseverance, achievement, obedience, and family honour (Ho, 2023). Consequently, parents function as important "cultural agents" who mediate children's musical experiences, expectations, practice behaviours, and attitudes toward achievement (Kong, 2023). Piano learning therefore reflects not only individual musical development but also broader sociocultural values associated with educational success and cultural capital. Through scaffolding processes within the learner's ZPD, parents and teachers support children in accomplishing musical tasks that they may not yet complete independently (Vygotsky, 1978). Such scaffolding may include guided practice routines, emotional encouragement, demonstration, modelling behaviours, structured feedback, motivational reinforcement, and collaborative problem-solving (Wong et al., 2023a). Effective scaffolding gradually transfers responsibility to learners, promoting independence, confidence, and self-regulated learning behaviours.

The framework argues that effective parental and teacher scaffolding positively influences psychological need satisfaction within SDT. For example, emotionally supportive guidance may strengthen relatedness, scaffolded technical instruction may enhance

competence, and autonomy-supportive communication may foster learner agency. Thus, SCT explains the social processes through which SDT psychological needs are either supported or undermined within piano learning environments. Importantly, the framework recognizes that parental involvement in Chinese piano education is deeply shaped by sociocultural values associated with academic excellence, discipline, achievement orientation, and cultural capital (Cheng et al., 2024). Within Confucian educational traditions, parents often perceive piano learning as an important avenue for holistic development, social distinction, and future educational competitiveness (Bai, 2021). Consequently, parental mediation may function both as a motivational support mechanism and as a potential source of emotional pressure depending on the quality of interaction and emotional climate.

Figure 1 illustrates the dynamic interaction between psychological need satisfaction derived from Self-Determination Theory and sociocultural influences derived from Vygotskian perspectives. The model demonstrates how autonomy, competence, and relatedness interact with parental scaffolding, cultural expectations, filial piety, and teacher mediation to influence beginner piano achievement within the Chinese Piano Craze context.

Supportive parental involvement characterized by encouragement, empathy, collaboration, and realistic expectations may strengthen learners' confidence, emotional security, and intrinsic motivation (Qiushuo & Mustafa, 2025). In contrast, excessively controlling parenting practices emphasizing perfectionism, comparison, and external achievement may undermine learners' autonomy and emotional well-being (Zhang et al., 2023). The framework therefore emphasizes the importance of balancing structure and guidance with emotional responsiveness and learner-centred support.

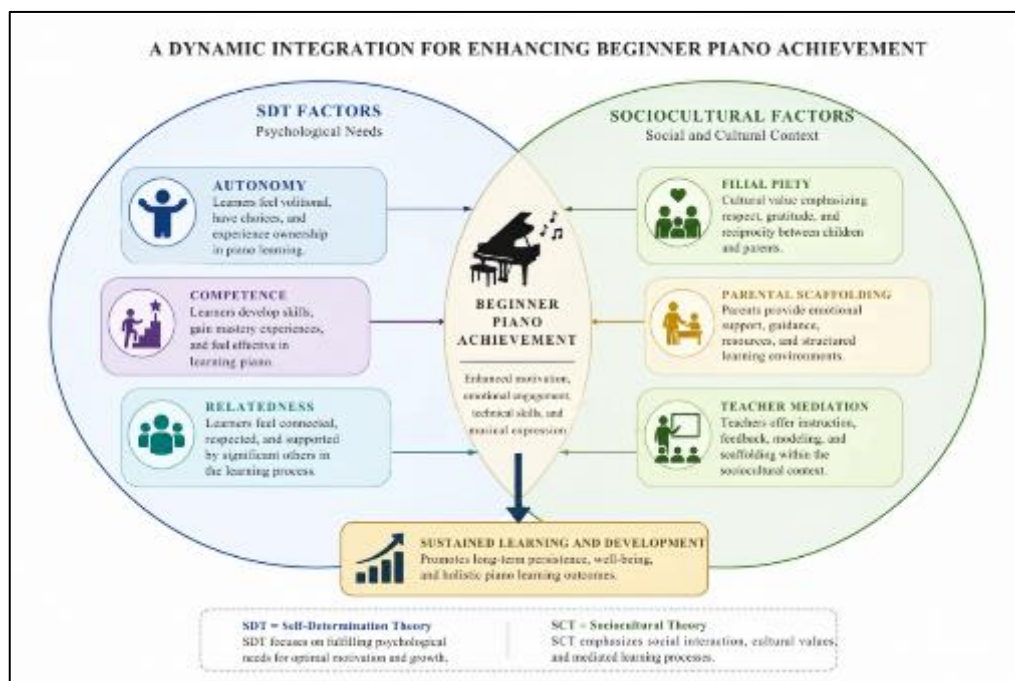


Figure 1: Interaction Between SDT and Sociocultural Factors

Building upon these interactions, beginner piano achievement is conceptualized as a multidimensional construct encompassing three interrelated dimensions:

technical playing skills, emotional engagement, and musical expression. Technical playing skills refer to the development of foundational pianistic competencies such as note reading, rhythmic accuracy, finger coordination, posture, articulation control, and performance fluency, which form the basis for long-term musical development (Wong et al., 2023b). Emotional engagement involves learners' enjoyment, confidence, intrinsic motivation, persistence, and sustained interest in piano learning, all of which significantly influence practice consistency and long-term participation in music education (Ryan & Deci, 2017; Guan & Luo, 2025). Musical expression encompasses learners' abilities to communicate emotion, shape phrasing, demonstrate interpretive understanding, and engage creatively with musical performance (Zheng & Leung, 2021).

Rather than viewing achievement solely through technical proficiency or examination outcomes, the proposed framework argues that meaningful beginner piano achievement emerges through the balanced development of technical competence, emotional well-being, and expressive musicality within supportive sociocultural and pedagogical environments. As summarized in Table 1, beginner piano achievement within the PMM framework is conceptualized across three interconnected dimensions consisting of technical playing skills, emotional engagement, and musical expression, each supported by specific developmental indicators relevant to sustainable beginner piano learning.

Table 1

Components of Beginner Piano Achievement

Dimension	Description	Indicators
Technical Skills	Note reading, rhythmic accuracy, finger coordination, posture, articulation control	Fluency, accuracy, coordination
Emotional Engagement	Enjoyment, confidence, intrinsic motivation, persistence	Sustained participation, practice consistency
Musical Expression	Creativity, phrasing, interpretive understanding, expressive communication	Interpretation, expressiveness, musicality

Technical playing skills include foundational competencies such as note reading, rhythm accuracy, finger coordination, posture, articulation control, and performance fluency (Wong et al., 2023b). These skills represent the structural foundation for long-term pianistic development and are heavily emphasized within examination-oriented learning systems.

Emotional engagement refers to learners' enjoyment, intrinsic motivation, confidence, persistence, and sustained interest in piano learning (Ryan & Deci, 2017). Emotional engagement is particularly important for beginner learners because positive emotional experiences influence practice consistency, resilience, and long-term participation in music learning (Guan & Luo, 2025). Musical expression encompasses interpretive understanding, phrasing, creativity, emotional communication, and expressive performance (Zheng & Leung, 2021). The framework argues that beginner piano achievement should extend beyond technical accuracy to include meaningful artistic and emotional engagement with music-making.

To operationalize these dimensions, the framework incorporates an ADDIE-based instructional design structure proposed by Robert Maribe Branch (Branch, 2009). The ADDIE model consisting of Analysis, Design, Development, Implementation, and Evaluation provides

a systematic and learner-centred process for developing the proposed Piano Motivation Model (PMM) intervention.

Within the framework, the Analysis phase identifies learner needs, motivational barriers, sociocultural influences, parental involvement patterns, and instructional challenges affecting beginner piano learning (Li & Abidin, 2024). The Design phase establishes pedagogical strategies integrating SDT principles and sociocultural responsiveness, including autonomy-supportive instruction, scaffolded learning tasks, expressive repertoire selection, and parent collaboration approaches. The Development phase involves producing instructional materials, guided practice modules, parental support resources, reflective activities, and expressive learning tasks aligned with beginner learners' developmental needs (Behzadaval & Vahedi, 2019). The Implementation phase applies the intervention within beginner piano learning environments such as private studios, community music programmes, or classroom settings. Finally, the Evaluation phase assesses improvements in technical achievement, emotional engagement, musical expression, motivational development, and learner satisfaction. Transforming theoretical ideas into operable teaching models is an important practical contribution of this research.

By integrating Self-Determination Theory (SDT), Sociocultural Theory (SCT), and the ADDIE instructional design model, the proposed framework offers a holistic explanation of beginner piano achievement that acknowledges the dynamic interactions between psychological motivation, cultural mediation, pedagogical support, parental involvement, and instructional design. The framework therefore contributes both theoretically and practically by providing a culturally responsive and psychologically grounded approach for enhancing sustainable beginner piano learning within the Chinese Piano Craze context. The major theoretical foundations underpinning the Piano Motivation Model (PMM), including their key concepts and contributions to the framework, are summarized in Table 2.

Table 2

Summary of Theoretical Foundations Underpinning the PMM

Theory	Key Concepts	Contribution to PMM
Self-Determination Theory (SDT)	Autonomy, competence, relatedness	Learner motivation and psychological need satisfaction
Sociocultural Theory (SCT)	ZPD, scaffolding, cultural mediation	Social mediation and parental involvement
ADDIE Instructional Design Model	Analysis, design, development, implementation, evaluation	Structured intervention development

Proposed Multidimensional Conceptual Framework

Building upon the theoretical foundations discussed in the preceding sections, this study constructs a conceptual framework to clarify the relationships between the key variables involved in the Parental Music Mentorship (PMM) model and children's piano learning achievement. This framework systematically links the intervention (PMM model), the intermediate psychological mechanism (parental perception), and the final outcome (children's holistic piano achievement), providing a clear logical path for the empirical verification of the study. The framework consists of three core components: the independent variable, the mediating variable, and the dependent variable, with clear causal relationships and interactive mechanisms between each component. This visualized framework makes the

research logic clearer and also provides a reference for subsequent empirical research in related fields.

The proposed framework synthesizes three major theoretical and instructional perspectives: Self-Determination Theory (SDT), Vygotsky's Sociocultural Theory (SCT), and the ADDIE instructional design model. The integration of these perspectives provides a holistic explanation of how motivational processes, social mediation, and instructional structures collectively influence beginner piano learning experiences and achievement outcomes.

Within the framework, the PMM intervention functions as the independent variable, designed to enhance beginner piano learning through culturally responsive and motivation-supportive instructional strategies. Psychological need satisfaction, learning engagement, self-regulation, and parental perception operate as mediating mechanisms that explain how the intervention influences learner outcomes. The dependent variable is multidimensional beginner piano achievement, encompassing technical playing skills, emotional engagement, and musical expression.

Grounded in Self-Determination Theory developed by Edward L. Deci and Richard M. Ryan, the framework emphasizes the importance of satisfying learners' psychological needs for autonomy, competence, and relatedness as central mechanisms underlying intrinsic motivation, persistence, and emotional well-being (Deci & Ryan, 1985, 2000; Ryan & Deci, 2017). Within beginner piano learning, autonomy-supportive instruction, scaffolded competence development, and emotionally supportive relationships are expected to strengthen learners' engagement and long-term participation in musical activities.

Simultaneously, the framework incorporates the Sociocultural Theory of Lev Vygotsky, which conceptualizes learning as socially mediated and culturally situated (Vygotsky, 1978). In the Chinese Piano Craze context, piano learning occurs within collectivist educational cultures emphasizing discipline, parental involvement, achievement orientation, and cultural capital (Ho, 2023; Kong, 2023). Consequently, beginner learners' musical experiences are strongly shaped by interactions with parents, teachers, peers, and institutional structures.

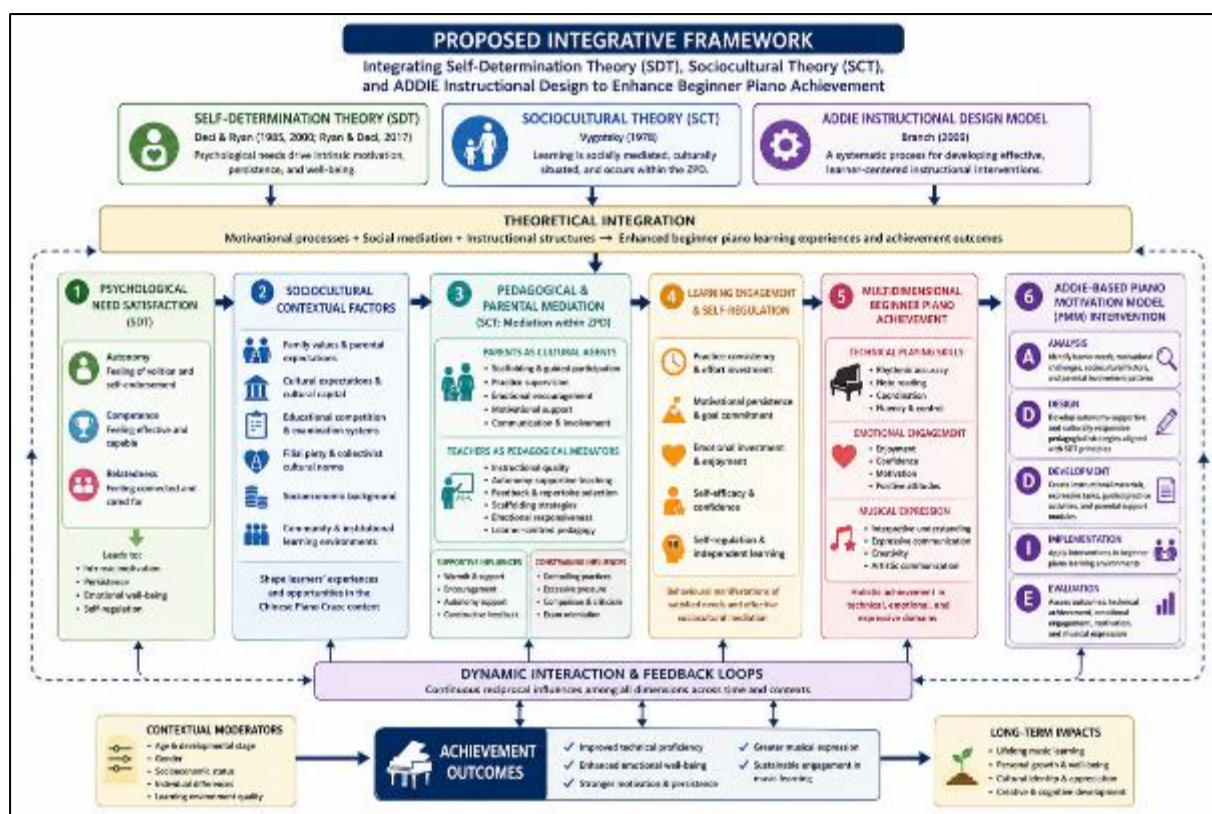


Figure 2: Multidimensional Conceptual Framework for Enhancing Beginner Piano Achievement in the Chinese Piano Craze Context

Figure 2 illustrates the dynamic relationships among psychological need satisfaction, sociocultural influences, pedagogical mediation, and multidimensional piano achievement within the PMM intervention framework. The model proposes that culturally responsive instructional and parental support mechanisms enhance beginner learners' motivation, engagement, and expressive development through interconnected psychological and sociocultural processes.

In this conceptualization, parents are conceptualized as "cultural agents" who mediate children's musical learning experiences through scaffolding processes within the learner's Zone of Proximal Development (ZPD). Through guided participation, emotional encouragement, practice supervision, and motivational support, parents influence learners' attitudes, practice behaviours, confidence, and emotional engagement (Kong, 2021; Zhang et al., 2023). Teachers similarly function as pedagogical mediators who facilitate psychological need satisfaction through instructional approaches, feedback practices, repertoire selection, emotional responsiveness, and learner-centred pedagogy (Wong et al., 2023a).

The framework further recognizes that sociocultural influences may function both positively and negatively within beginner piano learning. Supportive parental involvement and emotionally responsive teaching may strengthen intrinsic motivation and emotional well-being, whereas excessively controlling practices, examination pressure, and comparison-oriented learning environments may contribute to anxiety, emotional disengagement, and reduced learner autonomy (Cheng et al., 2024). These interactions collectively operate through six primary dimensions that shape beginner piano achievement outcomes.

- The first dimension, psychological need satisfaction, is derived from SDT and includes learners' experiences of autonomy, competence, and relatedness. These psychological needs are expected to influence intrinsic motivation, practice persistence, emotional engagement, and self-regulation (Ryan & Deci, 2017).
- The second dimension, sociocultural contextual factors, includes family values, cultural expectations, educational competition, filial piety, socioeconomic background, cultural capital, examination systems, and community learning environments that shape learners' musical experiences within the Chinese Piano Craze phenomenon (Bai, 2021; Zhou et al., 2020).
- The third dimension, pedagogical and parental mediation, refers to the mediating roles of teachers and parents in facilitating or constraining learners' musical development. This dimension includes instructional quality, autonomy-supportive teaching, emotional encouragement, scaffolding strategies, communication styles, and parental involvement patterns (Wong et al., 2023b; Qiushuo & Mustafa, 2025).
- The fourth dimension, learning engagement and self-regulation, encompasses learners' practice consistency, motivational persistence, emotional investment, self-efficacy, and capacity for independent learning behaviours (Cheng & Southcott, 2023). This dimension represents the behavioural manifestation of successful psychological need satisfaction and effective sociocultural mediation.
- The fifth dimension, multidimensional beginner piano achievement, conceptualizes achievement across three interconnected domains: technical playing skills, emotional engagement, and musical expression. Technical skills include rhythmic accuracy, note reading, coordination, and fluency; emotional engagement includes enjoyment, confidence, and motivation; while musical expression involves interpretive understanding, creativity, and expressive communication through performance (Zheng & Leung, 2021).
- The sixth dimension is the ADDIE-Based Piano Motivation Model (PMM) intervention, which functions as the operational and instructional component of the framework. Drawing upon the ADDIE instructional design model proposed by Robert Maribe Branch (Branch, 2009), the PMM intervention provides a structured, learner-centred, and culturally responsive mechanism for enhancing beginner piano learning experiences.

Within the PMM intervention, the Analysis phase identifies learner needs, motivational challenges, sociocultural influences, and parental involvement patterns. The Design phase develops autonomy-supportive and culturally responsive pedagogical strategies aligned with SDT principles. The Development phase produces instructional materials, expressive learning tasks, guided practice activities, and parental support modules (Li & Abidin, 2024). The Implementation phase applies these interventions within beginner piano learning environments, while the Evaluation phase assesses improvements in technical achievement, emotional engagement, motivation, and musical expression.

Overall, the proposed framework argues that sustainable beginner piano achievement emerges not merely through repetitive technical practice or examination preparation, but through balanced interactions between psychological motivation, sociocultural mediation, emotional support, instructional quality, and culturally responsive pedagogical design. By integrating SDT, Sociocultural Theory, and ADDIE-based instructional principles, the framework provides a comprehensive and theoretically grounded model for

understanding and enhancing beginner piano learning within contemporary Chinese music education.

The framework contributes to contemporary music education literature by extending SDT and sociocultural perspectives into the context of beginner piano learning within China's Piano Craze phenomenon, while also providing a structured instructional foundation for culturally responsive music pedagogy and parental engagement practices. This research fills the research gap of integrated theoretical application in local piano education, and the constructed framework can be used as a reference for follow-up related research and teaching practice.

Proposed Piano Motivation Model (PMM)

The Piano Motivation Model (PMM) is proposed as an instructional and motivational intervention designed to operationalize the multidimensional conceptual framework presented in this study. Grounded in Self-Determination Theory, Sociocultural Theory, and the ADDIE instructional design model, the PMM aims to enhance beginner piano achievement through culturally responsive, learner-centred, and motivation-supportive pedagogical practices. The model was developed in response to the motivational, emotional, and instructional challenges associated with the Chinese Piano Craze phenomenon, where beginner piano learning is frequently influenced by examination-oriented instruction, parental pressure, and externally regulated achievement expectations (Bai, 2021; Cheng et al., 2024). As a targeted intervention model for practical problems, PMM is the core practical output of this research.

Unlike conventional piano pedagogies emphasizing repetitive technical drills and performance examination outcomes, the PMM promotes balanced development across technical playing skills, emotional engagement, and musical expression. The model conceptualizes piano learning as both a psychological and sociocultural process in which learner motivation, emotional support, parental mediation, and instructional design interact dynamically to influence musical development. Through autonomy-supportive teaching, scaffolded learning experiences, emotionally responsive feedback, and collaborative parental involvement, the PMM seeks to cultivate sustainable engagement and meaningful musical participation among beginner piano learners.

Core Principles of the PMM

The Piano Motivation Model (PMM) is guided by several interconnected instructional and motivational principles derived from Self-Determination Theory (SDT), Sociocultural Theory (SCT), and learner-centred instructional design. These principles collectively aim to create supportive, culturally responsive, and psychologically meaningful piano learning environments that enhance beginner learners' technical development, emotional engagement, and expressive musicality. Rather than emphasizing examination achievement alone, the PMM promotes holistic beginner piano learning through balanced interactions between motivation, scaffolding, emotional support, creativity, and instructional structure.

Autonomy-Supportive Learning

One of the central principles of the PMM is autonomy-supportive learning, which is grounded in Self-Determination Theory developed by Edward L. Deci and Richard M. Ryan (Deci & Ryan,

1985, 2000). Autonomy support involves creating learning environments in which beginner piano learners experience meaningful choice, personal agency, and ownership over their musical development. Within the PMM, autonomy-supportive instruction may include opportunities for repertoire selection, interpretive exploration, collaborative goal setting, flexible practice strategies, and reflective learning activities.

Research indicates that autonomy-supportive educational environments strengthen intrinsic motivation, persistence, emotional well-being, and long-term engagement in music learning (Ryan & Deci, 2017; Cheng & Southcott, 2023). In contrast, highly controlling instructional approaches characterized by excessive criticism, rigid practice regulation, and examination pressure may undermine learners' motivation and emotional connection toward piano learning (Kong, 2021). The PMM therefore encourages teachers and parents to provide guidance while simultaneously respecting learners' individuality, emotional experiences, and developmental needs.

Scaffolded Competence Development

Another core principle of the PMM involves scaffolded competence development. Beginner piano learners frequently encounter technical challenges related to rhythm accuracy, note reading, posture, finger coordination, and hand independence. Without appropriate support, these challenges may lead to frustration, anxiety, and reduced motivation (Wong et al., 2023a).

Drawing upon the Sociocultural Theory of Lev Vygotsky, the PMM emphasizes scaffolded learning experiences within the learner's Zone of Proximal Development (ZPD) (Vygotsky, 1978). Teachers and parents function as more knowledgeable others who guide learners through progressive instructional support, modelling behaviours, constructive feedback, guided practice, and gradual transfer of responsibility.

The PMM advocates structured yet achievable learning tasks that allow learners to experience incremental success and mastery. Such experiences strengthen learners' perceptions of competence, which are strongly associated with self-efficacy, persistence, and musical achievement (Franceschi & Ercegovac, 2022). Constructive feedback within the PMM prioritizes encouragement, progress recognition, and process-oriented improvement rather than perfectionistic evaluation or excessive comparison.

Emotional Engagement and Well-Being

The PMM recognizes emotional engagement as a fundamental component of sustainable beginner piano learning. Emotional engagement includes enjoyment, confidence, curiosity, motivation, emotional safety, and positive attitudes toward musical participation. Research suggests that emotionally supportive learning environments significantly enhance learner persistence and long-term commitment in music education (Bonneville-Roussy & Evans, 2025).

Within the Chinese Piano Craze context, beginner learners frequently experience emotional pressures associated with examinations, competition participation, parental expectations, and social comparison (Bai, 2021; Cheng et al., 2024). Consequently, the PMM

emphasizes emotionally responsive pedagogy designed to reduce anxiety, strengthen learner confidence, and cultivate positive musical experiences.

Teachers within the PMM are encouraged to establish psychologically safe learning environments where mistakes are viewed as opportunities for growth rather than indicators of failure. Similarly, parents are guided to provide emotional encouragement and supportive communication rather than overly controlling or performance-oriented supervision. By prioritizing emotional well-being alongside technical achievement, the PMM seeks to promote healthier and more sustainable forms of beginner piano engagement.

Culturally Responsive Pedagogy

Culturally responsive pedagogy constitutes another foundational principle of the PMM. The model acknowledges that beginner piano learning in China occurs within sociocultural environments strongly influenced by Confucian educational values emphasizing discipline, diligence, perseverance, filial piety, and academic achievement (Ho, 2023; Zhou et al., 2020). Rather than rejecting these cultural values, the PMM seeks to balance them with learner-centred motivational support and emotional responsiveness.

The PMM therefore integrates culturally sensitive instructional practices that recognize the important role of parents, family expectations, and educational aspirations within Chinese music education. Parents are conceptualized as “cultural agents” who mediate children’s learning experiences through practice supervision, emotional support, and motivational reinforcement (Kong, 2023). However, the model also encourages reflective parental involvement that supports learner autonomy and emotional well-being rather than excessive external control.

Additionally, culturally responsive pedagogy within the PMM may involve the inclusion of culturally meaningful repertoire, expressive interpretation activities, collaborative learning experiences, and communication strategies sensitive to family expectations and educational values.

Collaborative Parent-Teacher Partnership

The PMM further emphasizes collaborative parent-teacher partnership as a key mechanism supporting beginner piano achievement. Research consistently demonstrates that parental involvement significantly influences children’s music learning experiences, practice consistency, and motivational development (Qiushuo & Mustafa, 2025; Zhang et al., 2023).

Within the PMM, teachers and parents are encouraged to function as collaborative partners rather than isolated educational agents. Effective communication between teachers and parents may help establish consistent motivational support, realistic expectations, constructive feedback practices, and emotionally supportive learning environments. Parents are guided to support children’s learning through encouragement, structured routines, and collaborative participation rather than punitive control or excessive achievement pressure.

This collaborative approach aligns with sociocultural perspectives emphasizing learning as a socially mediated process shaped through interpersonal interaction and guided participation (Vygotsky, 1978).

Expressive and Creative Musical Learning

The PMM also promotes expressive and creative musical learning as an essential dimension of beginner piano achievement. Traditional examination-oriented piano instruction frequently prioritizes technical accuracy and performance outcomes while providing limited opportunities for emotional expression and creativity (Zheng & Leung, 2021). Consequently, learners may become technically proficient yet emotionally disengaged from musical participation.

To address this issue, the PMM incorporates expressive interpretation activities, imaginative musical tasks, reflective listening exercises, improvisation opportunities, and creative engagement with repertoire. Such activities encourage learners to develop emotional connection, artistic sensitivity, and interpretive understanding alongside technical competence.

Research suggests that creative and expressive learning experiences strengthen intrinsic motivation, musical identity development, and long-term participation in music education (Ho, 2023). The PMM therefore conceptualizes musical expression not as an advanced skill reserved for elite learners, but as an integral component of beginner piano learning.

Motivation-Centred Instructional Design

Finally, the PMM is grounded in motivation-centred instructional design through the integration of the ADDIE instructional framework proposed by Robert Maribe Branch (Branch, 2009). The ADDIE model provides systematic guidance for designing learner-centred and culturally responsive piano instruction.

Within the PMM, instructional planning prioritizes learner motivation, emotional engagement, developmental appropriateness, and sociocultural responsiveness. The Analysis phase identifies learners' motivational needs, sociocultural contexts, and learning challenges. The Design and Development phases create autonomy-supportive learning materials, scaffolded practice tasks, expressive activities, and parental guidance resources (Li & Abidin, 2024). The Implementation phase applies these strategies within authentic learning environments, while the Evaluation phase assesses improvements in technical achievement, emotional engagement, motivation, and musical expression.

Collectively, these core principles position the PMM as a holistic and multidimensional instructional model that integrates psychological motivation, sociocultural mediation, emotional support, parental collaboration, and structured instructional design to enhance sustainable beginner piano achievement within the Chinese Piano Craze context.

ADDIE-Based Structure and Implementation of the PMM

The Piano Motivation Model (PMM) is operationalized through the ADDIE instructional design framework developed by Robert Maribe Branch, which consists of five systematic phases: Analysis, Design, Development, Implementation, and Evaluation (Branch, 2009). The integration of the ADDIE model within the PMM provides a structured and learner-centred approach for addressing the motivational, emotional, pedagogical, and sociocultural challenges associated with beginner piano learning in the Chinese Piano Craze context. By

combining instructional design principles with Self-Determination Theory (SDT) and Sociocultural Theory (SCT), the PMM aims to create sustainable and culturally responsive beginner piano learning experiences.

The ADDIE structure is particularly appropriate for music education because it allows instructional interventions to be developed systematically while remaining responsive to learners' developmental needs, sociocultural contexts, and motivational characteristics (Behzadaval & Vahedi, 2019; Li & Abidin, 2024). Within the PMM, each ADDIE phase contributes to the enhancement of technical playing skills, emotional engagement, and musical expression through carefully designed instructional and parental support mechanisms. Figure 3 illustrates the ADDIE-based operational structure of the PMM and demonstrates how systematic instructional design processes support beginner piano achievement through integrated motivational, pedagogical, and sociocultural mechanisms. The standardized ADDIE structure makes the PMM model replicable and popularized in different teaching scenarios.

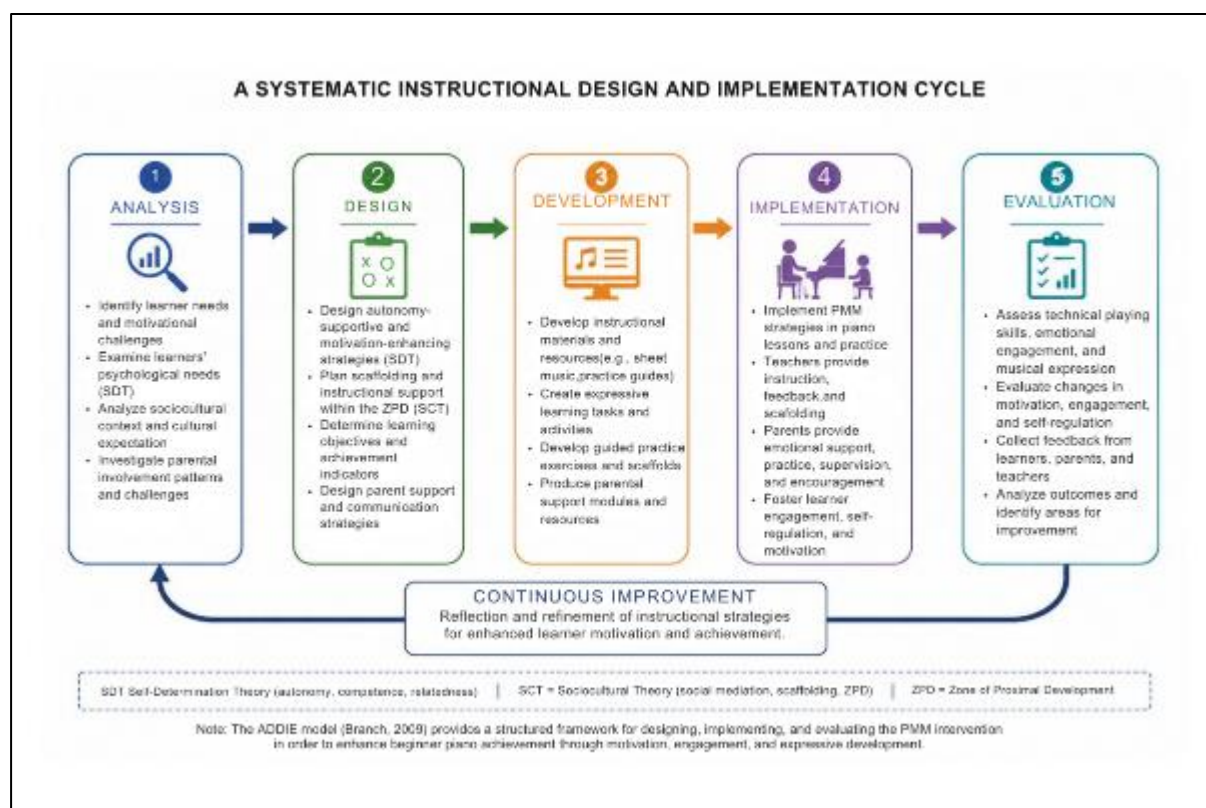


Figure 3: ADDIE-Based Structure of the Piano Motivation Model (PMM)

The ADDIE framework guides the systematic implementation of the PMM through five interconnected phases: Analysis, Design, Development, Implementation, and Evaluation. These phases collectively support beginner learners' motivation, emotional engagement, technical competence, and musical expression through structured instructional and parental support mechanisms.

Analysis Phase

The Analysis phase focuses on identifying learners' developmental needs, motivational challenges, sociocultural influences, and instructional barriers that may affect beginner piano achievement. Within the Chinese Piano Craze context, beginner learners frequently encounter multiple pressures associated with examination-oriented instruction, parental expectations, technical difficulties, and externally regulated learning environments (Bai, 2021; Cheng et al., 2024). Consequently, the PMM emphasizes comprehensive learner analysis before instructional planning begins.

During this phase, teachers examine learners' prior musical experiences, technical readiness, emotional engagement levels, motivational orientations, and practice behaviours. Particular attention is given to learners' psychological needs for autonomy, competence, and relatedness as proposed within SDT (Ryan & Deci, 2017). Teachers also assess learners' emotional responses toward piano learning, including confidence, anxiety, enjoyment, frustration, and persistence.

In addition, the Analysis phase evaluates parental involvement patterns and sociocultural contexts influencing children's learning experiences. Parents' expectations, communication styles, supervision approaches, and educational values may significantly affect learners' motivation and emotional well-being (Kong, 2021; Zhang et al., 2023). Understanding these contextual factors enables teachers to develop more culturally responsive and emotionally supportive instructional strategies.

The Analysis phase further identifies environmental and institutional factors such as lesson structures, examination requirements, access to learning resources, and opportunities for peer interaction. By conducting holistic learner and contextual analysis, the PMM seeks to establish instructional foundations aligned with learners' psychological, emotional, and sociocultural needs.

Design Phase

The Design phase involves the development of learner-centred pedagogical strategies aligned with the motivational and sociocultural principles of the PMM. Guided by SDT, this phase emphasizes autonomy-supportive instruction, scaffolded competence development, and emotionally responsive learning environments (Deci & Ryan, 2000).

Instructional planning within this phase incorporates differentiated learning activities appropriate for beginner learners' developmental levels. Teachers design lessons that balance technical exercises with expressive and creative musical tasks in order to sustain learner engagement and enjoyment. Repertoire selection is approached strategically to ensure that musical materials are technically accessible, emotionally meaningful, and culturally relevant.

The Design phase also integrates scaffolding principles derived from Sociocultural Theory (Vygotsky, 1978). Teachers plan progressive learning sequences that gradually increase task complexity while providing appropriate instructional support. Guided demonstrations, modelling, collaborative learning activities, reflective questioning, and

structured practice routines are incorporated to support learners within their Zone of Proximal Development (ZPD).

Parental involvement strategies are similarly designed during this phase. Parents are provided with guidance regarding supportive communication, emotional encouragement, practice supervision, and autonomy-supportive interaction techniques. Rather than functioning as authoritarian monitors, parents are encouraged to act as collaborative learning partners who support children's confidence and emotional engagement (Qiushuo & Mustafa, 2025).

Furthermore, the Design phase emphasizes emotional and motivational considerations. Activities promoting enjoyment, curiosity, creativity, and expressive exploration are intentionally embedded into lesson structures to reduce excessive examination-oriented learning and performance anxiety (Ho, 2023).

Development Phase

The Development phase focuses on producing instructional materials, learning resources, parental support modules, and pedagogical tools required for implementing the PMM. Within this phase, teachers and instructional designers create learner-centred materials that integrate technical instruction, motivational support, and expressive musical learning.

Instructional resources developed within the PMM may include guided practice journals, reflective learning activities, expressive interpretation exercises, scaffolded technical exercises, listening tasks, creativity-based activities, and motivational reinforcement tools. These materials are designed to encourage learners' self-regulation, confidence, and emotional engagement throughout the learning process.

The Development phase also includes the preparation of parental support materials intended to strengthen constructive home-based learning environments. Such resources may provide guidance regarding practice scheduling, emotional encouragement, communication strategies, and realistic expectation-setting. Given the significant role of parental involvement in Chinese piano education, these materials aim to balance discipline and support while minimizing excessive psychological pressure (Kong, 2023).

In addition, digital and multimedia resources may be incorporated to increase learner engagement and accessibility. Interactive practice tools, audio demonstrations, video modelling, and reflective learning platforms may support diverse learning preferences and reinforce instructional consistency beyond formal lesson settings (Guobin et al., 2025).

Importantly, the Development phase prioritizes culturally responsive and emotionally supportive learning materials. Musical tasks are designed not only to improve technical proficiency but also to foster creativity, expressive communication, and meaningful emotional connection with music-making (Zheng & Leung, 2021).

Implementation Phase

The Implementation phase involves the application of the PMM within authentic beginner piano learning environments such as private piano studios, community music schools, group

piano classes, or home-based learning contexts. During this phase, teachers, parents, and learners actively engage in the instructional processes designed during the previous phases.

Teachers implement learner-centred instructional strategies emphasizing encouragement, guided participation, constructive feedback, and autonomy support. Rather than relying exclusively on repetitive technical drilling and examination preparation, lessons incorporate expressive exploration, collaborative interaction, reflective learning, and motivational reinforcement. Teachers also monitor learners' emotional responses and adjust instructional approaches according to individual developmental needs.

Parental involvement is actively integrated into the Implementation phase. Parents support learners through structured practice supervision, emotional encouragement, collaborative participation, and communication with teachers. However, the PMM emphasizes balanced parental involvement that supports learner independence and emotional well-being rather than excessive control or performance pressure (Wing & Koh, 2020).

The Implementation phase also encourages positive teacher-parent collaboration. Regular communication between teachers and parents helps establish consistent expectations, monitor learner progress, address emotional challenges, and strengthen supportive learning environments. Such collaboration reflects the sociocultural perspective that learning occurs through guided social interaction and mediated participation (Vygotsky, 1978).

Additionally, learners are encouraged to participate in recitals, collaborative music-making, reflective discussions, and expressive performance opportunities that strengthen confidence, social belonging, and musical identity development. These experiences may further enhance relatedness and intrinsic motivation within beginner piano learning environments.

Evaluation Phase

The Evaluation phase assesses the effectiveness of the PMM in enhancing multidimensional beginner piano achievement. Unlike conventional piano assessment systems that focus primarily on technical accuracy and examination outcomes, the PMM adopts a holistic evaluation approach encompassing technical development, emotional engagement, motivation, self-regulation, and musical expression.

Technical assessment includes learners' progress in note reading, rhythmic accuracy, finger coordination, posture, articulation control, and performance fluency. Emotional and motivational evaluation examines learners' enjoyment, confidence, persistence, practice consistency, and emotional responses toward piano learning (Franceschi & Ercegovac, 2022).

The PMM also evaluates expressive and creative dimensions of musical learning, including interpretive understanding, phrasing, emotional communication, and creative engagement with repertoire (Zheng & Leung, 2021). Reflective journals, observational assessment, teacher feedback, learner self-assessment, and parental reflections may be incorporated to provide multidimensional evaluation data.

Formative assessment is emphasized throughout the learning process to provide continuous feedback and instructional adjustment. Rather than focusing exclusively on summative examination outcomes, the PMM prioritizes growth-oriented evaluation that recognizes learners' individual progress and developmental trajectories.

The Evaluation phase additionally assesses the effectiveness of parental involvement and teacher mediation strategies. Feedback from learners, parents, and teachers may help refine instructional approaches and improve future implementation cycles. In this way, evaluation functions not merely as outcome measurement but also as a mechanism for continuous instructional improvement and reflective pedagogical practice.

Overall, the ADDIE-based structure of the PMM provides a systematic and theoretically grounded approach for enhancing beginner piano achievement through integrated psychological, sociocultural, instructional, and motivational support mechanisms. By combining structured instructional design with autonomy-supportive pedagogy, scaffolded learning, emotional engagement, and culturally responsive parental involvement, the PMM offers a holistic framework for sustainable beginner piano learning within the Chinese Piano Craze context.

Educational and Pedagogical Implications

The proposed Piano Motivation Model (PMM) offers several important implications for beginner piano instruction, music education practice, parental involvement, and educational management within the Chinese Piano Craze context. By integrating Self-Determination Theory (SDT), Sociocultural Theory (SCT), and ADDIE-based instructional design principles, the PMM provides a multidimensional approach that moves beyond traditional examination-oriented piano instruction toward more sustainable, learner-centred, and emotionally supportive music education practices. The research conclusions and suggestions in this part can directly guide the practice of piano education in China, with strong practical popularization value.

Implications for Beginner Piano Pedagogy

One of the primary pedagogical implications of the PMM is the need to balance technical instruction with emotional engagement and expressive musical development. Traditional beginner piano instruction within examination-oriented systems often prioritizes repetitive technical drills, score accuracy, and performance outcomes while providing limited opportunities for creativity, autonomy, and emotional expression (Bai, 2021; Zheng & Leung, 2021). Although such approaches may produce short-term technical improvement, they may simultaneously contribute to learner anxiety, emotional disengagement, and reduced intrinsic motivation.

The PMM suggests that beginner piano pedagogy should adopt more autonomy-supportive instructional approaches aligned with SDT principles (Ryan & Deci, 2017). Teachers are encouraged to provide meaningful learning choices, supportive feedback, expressive exploration opportunities, and scaffolded learning experiences that strengthen learners' confidence and emotional connection toward music-making. Such learner-centred pedagogies may enhance persistence, enjoyment, and long-term musical participation.

Additionally, the PMM highlights the importance of recognizing emotional engagement as a legitimate educational outcome rather than treating it as secondary to technical achievement. Beginner learners who experience enjoyment, emotional safety, and meaningful musical participation are more likely to sustain practice behaviours and develop positive musical identities (Bonneville-Roussy & Evans, 2025).

Implications for Teacher Education and Professional Development

The framework also carries significant implications for piano teacher education and professional development. Many piano teachers operating within highly competitive educational environments may rely heavily on authoritarian instructional styles, examination preparation, and externally regulated motivational strategies (Cheng et al., 2024). While these practices may reflect broader sociocultural expectations regarding discipline and achievement, they may not adequately address learners' psychological and emotional needs.

The PMM therefore suggests that teacher preparation programmes should incorporate training related to motivational psychology, emotional responsiveness, autonomy-supportive pedagogy, scaffolded instruction, and culturally responsive teaching practices. Teachers require greater awareness of how instructional communication, feedback practices, and emotional interactions influence learner motivation, confidence, and persistence.

Furthermore, professional development initiatives may help teachers integrate expressive and creative learning activities into beginner piano instruction. Encouraging improvisation, reflective listening, imaginative interpretation, and collaborative music-making may help teachers create more balanced learning environments that support both technical competence and artistic development (Ho, 2023).

Implications for Parental Involvement

Parental involvement represents another major implication of the PMM. Within the Chinese Piano Craze context, parents frequently play highly active roles in supervising practice routines, selecting teachers, monitoring achievement, and establishing educational expectations (Kong, 2021; Zhang et al., 2023). While such involvement may strengthen discipline and practice consistency, excessive control and performance pressure may undermine learners' autonomy and emotional well-being.

The PMM proposes a more balanced model of parental participation grounded in sociocultural scaffolding and emotional support. Parents are encouraged to function as collaborative learning partners who provide encouragement, structured support, and motivational reinforcement rather than solely emphasizing examination outcomes or competitive achievement.

This perspective has important implications for parent education programmes within music schools and private piano studios. Workshops, communication guidelines, and parental mentoring resources may help families develop more constructive home-based learning environments that support learners' confidence, emotional engagement, and self-regulation. Such approaches may reduce emotional tension while strengthening long-term learner persistence.

Implications for Educational Management and Music Institutions

The PMM also offers important implications for educational management and institutional music education practices. The rapid expansion of piano learning within China has created highly competitive instructional environments often characterized by standardized assessment systems, examination-focused teaching, and achievement-oriented institutional cultures (Bai, 2021). These conditions may contribute to high learner attrition rates, motivational decline, and emotional burnout among beginner students.

Music schools, conservatories, and private piano institutions may therefore benefit from adopting more holistic instructional policies that prioritize learner well-being, motivation, and expressive development alongside technical achievement. Institutional support for learner-centred teaching practices, parent-teacher collaboration, emotional support systems, and diversified assessment methods may contribute to healthier and more sustainable music learning environments.

The PMM additionally highlights the importance of instructional design within music education management. Structured and systematically designed interventions grounded in the ADDIE framework may improve instructional consistency, learner engagement, and educational quality (Li & Abidin, 2024). Educational institutions may therefore consider incorporating motivation-centred instructional design principles into curriculum planning, teacher supervision, and programme evaluation processes.

Implications for Culturally Responsive Music Education

Another important implication of the PMM concerns culturally responsive music education. The framework recognizes that beginner piano learning in China is deeply shaped by collectivist cultural values emphasizing diligence, perseverance, filial piety, and educational achievement (Zhou et al., 2020). Rather than rejecting these cultural influences, the PMM advocates balanced pedagogical approaches that integrate cultural sensitivity with learner autonomy and emotional support.

This perspective suggests that culturally responsive piano pedagogy should acknowledge the educational aspirations and family values associated with piano learning while simultaneously promoting learners' psychological well-being and intrinsic motivation. Teachers and parents may therefore need to negotiate the balance between discipline and autonomy, achievement and enjoyment, as well as technical precision and expressive creativity.

The PMM further supports the inclusion of culturally meaningful repertoire, collaborative learning experiences, and expressive musical activities that strengthen learners' emotional connection to music-making. Such approaches may help beginner learners experience piano learning not merely as a competitive educational obligation but also as a meaningful form of artistic and personal development.

Implications for Future Research

Finally, the PMM provides several directions for future music education research. Empirical studies may examine the effectiveness of the PMM in enhancing beginner learners' motivation, technical achievement, emotional engagement, and musical expression across

different educational settings. Quantitative and qualitative investigations may also explore how parental involvement patterns, teacher instructional styles, and sociocultural influences interact to shape beginner piano learning experiences.

Future research may additionally investigate the applicability of the PMM beyond the Chinese Piano Craze context, including other collectivist educational cultures and diverse forms of instrumental music education. Longitudinal studies examining learner persistence, emotional development, and motivational trajectories may further strengthen understanding of sustainable beginner music learning.

Overall, the PMM contributes important educational, pedagogical, and managerial insights by proposing a holistic and culturally responsive approach to beginner piano instruction. By emphasizing psychological need satisfaction, sociocultural mediation, emotional engagement, parental collaboration, and systematic instructional design, the model provides a comprehensive framework for supporting sustainable beginner piano achievement within contemporary music education contexts.

Conclusion

The Chinese Piano Craze phenomenon has transformed beginner piano learning into one of the most significant contemporary developments in global music education. While the rapid expansion of piano participation has created important opportunities for musical engagement, cultural enrichment, and educational advancement, it has also generated substantial pedagogical and psychological challenges associated with examination-oriented instruction, parental pressure, emotional disengagement, and learner attrition (Bai, 2021; Cheng et al., 2024). These challenges highlight the need for more holistic and sustainable approaches to beginner piano education that extend beyond narrow technical achievement and externally regulated performance outcomes. This research is launched precisely against this realistic background, aiming to solve the prominent problems in current piano education.

In response to these concerns, this paper proposed a multidimensional conceptual framework integrating Self-Determination Theory (SDT), Sociocultural Theory (SCT), and the ADDIE instructional design model to explain and enhance beginner piano achievement within the Chinese Piano Craze context. Grounded in the work of Edward L. Deci and Richard M. Ryan, the framework emphasizes the importance of satisfying learners' psychological needs for autonomy, competence, and relatedness in order to strengthen intrinsic motivation, emotional engagement, and sustained musical participation (Ryan & Deci, 2017). Simultaneously, the framework incorporates the sociocultural perspectives of Lev Vygotsky by conceptualizing learning as socially mediated and culturally situated within family, institutional, and community contexts.

The proposed Piano Motivation Model (PMM) operationalizes these theoretical foundations through a structured and culturally responsive instructional framework guided by the ADDIE model developed by Robert Maribe Branch (Branch, 2009). The PMM positions parents as cultural agents and teachers as pedagogical mediators who collaboratively support beginner learners through scaffolded instruction, emotional encouragement, autonomy-supportive teaching, and expressive musical learning experiences. Rather than conceptualizing piano achievement solely in terms of technical proficiency, the framework proposes a

multidimensional understanding encompassing technical playing skills, emotional engagement, and musical expression.

The paper further argued that sustainable beginner piano achievement emerges through dynamic interactions among psychological motivation, sociocultural mediation, instructional quality, emotional support, and learner-centred pedagogical design. By integrating motivational psychology, sociocultural perspectives, and instructional design theory, the proposed framework contributes a more comprehensive explanation of beginner piano learning within contemporary Chinese music education.

From an educational and pedagogical perspective, the PMM offers practical implications for piano teachers, parents, music institutions, curriculum developers, and educational managers seeking to establish healthier and more sustainable beginner learning environments. The framework encourages a shift from highly controlling and examination-dominated instructional cultures toward more balanced pedagogical practices that support creativity, emotional well-being, learner autonomy, and meaningful musical participation.

Finally, the study contributes to contemporary music education literature by extending SDT and sociocultural perspectives into the specific context of China's Piano Craze phenomenon while simultaneously proposing a structured instructional model for enhancing beginner piano achievement. Future empirical studies are recommended to evaluate the effectiveness of the PMM across different instructional settings and learner populations. Such investigations may further strengthen understanding of how culturally responsive, motivation-supportive, and socially mediated pedagogical approaches can contribute to sustainable musical development among beginner learners in contemporary music education contexts.

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