



ISSN: 2617-6548

URL: www.ijirss.com



The influence of enjoyment and love of music and high school music experience on music societies participation among non-music major college students in Sichuan, China: The mediating effect of basic psychological needs

Yuena Gu^{1*}, Junainah Abd Hamid²,  Jacqueline Tham³

^{1,2,3}Management and Science University, Postgraduate Center, Selangor Darul Ehsan, Shah Alam, 40100, Malaysia.

¹Chengdu Vocational University of The Arts, Conservatory of music, Chengdu, Sichuan Province, 611433, China.

Corresponding author: Yuena Gu (Email: Sliva2024@hotmail.com)

Abstract

This study explored the influencing factors of non-music college students' participation in music societies in Sichuan, China, and analyzed the relationships between students' enjoyment and love of music (EALM), high school music experience (HSME), basic psychological needs (BPN), and music societies participation (MSP) and the mediating role of BPN. The study used a cross-sectional survey with an online questionnaire for 499 students and structural equation modeling to analyze the data. The results showed that EALM was the primary factor influencing MSP, with a significant direct positive association; HSME had a non-significant direct effect on MSP, but its fully mediated effect through BPN was significant; and BPN had a strong positive direct effect on MSP and partially mediated the relationship between EALM and MSP. The study suggests that the core motivation for non-music majors to participate in music societies is an intrinsic love of music, and that the high school music experience indirectly facilitates participation in music societies by fulfilling BPN (autonomy, relatedness, and competence). It is recommended that music education administrators and club activities should focus on stimulating the love of music, satisfying psychological needs, and optimizing the design and promotion of activities to enhance the participation of non-music majors.

Keywords: Basic psychological needs, enjoyment and love of music, high school music experience, music societies participation. Non-music college students.

DOI: 10.53894/ijirss.v8i4.7939

Funding: This study received no specific financial support.

History: Received: 30 April 2025 / Revised: 3 June 2025 / Accepted: 5 June 2025 / Published: 19 June 2025

Copyright: © 2025 by the authors. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Publisher: Innovative Research Publishing

1. Introduction

1.1. Research Background

Theoretical and practical classes offered by institutions of higher education in accordance with talent cultivation programs are collectively known as the 'first classroom.' Other activities or scenarios that help to expand the knowledge of college students and enhance their comprehensive quality are known as the 'second classroom' [1]. Societal activities are not only the typical 'second classroom' but also an important way for college students to connect theory with practice and engage in social practice [2]. Research conducted in foreign countries has demonstrated the efficacy of such activities in cultivating critical thinking, fostering the development of a healthy personality, cultivating leadership skills, and enhancing teamwork abilities. In addition, domestic scholars have successively proven that participation in social activities promotes college students' comprehensive quality, social adaptability, employability, mental health, and starting salary Lin et al. [3].

Ma [4] posits that the establishment of music societies on university campuses has the potential to enhance students' extracurricular activities by offering a diverse array of musical genres and providing a novel domain for musical engagement and learning. Furthermore, this initiative respects students' interests and hobbies, bestows autonomy upon them, and enables them to select their own approach to musical performance, thereby fostering their musical aptitude. Furthermore, music societies represent a pivotal component in the execution of aesthetic education and the cultivation of campus culture within higher education institutions. In addition, music society constitutes a pivotal component in the execution of aesthetic education and the cultivation of campus culture within institutions of higher learning, Hu et al. [5]. Zhou and Li [6] posit that the practical activities of music and art organized by university music societies can promote the growth of students' creative spirit and imagination in all aspects. These activities can effectively stimulate students' inner subjective emotions, help students achieve sound shaping and healthy development of personality, and lay a solid foundation for building a positive, healthy, harmonious and orderly university cultural environment [7-10]. Within the ambit of the contemporary educational era that staunchly advocates for the enhancement of students' holistic development and comprehensive quality, the State has persistently revised and promulgated a series of documents with the objective of vigorously fortifying and popularizing art education. From the perspective of the educational objectives of music society activities, the cultivation of 'artisanal' talents is not the purpose of music education; rather, it is a general higher music education for all individual students in the whole school, with the aim of cultivating students' comprehensive development [11-13].

In recent years, the proliferation of music societies in higher education institutions has been a salient feature of the national art education policy. These societies have assumed a substantial proportion within the broader spectrum of university societies, signifying an augmentation in the scope of opportunities for students to engage with music at the level of learning [6, 14]. In the context of our nation's accelerated economic and cultural evolution, music literacy has emerged as a pivotal skill not only for music majors but also for non-music majors. The future of the country's talent requirements necessitates a multifaceted, diversified, and multidimensional aptitude, which cannot be solely attributed to the discipline of this major, while disregarding the significance of other disciplines [15-17]. In local general colleges and universities, non-music students are typically focused on the subject area of the majority of this major, and unlike music students, they are not expected to demonstrate the same level of professional proficiency. However, as a contemporary, high-quality, high-standards, high-requirement community, a certain basic music literacy can be attained through the study of music literacy, enhancing students' own aesthetic ability and appreciation [18, 19]. Furthermore, the cultivation of music literacy in college students is conducive to the development of their aesthetic ability and appreciation of musical works, fostering a comprehensive understanding and imagination of these works. Participation in musical activities enables students to adapt, create, and express their own innovative thinking, thereby achieving enhanced choreographic outcomes. The findings of this study indicate that students' creative thinking and abilities undergo a qualitative leap when they participate continuously in practical performances of music activities, synthesize their experiences, and complement their strengths and weaknesses [20]. Secondly, music, as a cultural symbol and spiritual bond, exerts a significant influence on students' sense of cultural identity. The establishment of music societies and the organization of music activities facilitates students' strengthening of their sense of identity with local and other outstanding cultures. Through music education, students become cognizant of the role of music in promoting cultural identity and are motivated to become new-age citizens with an international outlook, thereby deepening their identification with their own cultural identity. Engaging in musical activities and creativity has been shown to foster positive attitudes towards cultural identity, which is a crucial aspect of personal growth [21-23].

1.2. Problem Statement

Karki [24] observed that although school music education is dedicated to cultivating a passion for music and a lifelong inclination to engage, many students tend to disengage from music after high school. The transition from high school to college music education is often inadequate, leading to challenges in identifying suitable music activities and participation opportunities for students upon their entry to college [25, 26]. Furthermore, there is a lack of awareness among students regarding the extent to which university music performing ensembles are open to non-music majors and the benefits of participating in music activities for them [27, 28]. Secondly, non-music majors encounter heightened academic pressures and a broader array of interests upon entering university, potentially leading to music becoming a secondary focus. Additionally, some students may perceive themselves to be less proficient and talented in music. The time commitment required for music ensembles, in conjunction with an overload of academic coursework, can be a significant deterrent, and students may lack the confidence to persevere. Consequently, they may opt for alternative activities. Consequently, a significant proportion of students opt to discontinue their involvement in music after completing high school [27, 29]. Once again, the advent of social media and virtual interactions has been identified as a contributing factor to the observed decline in student engagement [30-32]. While social media has afforded students a platform to showcase their talents and creativity, it has concomitantly led to

an increased propensity to express themselves online rather than participating in person in societal activities. This phenomenon has resulted in a diminution of in-person interaction within society, thereby weakening the substantive connection between members [31, 33]. Concurrently, certain societies may encounter challenges related to inadequate leadership and ineffective management, giving rise to monotonous and less engaging activities. If students do not perceive an adequate level of support and opportunities for growth within societies, they may be more likely to lose interest, thereby diminishing their motivation for active participation. The decline in student participation is constrained by academic pressures but is also closely related to the rise of virtual socialization and problems with the internal management of societies [33].

Despite the findings outlined above, the majority of extant research on college students' participation in music has focused on music majors or high-level music performers, with relatively little attention paid to the group of non-music college students. However, these students are also an important part of music education, and their musical participation experiences are crucial to building a comprehensive music education system [24]. In a previous study, Warren [34] highlighted similar concerns, noting that students not pursuing a degree in music are frequently overlooked in literature on music education and the broader implications for the population. While these studies may be important in addressing issues outside of music as they relate to music education, they do not directly address the question of why the number of people involved in music is declining and do not allow music educators to understand how higher education can best continue to provide music education beyond secondary school music ensembles and choral singing. Conversely, a survey of Chinese literature resources revealed that the majority of domestic colleges and universities prioritize the mechanism of college student ensembles, the sharing of team-building experiences, and the value and function of college ensembles. The research methodology employed is predominantly discursive. The majority of extant research adopts a discursive or direct approach; there is a paucity of studies that penetrate the psychological level of college students' participation in ensembles to explore their motivations and reasons for participating in music. There is a dearth of research that explores the psychological aspects of college students' participation in orchestras and their motivations and reasons for participating in music [35].

1.3. Research Objective

Utilizing the theoretical underpinnings of self-determination theory, particularly the three dimensions of basic psychological needs autonomy, relatedness, and competence this study endeavors to elucidate the mechanisms through which non-music college students' enjoyment and love of music, high school music experience, and basic psychological needs influence their engagement in college music societies. By examining students who participated in music activities during their college years but are not music majors and do not intend to choose music as a career in the future, it is beneficial to promote new ideas in music teaching on a larger scale and increase the relevance of music participation, especially when the decisions of future decision-makers will affect the relevant music institutions [28]. Moreover, band directors from demographically similar regions could apply the results of this study to their own projects and begin to develop specific project strategies to increase student motivation and foster a healthier band. Concomitantly, to understand lifelong music participation, music educators must examine the needs of young people as they transition to college. At this stage, non-music majors are afforded greater autonomy in determining whether to pursue further studies or opt out of music-related courses [36]. Addressing the needs of this period can prevent a disruption in musical participation in adulthood [37].

1.4. Research Problem

1. Does the enjoyment of music (EALM) directly influence participation in music society (MSP) among non-music major college students?
2. Does high school music experience (HSME) directly influence music society participation (MSP) among non-music major college students?
3. Do basic psychological needs (BPN) mediate the relationship between EALM, HSME, and MSP among non-music major college students?

Summary of The Research Steps

This study used a cross-sectional survey design to collect data from 499 non-music majors in Sichuan colleges and universities through a self-administered online questionnaire. Structural equation modeling (SEM) was used to validate the direct and mediated effects among the variables, and the reliability of the measurement instrument was ensured by reliability and validity analyses. The results of the study will provide a theoretical basis and practical guidance for college music societies to optimize the design of activities and enhance the participation of non-major students.

2. Literature Review

2.1. Self-Determination Theory

Self-Determination Theory (SDT) was developed by Deci and Ryan in the 1970s. The theory is derived from an extensive study of human motivation and behavior, with the objective of elucidating how individuals select their behaviors autonomously and the psychological mechanisms underlying these behaviors. The focal point of SDT is on how social and cultural factors can either foster or impede an individual's volition and determination, which consequently influences their well-being and behavioral performance [38]. The notion of environmental conditions that foster autonomy, competence, and belonging is predicated on the premise that they will engender heightened willpower, augmented motivation, and elevated levels of engagement in activities, thereby enhancing human behavioral performance, persistence, and creativity, among other domains. The social environment exerts a significant influence on the facilitation or hindrance of natural tendencies and development in human psychological growth, psychosocial subjective internalization, and well-being, given the

variability inherent in human behavior [39]. In the context of SDT, psychological growth, subjective internalization, and well-being serve as the variables that examine natural tendencies and human development. These phenomena have been extensively researched by numerous scholars from various perspectives. Psychological growth is frequently articulated as intrinsic motivation, signifying that individuals engage in activities out of intrinsic curiosity and exploration, deriving pleasure from the activity itself, devoid of any external compulsion [38, 39]. In the study of psychological growth, it is posited that intrinsically motivated individuals are engaged in an ongoing, cyclical process of seeking or creating the most challenging environments and exerting every effort to overcome them, thereby generating diverse intrinsic motivations to direct the individual's psychological growth [38].

2.2. Basic Psychological Needs Theory

Basic Psychological Needs Theory (BPNT) constitutes a fundamental element of Self-Determination Theory (SDT), which explicitly posits that Autonomy, Relatedness, and Competence represent the three fundamental psychological needs of human beings [39]. Autonomy signifies the capacity for individuals to act in accordance with their own volition and to exercise autonomy in decision-making and action. Relatedness encompasses this need pertains to the establishment and maintenance of positive emotional connections with others, which may encompass close friendships, teamwork relationships, and similar interactions. Competence refers to an individual's perception of and confidence in their abilities when confronted with a task or challenge, and the pursuit of attaining a certain level of achievement in a specific domain [40]. The satisfaction of these three fundamental psychological needs is imperative for an individual's behavior. When individuals are granted autonomy and the capacity to self-direct their own behaviors, they demonstrate a heightened propensity to engage in activities, exhibit elevated levels of creativity, and evince greater motivation [39]. The fulfilment of the Relatedness need engenders a sense of care, understanding, and acceptance from others, thereby enhancing the sense of belonging and security experienced by individuals. Furthermore, it has been demonstrated that the Competence need is satisfied when individuals experience a sense of achievement and enhance their self-efficacy, which in turn makes them more motivated to pursue higher goals [39, 41].

2.3. Enjoyment and Love of Music

Many research reports say that students like music participation because of its unique emotional quality. Simply put, participating in music activities is a reward in itself [42]. Numerous studies have concluded that the enjoyment of music itself is a powerful motivator for continued participation in music. They explicitly claim that truly feeling the emotions embedded in music is one of the most powerful reasons why students expect to continue their participation in music [43-54].

In Lamont [49] and Lamont [55] study, it was noted that many of the participants indicated that the performers were able to immerse themselves in the music and feel the charm and power of the music when they played or sang their favorite music, which brought pleasure and enjoyment, suggesting that the ability to elicit pleasure and enjoyment, as well as the emotions of joy, satisfaction, and happiness experienced during performances, is a significant motivator for individuals' engagement in music performance. Moder [52] in her study of non-music university students' reasons for participating in orchestra, also found that enjoyment and love of music were the strongest influences on students' decisions to participate in university orchestras, suggesting that students' intrinsic love of music is a central driver of their involvement in music, and that this love is difficult to replace with other factors. In terms of the overall findings, enjoyment and love of music are intrinsic motivators for participation in music and play a key role in students' initial involvement in orchestras. In addition to the studies mentioned above, there are many studies that suggest the main reason students choose to participate in music societies is the love and enjoyment of playing an instrument and participating in an orchestra. The love and enjoyment of the instrument play a significant role in influencing the students' decision to participate, suggesting that the students' love and enjoyment of the instrument are not only important factors in their subjective perceptions but also play a key role in their actual decision [47, 48, 53, 54].

2.4. High School Music Experience

Students' choice to join music societies after entering college may be largely a natural continuation and extension of the positive momentum that has built up from their previous musical activities [48, 52, 56-59]. Key expressions such as "continue," "maintain," and "keep participation in music" clearly indicate that participants harbor a deep-seated desire to continue the music activities that have been initiated and to continue to deepen and expand their musical experience in a new environment Cogdill [60]; Isbell and Stanley [58]; Moder [52] and Karki [24].

Lapp's [61] study indicated that the music department chair identified the greatest motivation for non-majors to participate in music activities as 'continuing musical accomplishments gained prior to college'. The alumni survey indicated that 'because of involvement in the music program in high school and a desire to continue that experience in college' was the greatest motivation for alumni to participate in college music activities. This finding suggests that high school music activities have a significant impact on college music participation and that students aspire to continue developing the musical interests and skills they cultivated in high school in college. Cogdill [60] conducted a survey of first-year college students, discovering significant relationships between students' musical experiences (inside and outside of high school), musical self-concept, and growth mindset tendencies. These relationships influenced students' willingness to participate, with participation in high school choir and out-of-school singing activities during high school being positively related to a growth mindset in singing ability. This finding suggests that students who are actively involved in singing activities during high school are more likely to have a growth mindset, believing that their singing ability can be improved through effort and training. The study thus suggests that music participation experiences in high school, such as participation in choir and off-campus singing activities,

have a significant impact on college students' singing ability mindset as well as their future music participation behaviors [62-64].

There are also findings that the overall high school band experience was a significant factor in the decision of participants to join college marching bands. Positive band experiences in high school, including a love of playing, enjoyment of band activities, interaction with friends, and good instruction, had a positive impact on students' continued participation in marching band in college. This included the development of musical skills, teamwork, and interactions with teachers and peers. Students perceived the guidance and encouragement of their high school band director to be a significant factor in their musical development. These experiences resulted in a strong attachment to band activities. This profound sense of commitment and engagement was further solidified by the students' aspiration to persist in participating in marching band. The aforementioned experiences not only nurtured a profound interest in music but also fostered a keen sense of teamwork and socialization, thereby motivating students to continue their involvement in college music societies [24, 48, 56, 57].

2.5. Basic Psychological Needs

When students are empowered to autonomously select the content and form of their engagement in music society activities, derived from their personal interests and original ideas, their need for autonomy is met. This, in turn, fosters their intrinsic motivation to participate in music society activities and the right to exercise their own discretion. The opportunity to exercise autonomy in music society activities fosters a sense of control over their own actions, thereby enhancing their motivation to engage in these activities [65-67]. Interacting with peers through rehearsals and performances in music societies fosters the development of emotional connections, thereby addressing the need for relatedness. This sense of belonging fosters a warm collective identity, enhancing students' sense of dependence on the society and motivating increased participation in its activities [42, 66]. The fulfillment of associational needs provides a conducive social environment for students to forge friendships with like-minded individuals and expand their interpersonal networks. The enhancement of musical aptitude through collaborative engagement fosters a sense of social fulfillment, thereby reinforcing students' inclination to engage in music societies [68, 69]. Furthermore, the enhancement of students' musical aptitude through consistent endeavors within music societies fosters the fulfillment of their competence needs, thereby elevating their self-esteem and propelling their motivation to engage in society activities and attain higher musical accomplishments [70-72].

This study hypothesized that there is a direct relationship between enjoyment and love of music (EALM), high school music experience (HSME), basic psychological needs (BPN), and non-music major college student music society participation (MSP), and hypothesized that basic psychological needs (BPN) play a mediating role in enjoyment and love of music (EALM), high school music experience (HSME), and non-music major college student music society participation (MSP).

3. Research Methodology

3.1. Variables

The purpose of this study was to examine the self-influencing factors that influence non-music majors' participation in music societies and the mechanisms that affect participation in music societies. In this study, the self-influencing factors were categorized as enjoyment and love of music (EALM), high school music experience (HSME), and these two factors were used as independent variables to predict their relationship with non-music major college students' participation in music societies (MSP). Meanwhile, the basic psychological needs (BPN) of non-music college students were used as a mediator variable for the association of the two independent variables with the dependent variable, and the three dimensions under this mediator variable were autonomy (Au), relatedness (Re), and competence (Com).

3.2. The Conceptual Framework

This study explores the factors that influence the participation of non-music college students in music societies in Sichuan, China. The conceptual framework of this study is based on the content of the literature review section. As illustrated in Figure 1, this study will determine the direct effects of non-music major college students' enjoyment and love of music (EALM), their high school music experience (HSME), and their basic psychological needs (BPN) on music society participation (MSP). The study will also assess the role of students' Basic Psychological Needs (BPN) as influential variables in the relationship between non-music college students' enjoyment and love of music (EALM), their high school music experience (HSME), and their music society participation (MSP). The examination of Basic Psychological Needs will be conducted in terms of the dimensions of Autonomy (Au), Relatedness (Re), and Competence (Com). The study will also determine the indirect effects of enjoyment and love of music (EALM) and high school music experience (HSME) on music society participation (MSP) among non-music college students, which is mediated by Basic Psychological Needs (BPN).

H6a: EALM→BPN→MSP

H6b: HSME→BPN→MSP

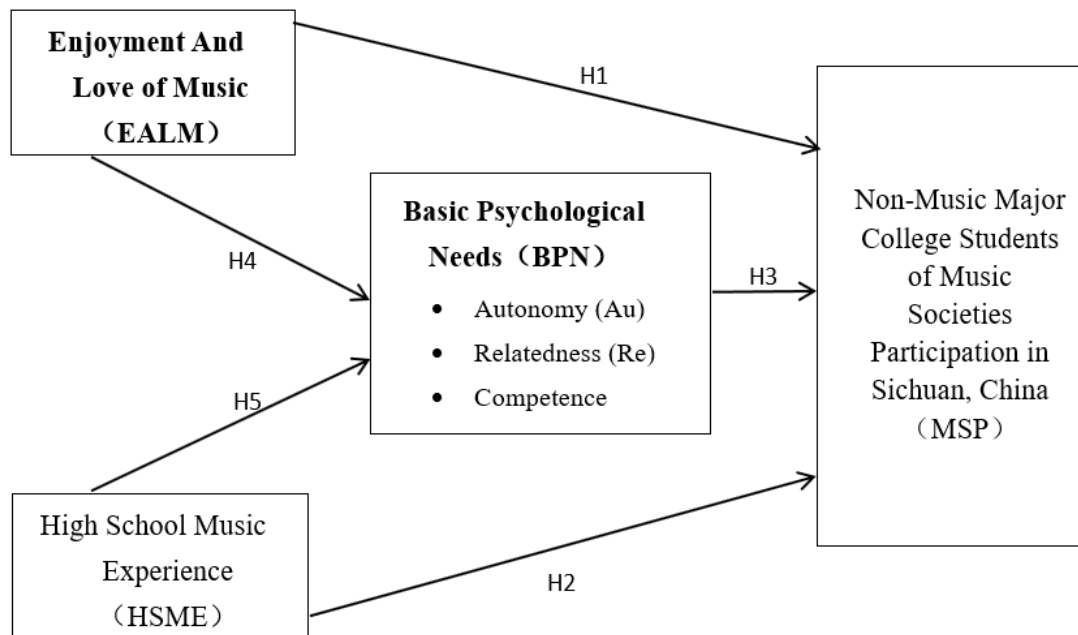


Figure 1.
Conceptual Framework.

In order to fulfill the research objectives of this study, we developed the following hypotheses based on the proposed conceptual framework:

H₁: There is a relationship between enjoyment and love of music and music society participation among non-music college students.

H₂: There is a relationship between non-music college students' high school music experience and music society participation.

H₃: There is a relationship between basic psychological needs and music society participation among non-music college students.

H₄: There is a relationship between non-music college students' enjoyment and love of music and their basic psychological needs.

H₅: There is a relationship between the high school music experience of non-music college students and their basic psychological needs.

H_{6a}: Non-music college students' enjoyment and love of music has a effect on music society participation through the mediation of basic psychological needs.

H_{6b}: Non-music college students' high school music experience has a effect on music society participation through the mediation of basic psychological needs.

4. Finding

In this study, the focus was on the reliability of the underlying constructs, specifically the degree of consistency of respondents' answers during the measurement process, which is also known as internal consistency reliability in the academic field [73]. In order to ascertain the degree of internal consistency of the items, Cronbach's alpha was evaluated. When conducting reliability analyses with the assistance of SPSS software, a Cronbach's coefficient value exceeding 0.7 is typically employed as the basis for determining reliability [74, 75]. As demonstrated in Table 1, the Cronbach's alpha coefficients for EALM and HSME were 0.874 and 0.897, respectively, while the Cronbach's alpha for BPN was 0.935, and the Cronbach's alpha for MSP was 0.914, which were higher than 0.7. This suggests that the scales possess a high degree of internal consistency.

Table 1.
Cronbach's Alpha.

Variable	No of items	Cronbach's Alpha
EALM	6	0.874
HSME	7	0.897
BPN	18	0.935
MSP	8	0.914

Confirmatory Factor Analysis (CFA) is a statistical method that is utilized to ascertain the compatibility of a hypothesis with empirical data. It is employed to evaluate the convergent, discriminant, and construct validity of a measurement instrument [76]. The following sections will delineate each type of validity in turn.

First, the correlation between multiple indicators of the same latent variable must be assessed. If these indicators converge well to the latent variable being measured, they are said to be highly correlated with each other. This is usually determined using the composite reliability (CR) and average variance extracted (AVE). Good convergent validity is indicated when the CR is >0.7 [77] and the AVE is >0.5 [78]. As demonstrated in Table 2, the CR values of 0.874, 0.898, 0.874, and 0.915, which were also higher than 0.7, indicate that the measurement model has good reliability. Furthermore, the AVE values of all variables were greater than 0.5, ranging from 0.537 to 0.698, indicating good convergent validity.

Table 2.
Composite Reliability and Average Variance Extracted.

Variable	Composite Reliability (CR)	Average Variance Extracted (AVE)
EALM	0.874	0.537
HSME	0.898	0.556
BPN	0.874	0.698
MSP	0.915	0.575

Second, the context of research, particularly when multiple latent variables are involved, is imperative to ascertain whether these latent variables are adequately differentiated; that is to say, whether they genuinely measure distinct concepts. The Fornell-Larcker criterion constitutes a method for discriminating discriminant validity in Structural Equation Modeling (SEM) analyses. Fornell and Larcker [78] state that the criterion is determined by comparing the average variance extracted (AVE) of a latent variable to the square of the correlation coefficients between that variable and other variables. According to the relevant academic standards, a measurement model can be judged to be consistent with inter-conceptual discriminant validity if the value of the square root of the average extracted variance corresponding to each construct is greater than the correlation coefficient between all the constructs with which it is associated [78] suggesting that the latent variables are conceptually distinct and that the constructed measurement model is justified to some degree. As shown in Table 3, the square root value of the diagonal AVE exceeds the values of the other correlation coefficients in the matrix, ranging from 0.733 to 0.836. This finding suggests that the model possesses good discriminant validity.

Table 3.
Discriminant validity.

	EALM	HSME	BPN	MSP
EALM	0.733			
HSME	0.393**	0.746		
BPN	0.497**	0.500**	0.836	
MSP	0.518**	0.386**	0.539**	0.757

Furthermore, construct validity is contingent upon model fitness, with relevant metrics encompassing the chi-square degrees of freedom ratio (Chi-Square/df), CFI, GFI, TLI, and others. Additionally, the square root of the approximation error (RMSEA) is a crucial metric. Typically, Chi-Square/df <3 is considered acceptable and <5 is regarded as desirable. CFI, GFI, TLI, etc., must be greater than 0.9. And RMSEA <0.08 is acceptable and <0.05 is desirable [76, 79, 80].

As demonstrated in Figure 2, the overall measurement model is shown, and the construct validity of the model is demonstrated in Table 4, where the Chi-Square/df is 1.526, which is less than 3. The GFI, CFI, and TLI are all greater than 0.9, while the RMSEA is 0.032, which is less than 0.05. Consequently, all the metrics meet the criteria for the model's fit, thereby indicating that the model fit is satisfactory.

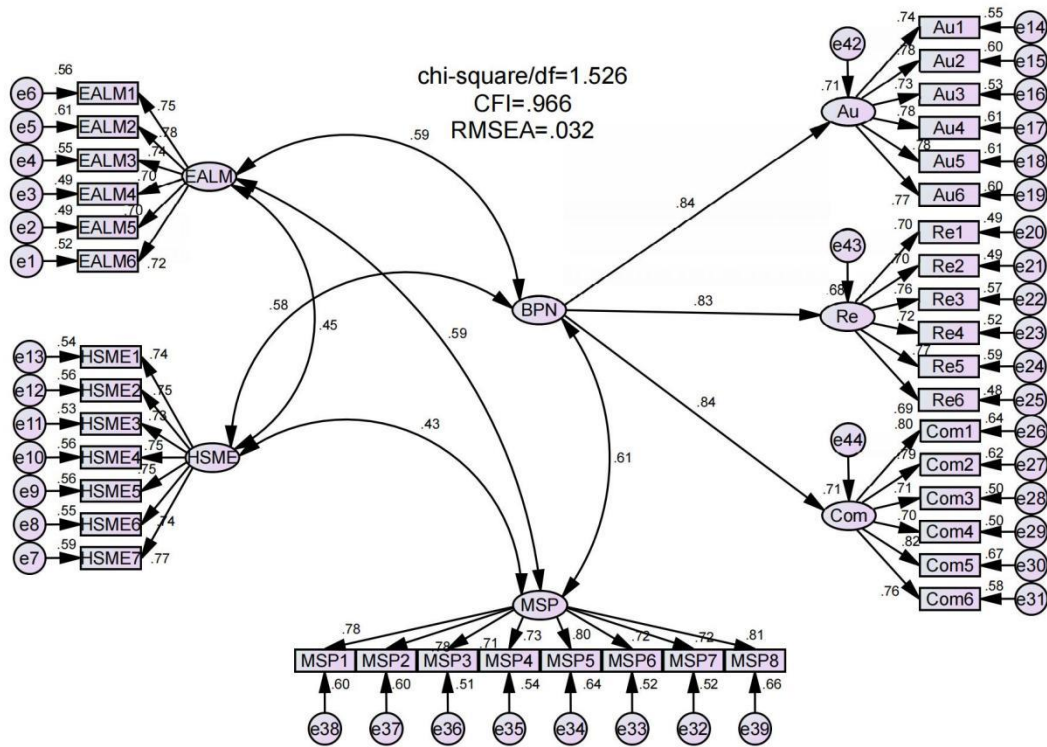


Figure 2.
Overall Measurement Model.

Table 4.
Construct validity of overall measurement model.

Indicators	χ^2	df	χ^2/df	GFI	RMSEA	CFI	TLI
Criteria	-	-	<3	>0.9	<0.08	>0.9	>0.9
Value	1057.459	693	1.526	0.903	0.032	0.966	0.964

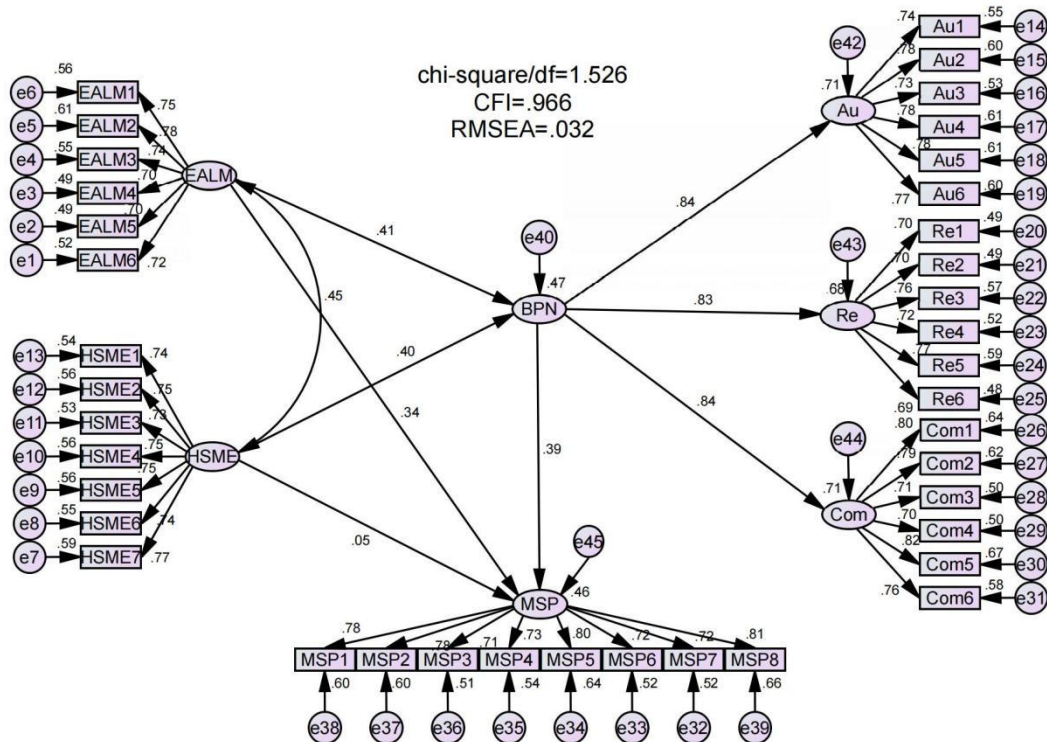


Figure 3.
Structural Equation Modelling (SEM).

In hypothesis testing, a standard path coefficient of >0.5 indicates that there is a strong relationship between the variables, between 0.3 and 0.5 represents a medium strength of relationship between the variables, and when the standard path coefficient is <0.3 , it represents a weak relationship between the variables. In determining whether the standard path coefficient is statistically significant or not, it is also based on the P-value, when $P < 0.05$, the level of significance is high, which indicates that there is a real relationship between the variables, and when $P \geq 0.05$ is not significant, it is not statistically significant [78, 81].

Table 5.

Hypothesis test results: Direct relationship - Path analysis.

Hypothesis	Path	Standard path coefficients	S.E	C.R.	P value	Test result
H1	MSP←EALM	0.352	0.059	5.921	***	Supported
H2	MSP←HSME	0.047	0.045	1.044	0.297	Rejected
H3	MSP←BPN	0.531	0.092	5.752	***	Supported
H4	BPN←EALM	0.313	0.043	7.345	***	Supported
H5	BPN←HSME	0.254	0.035	7.351	***	Supported

Hypothesis 1 proposes that there is a relationship between EALM and MSP. As illustrated in Table 5, the standard path coefficient is 0.352, indicating that EALM exerts a substantial positive influence on MSP. The standard error (S.E.) is 0.059, and the critical ratio (C.R.) is 5.921, with a p-value of *** (less than 0.001), which is significantly less than the commonly used threshold of 0.05. This finding indicates a statistically significant association between EALM and MSP, thereby validating hypothesis 1. This supports the hypothesis that enjoyment and love of music have a significant positive effect on the participation of non-music major college students in music societies in Sichuan, China. Therefore, hypothesis 1 is valid.

Hypothesis 2 proposes that there is a relationship between HSME and MSP. As shown in Table 5, the standard path coefficient is 0.047, which suggests that there is a positive but weak relationship between HSME and MSP. The standard error (S.E.) is 0.045, and the critical ratio (C.R.) is 1.044 with a p-value of 0.297, which is greater than the commonly used threshold value of 0.05. These findings suggest that the positive influence of students' high school music experience on college music societies participation is not statistically significant and is not reliable enough to confirm its veracity, thus invalidating Hypothesis 2.

Hypothesis 3 proposes that there is a relationship between BPN and MSP. As shown in Table 5, the standard path coefficient is 0.531, which indicates a strong positive correlation between BPN and MSP. The standard error (S.E.) is 0.092, the critical ratio (C.R.) is 5.752, and the p-value is *** (less than 0.001), which is significantly smaller than the commonly used critical value of 0.05. This result indicates that there is a statistically significant correlation between the BPN and the MSP, which verifies hypothesis 3. This supports the hypothesis that the basic psychological needs of non-music majors in Sichuan, China, have a significant effect on their participation in college music societies. Therefore, hypothesis 3 is valid.

Hypothesis 4 proposes that there is a relationship between EALM and BPN. As shown in Table 5, the standard path coefficient is 0.313, which indicates a strong positive correlation between BPN and MSP. The standard error (S.E.) is 0.043, the critical ratio (C.R.) is 7.345, and the p-value is *** (less than 0.001), which is significantly smaller than the commonly used critical value of 0.05. This result indicates that there is a statistically significant association between EALM and BPN, thus verifying hypothesis 4, which suggests that there is a significant positive correlation between the enjoyment of music and love of music by non-music college students from Sichuan, China, and their basic psychological needs have a significant positive correlation. Therefore, hypothesis 4 is valid.

Hypothesis 5 proposes that there is a relationship between HSME and BPN. As shown in Table 5, the standard path coefficient is 0.254, which suggests a positive but weak relationship between BPN and MSP. The standard error (S.E.) is 0.035, and the critical ratio (C.R.) is 7.351, with a p-value of *** (less than 0.001), which is significantly smaller than the commonly used critical value of 0.05. This result indicates that there is a statistically significant association between HSME and BPN, thus verifying hypothesis 5, which suggests that there is a significant effect between the high school music experience of non-music major college students and their basic psychological needs in Sichuan, China. Therefore, hypothesis 5 is valid.

Table 6.

Hypothesis test results: Mediating Relationship.

Hypothesis	Construct	Path	Construct	Bias-Corrected (95%CI)		Percentile method (95%CI)		Test result
				Lower	Upper	Lower	Upper	
H6a	EALM	BPN	MSP	0.109	0.251	0.105	0.244	Supported. Partial mediator.
H6b	HSME	BPN	MSP	0.089	0.203	0.086	0.196	Supported. Full mediator.

As shown in Table 6, the results of the data with 95% confidence intervals by the Bias-Corrected and Percentile method validation method are displayed as follows:

EALM→BPN→MSP: The confidence interval for Bias-Corrected is [0.109, 0.251], the confidence interval for Percentile is [0.105, 0.244], and the confidence interval does not contain 0, indicating that BPN has a mediating effect in the

effect of EALM on MSP. And the p-value of the EALM to MSP path is *** (less than 0.001) at a high level of significance, since the direct effect of enjoyment and love of music on music society participation is also significantly positive, the effect of enjoyment and love of music on music society participation is partially mediated through basic psychological needs transmission, which supports the hypothesis of H6a. Therefore, the hypothesis is valid.

HSME→BPN→MSP: The confidence interval for Bias-Corrected is [0.089, 0.203], the confidence interval for Percentile is [0.086, 0.196], and the confidence interval does not contain 0, which indicates that BPN has a mediating effect in the effect of HSME on MSP. Because the P-value for the HSME to MSP pathway is 0.297, which is much higher than 0.05, the direct effect of high school music experience on music societies participation is not significant, so BPN is a full mediator in this set of linkages, which supports the hypothesis of H6b, so the hypothesis is valid.

5. Discussion

The results of the study show that the enjoyment and love of music are the primary factors influencing the decision-making of non-music majors in college students' participation in music societies. This suggests that the initial consideration for students when deciding whether or not to participate in a music society is their intrinsic feelings and interest in music. The data indicate that students' innate feelings and interest in music represent the most critical basis for decision-making. This is consistent with the findings of many previous studies. Dray [82] obtained similar results in his study of students' intrinsic motivation to participate in music. This involved investigating students' overall enjoyment and interest in band, as well as exploring the impact of students' levels of positive or negative emotions towards band on their decision to remain involved in the program. Howard [47] discovered that music, with its distinctive allure, evokes a profound emotional response in students who perceive it not merely as an auditory delight, but as an art form that resonates at the emotional and spiritual levels.

This affinity for music is a primary motivating factor in their decision to participate in the music society, above and beyond any external influences. While social influences, access to credit, and parental influences do exert some influence on students' decisions, they are relatively weak [52]. Social factors may motivate students to consider joining a music society with the intention of expanding their social networks. However, this social drive is often unsustainable if the love of music itself is lacking [83].

Conversely, the love of music serves as a pivotal motivating factor for students, enabling them to surmount potential impediments and engage actively in music society activities [28, 53]. For students who are not majoring in music, despite the challenges they face, including high academic expectations and time constraints, they still choose to participate in music societies because of their passion for music. They perceive music as an effective means of relieving academic pressure and enhancing the overall campus experience [54]. Their passion for music enables them to accommodate its presence in their hectic academic schedules and to modify their timetables in order to guarantee their participation in music society activities. These students are aware of the significance of music in their lives and perceive it as an efficacious method of alleviating academic stress. Following a demanding day of academic pursuits, engagement in musical activities provides an opportunity for students to temporarily disengage from the pressures of academia and enter a realm of artistic expression [53]. This experience has been shown to facilitate relaxation of the body and mind, as well as a shift in one's state of mind. The experience of music provides a sense of comfort in the context of academic pressure, offering motivation and vitality that enables students to re-engage with their studies [48].

Furthermore, they are not merely content with fulfilling the fundamental obligations of the music society; they also proactively pursue additional avenues for musical learning and performance. These students perceive the music society as a significant avenue for actualizing their musical aspirations and articulating their individual emotions. Through active involvement in diverse activities, they continue to enhance their musical literacy and performance capabilities, thereby further intensifying their affinity for music.

Numerous studies have shown that a variety of factors may influence college students' participation in music societies, with high school music experience recognized as a potentially important factor [24, 48, 56]. However, its effect on participation in music societies was found to be insignificant in the current study, a result that contradicts the expected hypothesis and triggers more in-depth consideration of the issue.

Some conjectures exist as to the possibilities that contributed to this result: first, college music societies provide a different musical experience than the high school music experience. College society activities are more diverse and encompass a wider range of musical styles and genres, such as pop, rock, and folk music [84] whereas high school music experiences may be primarily focused on traditional music areas or within the scope of school-mandated music activities [85].

For college students seeking fresh and diverse musical experiences, the uniqueness of college music societies attracts participation in music, while the influence of high school music experiences is relatively diminished. The socializing function of college music societies is more prominent. In the college environment, students pay more attention to expanding their social circles and making like-minded friends [86]. Music societies provide a platform for students to communicate and interact with classmates from different professional backgrounds and build deep friendships through joint participation in music activities. In contrast, the interests of high school students may not be completely set yet, and after entering college, they shift or expand with personal growth and environmental changes. Students who have some interest in music and participation in related activities in high school may be attracted to other emerging areas of interest, such as academic research, society activities, and social practice when they arrive at college, thus distracting their attention and participation in music societies. The rich and diverse curriculum and campus cultural activities of universities provide students with more opportunities to explore their interests, and they may find more suitable directions and interests in new fields, leading to a decrease in the influence of high school music experience on participation in music societies in universities.

Second, the relatively free and open atmosphere of college allows students to explore more deeply the types of music they are truly interested in Zhang [87]. The high school music experience may be limited by the school's curriculum and teaching resources, and students are exposed to a limited variety of music. In college, on the other hand, students have the autonomy to choose their participation in music societies and are exposed to richer and more niche styles of music, such as jazz, subgenres within classical music, and world music. This process of self-selection allows students to further refine and deepen their musical interests, and the broader musical experience in high school is no longer a key factor in determining their participation in music societies in college.

Again, in high school, students' study time is relatively fixed, and there is less after-school time, so music activities may take place during the school's standardized after-school hours, and students do not need to plan their time independently [88]. However, the study time in university is more flexible, and students need to rationally arrange their course study, social activities, personal interest development, and other aspects of affairs by themselves. In the absence of effective time management, it may be difficult for students to balance the linkage between academic and music society activities. Even if they are interested in music societies, they may not be able to actively participate in them due to the lack of time, making it difficult to transform the high school music experience into the actual participation in music societies in college.

In addition to these reasons, the publicity and promotion of university music societies and recruitment methods have an important impact on students' participation in music decisions. If the publicity of a society on campus is not strong enough or the recruitment information is not effectively communicated to students, even if students have high school music experience, they may miss the opportunity to participate in music societies because they do not know about the society.

On the contrary, some societies attracted the attention of many students through exciting promotional activities and organizing music performances, etc. These students may have originally had little interest in music societies but decided to participate in them after the societies actively promoted them, thus making the linkage between high school music experience and participation in music societies less obvious. The college's music atmosphere and society culture can also affect students' willingness to participate in music [84]. If the school has a strong overall music atmosphere and organizes frequent music activities of various kinds, students may be inspired to participate in music societies regardless of their high school music experience if they feel the charm and vitality of music in the campus environment.

In addition, the cultural atmosphere within the society, such as the degree of rapport among society members and the organization and quality of society activities, may also attract students to join and continue to participate, making high school music experience no longer a major factor in determining participation in music. On the other hand, in the relatively free college campus, the influence of classmates and friends plays a key role in participation in music societies in college [48, 54]. When choosing a society, college students are often influenced by their classmates and friends around them. If classmates around them are actively involved in a music society and recommend and share the fun of the society's activities, students may join the society because of social factors rather than based on their own high school music experiences. This peer influence somewhat diminishes the direct effect of high school music experience on participation in music societies, making the linkage between the two complex and insignificant.

A substantial body of prior research has indicated that the fulfillment of students' fundamental psychological needs exerts a favorable influence on a variety of outcomes, including, but not limited to, academic achievement, engagement in off-campus arts activities, selection of music courses, participation in physical activity, and numerous others [37, 54, 89, 90].

The present study also obtained results consistent with previous studies. Not only that, the present study also showed a significant positive and strong trend in the relationship between the satisfaction of basic psychological needs and participation in music societies. This finding suggests that non-music majors who experience a higher degree of satisfaction in their basic psychological needs in music-related activities exhibit a stronger propensity to engage in music societies. Specifically, the study found that students who feel engaged in music-related activities of their own volition, who have numerous opportunities to cultivate and refine their musical abilities and qualities, and who experience profound emotional bonds and interactions with peers and mentors in music-related contexts, are better able to assimilate the values of music activities into their cognitive systems. They are more capable of integrating the value of music activities into their own cognitive systems, and thus give higher priority to participation in music societies when deciding whether or not to participate in music societies [91].

The satisfaction of autonomy needs enables students to freely choose the form of music activities based on their personal interests and preferences in the field of music. Whether they are keen to participate in the passionate performance of the campus band or feel the wonderful harmony of the choir, the right to make independent choices allows them to give full play to their subjective initiative in music activities, and become active participants. This greatly enhances the possibilities of their participation in music societies [37].

The fulfilment of competence needs provides students with the experience of continuous growth and progress in music skills learning and practice, and when they gradually acquire more exquisite playing skills, more accurate singing abilities or more sensitive music appreciation levels through music training, rehearsals and performances, each skill enhancement and competence breakthrough becomes a powerful driving force for them to participate in music societies [92].

The students are eager to further develop and improve their acquired skills in music societies, thus greatly enhancing their possibilities of joining music societies. The pursuit of musical mastery and the attainment of a sense of achievement are further catalysts for this engagement. The satisfaction of the need for relatedness has been demonstrated to allow students to establish a deep emotional connection with others in music activities. Whether it is perspiring alongside society members in the rehearsal hall, striving for a flawless performance, or engaging in musical discourse and exchanging study strategies with their music partners, this emotional resonance and social interaction foster a profound sense of belonging in music societies, thereby perceiving them as pivotal social refuges in their campus life. Consequently, students actively engage with music

societies, contributing to their vibrant community. They then proactively and enthusiastically engage in the activities of music societies to sustain and deepen this invaluable social connection [93].

Non-music college students who love and enjoy music have a wide range of musical choices at their disposal in the process of music participation. They are at liberty to select from a variety of musical genres and forms of musical participation that align with their individual interests, emotional responses, and the prevailing circumstances in their lives [94, 95].

This autonomy in musical selection is indicative of their capacity for independent decision-making within the domain of music. Furthermore, they may choose to explore the development of a particular music genre, familiarize themselves with the playing characteristics of a variety of musical instruments, or even attempt to compose simple musical works independently. This process of exploration and creation is conducive to the full expression of imagination and creativity, with music serving as a medium for the articulation of innermost feelings, thoughts, and unique personalities. This personalized musical creation and expression is a profound manifestation of the need for autonomy at the musical level, enabling them to find their own unique voice and expression in the world of music [96].

Social opportunities, and serves as an important bridge for them to establish connections with like-minded people and integrate into groups. Music societies, music lovers' societies and various music performances on campus serve as platforms for these students to engage in music-related social activities. Within these social groups, students communicate and interact with each other around their common interests in music, sharing music resources, learning experiences, and the feelings and joys brought by music. The process of engaging deeply with and appreciating a variety of musical works leads to the gradual development of a sense of identity and belonging to different music cultures among college students who love music [96, 97]. A strong interest in a particular national music genre or regional music style may be evident, and students may actively participate in the transmission and dissemination of related music culture. This sense of belonging, grounded in a shared musical cultural identity, serves to further enrich their spiritual world, thereby strengthening their cultural confidence and identity.

The experience of music participation in secondary school provides students with a wide range of exposure to music, whether it is in the music program, in school music activities, or in off-campus music training, which helps to develop students' interest in music. During this period, students may identify their distinct musical inclinations by engaging in activities such as appreciating diverse musical genres and participating in music composition or performance. This cultivation of musical interest is further developed at the college level, enabling college students to make more autonomous choices to participate in music-related activities based on their interests. This autonomous choice behavior reflects the positive impact of the high school music experience on college students' need for autonomy [70, 92].

The process of high school music education fosters the acquisition of specific skills and knowledge in instrument playing, vocal training, and music theory. These skill-learning experiences have been shown to enhance students' competence in the field of music, as well as developing their self-determination [98, 99]. When confronted with obstacles and challenges in music education, students are required to exercise autonomy in determining their learning methodologies, allocating practice time, and establishing objectives. The musical competencies cultivated during high school serve as a foundational basis for non-music college students to engage in music at the collegiate level [100]. Participation in college choirs, bands, or music competitions is facilitated by the musical skills accumulated in high school, enabling college students to better meet these challenges. The possession of competent experiences in the domain of music has been demonstrated to engender heightened levels of confidence in the abilities of college students, thereby further motivating them to pursue higher musical achievement. Furthermore, high school music society experiences provide a foundation for college students to expand their social networks at the college level. Research indicates that students who have participated in high school music societies are more likely to integrate into college music societies or other music-related groups and establish connections with new partners upon entering college [101]. The social skills acquired through high school music society participation facilitate the establishment of positive working relationships with new members, fostering a sense of belonging.

A substantial body of research has demonstrated that high school music experiences exert a favorable influence on the psychological development of non-music college students. Students who were extensively involved in musical activities such as high school music societies and learning to play an instrument had significantly higher levels of autonomy, competence, and related needs at the college level compared to those who had fewer experiences in their high school music careers [48]. In terms of autonomy needs, these students have been shown to be more proactive in participating in music activities and to have more autonomy in their choice of music activities. In terms of competence needs, they have been shown to perform better in university music courses and activities and to be more confident in their musical abilities. Finally, in terms of relatedness needs, they have been shown to be more likely to integrate into university music-related groups and to establish stable social relationships.

The enjoyment and love of music was indirectly associated with music societies participation by stimulating students' intrinsic needs for autonomy, competence, and belonging. Specifically, students' love of music leads them to explore music independently, to fulfill their need for competence in the pursuit of musical skills, to find emotional resonance in music appreciation and learning, and to fulfill their need for relatedness, which ultimately drives their participation in music society activities [102, 103]. The sense of autonomy and the skills accumulated during the high school music learning process lay the foundation for students to choose their own participation in music societies and demonstrate their abilities; while the sense of belonging provided by the high school music societies prompts students to actively seek new participation in music societies at the university, which in turn influences their participation behaviors [104-106].

6. Conclusion

6.1. Conclusions and Recommendations

This study focused on the factors affecting the participation of non-music major college students in music societies in Sichuan, China, and analyzed the relationship between college students' enjoyment and love of music, high school music experience, basic psychological needs, and participation in college music societies, with the following conclusions: firstly, the enjoyment and love of music are the primary factors affecting the participation of non-music major college students in music societies in Sichuan, China, and students' intrinsic emotions and interests are the core basis of their participation decisions.

Second, the direct effect of high school music experience on college students' participation in music societies was not significant, which contradicted the expected hypothesis. Possible reasons for this include the fact that college music societies offer more diverse musical experiences and social functions, the free and open atmosphere of college that allows students to explore a wider range of musical genres, the flexibility of college study time that makes it more difficult to balance academics and society activities, and the publicity and promotion of college music societies, the campus music atmosphere, and peer influences that diminish the direct effect of high school music experiences. Nevertheless, the high school music experience is still significant in developing students' musical interests, skills, autonomy, and social skills, and lays the foundation for college students' participation in music-related activities. Once again, there was a significant positive relationship between the satisfaction of basic psychological needs and non-music college students' participation in music societies.

The satisfaction of autonomy needs enables students to choose the form of music activities according to their personal interests; the satisfaction of competence needs allows students to gain a sense of achievement in music skill enhancement, which motivates them to further participate in music societies; and the satisfaction of sense of relatedness needs enables students to establish emotional connections with others in music activities and to regard music societies as an important place for socializing. These enhance students' willingness and possibility to participate in music societies. Finally, the enjoyment and love of music indirectly influence students' behavior in participating in music societies by stimulating their intrinsic needs for autonomy, competence, and belonging.

Students explore music autonomously because of their love of music, satisfy the need for competence in the pursuit of musical skills, gain emotional resonance in music appreciation and learning, and satisfy the need for relatedness, which ultimately drives their participation in music society activities. The sense of autonomy and skills accumulated in the process of high school music learning provides the basis for students to choose to participate in music societies and demonstrate their abilities; the sense of belonging given by high school music societies prompts students to actively seek to participate in new music societies in college, which in turn influences their participation behaviors.

This study provides a novel perspective on the behavior of non-music major college students' participation in music societies, thus serving as a valuable reference point for music educators and college society organizers. Furthermore, it underscores the necessity for researchers to consider a more diverse array of factors and their interactions when exploring the influences on music education. The future organization of music education and society activities should thus focus on the stimulation of students' love of music and the satisfaction of their basic psychological needs, while optimizing the design of society activities and publicity and promotion to promote the participation of more non-music major university students in music societies. Furthermore, it is important to emphasize that high school music experience does not necessarily determine college music societies participation, and students can be more proactive in exploring their music interests at the college level without being limited by their past experiences. It is recommended that students proactively engage with a diverse array of music activities during their university years, thereby ascertaining their authentic musical affinities. This approach will not only enrich their campus life but also facilitate their personal artistic development and enhance their overall quality of life.

6.2. Limitations of The Research

The sample of this study only covers universities in Sichuan, which may have regional cultural bias, and the generalization of the research findings to other regions needs to be approached with caution. In addition, the cross-sectional survey design was used, which could not capture the dynamic causal relationships between variables. The measurement of "high school music experience" was not refined to differentiate between specific types of activities, which may lead to an imprecise analysis of the pathways of influence. Furthermore, the moderating effects of external variables, such as family support and social support, on participation behavior were not explored, and the completeness of the research model needs to be improved.

6.3. Suggestions For Future Research

Expand the sample coverage to include non-music majors from different provinces and various levels of colleges and universities to verify the generalizability of the research findings. Adopt a longitudinal tracking design to observe the dynamic interaction process between psychological need satisfaction and participation behavior, and clarify the direction of causality. Refine the dimensions of "high school music experience" and analyze the differential effects of different types of experience. Introduce moderating variables such as family music environment, peer influence, and the quality of societal management to construct a more comprehensive model of participation motivation.

This research reveals the intrinsic motivation and psychological mechanisms of non-music majors' participation in music societies, emphasizing the logical chain of "emotion-driven - need satisfaction - behavioral participation." Despite the limitations of the sample and design, the research findings provide empirical evidence for the optimization of music societies in colleges and universities and the articulation of music education across stages. Future research needs to deepen the

theoretical model in a wider range of contexts to provide more targeted solutions for enhancing music participation among students across disciplines.

References

- [1] Q. Dong and X. Q. Zhang, "The theoretical connotation, practical dilemmas, and practical paths of the collaborative education of the "first classroom" and "second classroom" in college physical education in China," *Bulletin of Sports Science & Technology*, vol. 10, pp. 176-178, 2024.
- [2] S. Liang, L. Wang, and Q. Li, "Exploration and practice of the second - classroom education system under the background of the construction of local applied universities," *Shanxi Youth*, vol. 21, pp. 89-91, 2023.
- [3] Z. H. Lin, Z. J. Deng, and R. Zhang, "College students' participation in associations: Types, motivations and qualities," *Journal of Guangxi Youth Cadres College*, vol. 4, pp. 41-47, 2024.
- [4] L. Ma, "Investigation and research on the current situation of high school music associations from the perspective of the new curriculum standards," Master's Thesis, Nanjing University of the Arts, 2021.
- [5] X. Hu, J. Chen, and Y. Wang, "University students' use of music for learning and well-being: A qualitative study and design implications," *Information Processing & Management*, vol. 58, no. 1, p. 102409, 2021.
- [6] S. Zhou and C. X. Li, "Research on the construction of music - related associations in universities from the perspective of campus culture," *Home Drama*, vol. 15, pp. 98-99, 2021.
- [7] X. D. Chen, "An analysis of the application of general music education in the cultivation of innovative talents in colleges and universities," *Knowledge Library*, vol. 3, pp. 9-10, 2021.
- [8] X. L. Liu, "The application of general music education in the cultivation of innovative talents in chemical engineering majors in colleges and universities: "Basic Course for college students' innovation and entrepreneurship in the chemical industry," *China Plastics Industry*, vol. 7, p. 168, 2021.
- [9] Y. C. Wang, "The influence and significance of music education on college students' innovative thinking," *Cultural Industries*, vol. 9, pp. 156-157, 2020.
- [10] Z. W. Zong, "Discussion on the aesthetic education value of music education in colleges and universities and its optimization ideas," *Contemporary Music*, vol. 2, pp. 64-66, 2024.
- [11] B. Liu, "An analysis of the importance of music education in quality - oriented education," *Huang He Zhi Sheng*, pp. 03, 83, 2020.
- [12] G. C. Tang and D. Q. Cai, "Research on the construction and management of college music societies in the context of aesthetic education in the new era," *Music Education and Composition*, vol. 1, pp. 12-16, 2023.
- [13] Z. Yang, "Research on the problems of college music education in cultivating college students' innovative thinking," *Writer's World*, vol. 16, pp. 178-180, 2020.
- [14] S. M. H. Wan, "The present situation and development countermeasures of amateur music society of Jiangxi university of finance and economics-taking three music clubs as examples," Master's Thesis, Jiangxi University of Finance and Economics, 2020.
- [15] J. Feng, "Exploration of the path of general music education in colleges and universities based on the teaching concepts of moral and aesthetic education," *Art Science and Technology*, vol. 37, no. 1, pp. 247-249, 2024.
- [16] Y. Pei, "A discussion on the reform of general music education for aesthetic education in colleges and universities in the new era," *Art Education*, vol. 1, pp. 245-248, 2024.
- [17] X. R. Han and P. K. Chen, "Exploration of the practice of music teaching reform under the STEAM education concept," *Heilongjiang Researches on Higher Education*, vol. 8, pp. 79-84, 2024.
- [18] M. Yang, S. Y. Ding, and Y. T. Deng, "Research on the remodeling of the comprehensive abilities of non-music majors in colleges and universities by "music appreciation" courses," *Journal of Mianyang Teachers' College*, vol. 41, no. 7, pp. 36-42, 2022.
- [19] Y. Zhao, "The cultivation function of music education for innovative talents in chemical engineering specialty——review of basic course of innovation and entrepreneurship for college students in chemical industry," *Chemical Engineering*, vol. 52, no. 4, p. I0013, 2024.
- [20] L. Yu, "Research on the improvement of comprehensive abilities of non-music majors through extracurricular practical activities," *Journal of Chifeng University Philosophy and Social Science Edition in Chinese*, vol. 10, pp. 110-113, 2020.
- [21] B.-L. Bartleet, C. Grant, C. Mani, and V. Tomlinson, "Global mobility in music higher education: Reflections on how intercultural music-making can enhance students' musical practices and identities," *International Journal of Music Education*, vol. 38, no. 2, pp. 161-176, 2020.
- [22] Z. X. Kong, "Research on the educational value and practical path of general music courses in colleges and universities," *The Report of The Times (Running Water)*, vol. 7, pp. 121-123, 2024.
- [23] K. Santiago, "The music in me: The impact of music therapy on identity development in college students. a phenomenological inquiry," Doctoral Dissertation, Appalachian State University, 2022.
- [24] G. L. Karki, "The sources of self-efficacy on non-music major college and university students who participated in musical activities with a focus on gender, experience level, and cultural background," Doctoral Dissertation, Boston University, 2023.
- [25] C. Park, "Increasing student engagement with a community college music curriculum," The University of Liverpool, United Kingdom, 2021.
- [26] M. Frey-Clark, O. G. Tucker, and J. J. West, "A phenomenology of first-year music teaching during the COVID-19 pandemic," *Journal of Research in Music Education*, vol. 71, no. 3, pp. 297-321, 2023.
- [27] R. E. Rose, "Music appreciation course design: Facilitating the increased participation of non-music majors in collegiate music performance ensembles," Doctoral Dissertation, Liberty University School of Music, 2021.
- [28] L. M. Snyder, "Non-music major participation in college and university ensembles," *College Music Society*, vol. 61, no. 1, pp. 43-52, 2021.
- [29] P. de Oliveira Honorio, "Decision-making processes of non-music major undergraduate students to enroll in string instrument and orchestra lessons," Master's Thesis, University of Missouri-Columbia, 2023.
- [30] S. C. Joshi, S. Woltering, and J. Woodward, "Cell phone social media use and psychological well-being in young adults: Implications for internet-related disorders," *International journal of environmental research and public health*, vol. 20, no. 2, p. 1197, 2023.

- [31] M. Margaretha, Y. Monalisa, A. Mariana, I. Junita, and D. Iskandar, "Cyberslacking behavior and its relationship with academic performance: A study of students in Indonesia," *European Journal of Educational Research*, vol. 10, no. 4, pp. 1881-1892, 2021.
- [32] E. R. Wester, L. L. Walsh, S. Arango-Caro, and K. L. Callis-Duehl, "Student engagement declines in STEM undergraduates during COVID-19-driven remote learning," *Journal of microbiology & biology education*, vol. 22, no. 1, p. 10.1128/jmbe.v22i1.2385, 2021.
- [33] X. C. Yuan, "Research on the realistic dilemmas and innovative development paths of art clubs in colleges and universities," *Public Relations World*, vol. 1, pp. 130-132, 2024.
- [34] D. B. Warren, "University music engagement: A mixed methods examination of university student music participation and institutional responsibility for expanded opportunities," Master Dissertation, James Madison University, 2020.
- [35] H. Liu, "Exploring perceived motivating factors of busy adults to participate in Shanghai auditioned choirs," Doctoral Dissertation, Shanghai Conservatory of Music, 2021.
- [36] M. A. Boswell, "Music for a lifetime: How are we doing? A review of literature on adult participation in large community music ensembles," *Update: Applications of Research in Music Education*, vol. 40, no. 2, pp. 56-65, 2022.
- [37] A. Oliveira, F. S. Ribeiro, L. M. Ribeiro, G. McPherson, and P. Oliveira-Silva, "Disentangling motivation within instrumental music learning: A systematic review," *Music Education Research*, vol. 23, no. 1, pp. 105-122, 2021.
- [38] E. L. Deci and R. M. Ryan, "The empirical exploration of intrinsic motivational processes," vol. 13: Elsevier, 1980, pp. 39-80.
- [39] E. L. Deci and R. M. Ryan, "The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior," *Psychological inquiry*, vol. 11, no. 4, pp. 227-268, 2000.
- [40] Y. Li, "A study on students' engagement based on self - determination theory," Master's Thesis, Tianjin University, 2018.
- [41] P. D. MacIntyre, B. Schnare, and J. Ross, "Self-determination theory and motivation for music," *Psychology of Music*, vol. 46, no. 5, pp. 699-715, 2018.
- [42] M. Y. Liu, *Psychological needs and music engagement intentions: A self-determination theoretical perspective on the motivation to continue in music*. Boston University, 2016.
- [43] E. P. Asmus and C. S. Harrison, "Characteristics of motivation for music and musical aptitude of undergraduate nonmusic majors," *Journal of Research in Music Education*, vol. 38, no. 4, pp. 258-268, 1990.
- [44] V. D. Baker, "Scheduling accommodations among students who persist in high school music ensembles," *Journal of Music Teacher Education*, vol. 18, no. 2, pp. 7-17, 2009.
- [45] P. S. Campbell, C. Connell, and A. Beegle, "Adolescents' expressed meanings of music in and out of school," *Journal of Research in Music Education*, vol. 55, no. 3, pp. 220-236, 2007.
- [46] J. Hess, "The Sankofa Drum and Dance Ensemble: Motivations for student participation in a school world music ensemble," *Research Studies in Music Education*, vol. 32, no. 1, pp. 23-42, 2010.
- [47] K. Howard, "Motivating factors affecting the recruitment and retention of suburban middle school band students," Doctoral Dissertation, Milligan University, 2019.
- [48] A. S. Kirby, "Non-music major participation in collegiate marching bands: A necessary demographic required for the survival of the collegiate marching band," Doctoral Dissertation, Liberty University, 2023.
- [49] A. Lamont, "University students' strong experiences of music: Pleasure, engagement, and meaning," *Musicae Scientiae*, vol. 15, no. 2, pp. 229-249, 2011.
- [50] R. Mantie and J. Dorfman, "Music participation and nonparticipation of nonmajors on college campuses," *Bulletin of the Council for Research in Music Education*, vol. 200, pp. 41-62, 2014.
- [51] P. P. Mitchum, *Student motivation to participate in instrumental music*. University of Missouri-Kansas City, 2008.
- [52] J. A. Moder, *Factors influencing non-music majors' decisions to participate in collegiate bands*. University of Missouri-Kansas City, 2013.
- [53] T. Renninger, "Examining factors of student retention in a middle school band program," Master Dissertation, Eastern Washington University, 2021.
- [54] S. D. Simpkins, D. L. Vandell, and Y. Liu, "Participation and enjoyment in out-of-school activities during adolescence as predictors of activities in adulthood," *Journal of Research on Adolescence*, vol. 33, no. 3, pp. 786-802, 2023.
- [55] A. Lamont, "Emotion, engagement and meaning in strong experiences of music performance," *Psychology of music*, vol. 40, no. 5, pp. 574-594, 2012.
- [56] J. W. Bennett, "A case study analysis of the experiences and perceived learning outcomes of former non-music majors in applied horn lessons," Doctoral Dissertation, West Virginia University, 2023.
- [57] A. Faber, "A study of factors that influence first-year nonmusic majors' decisions to participate in music ensembles at small liberal arts colleges in Indiana," Doctoral Dissertation, Ball State University, 2010.
- [58] D. Isbell and A. M. Stanley, "Keeping instruments out of the attic: The concert band experiences of the non-music major," *Music Education Research International*, vol. 5, pp. 22-32, 2011.
- [59] J. Tedford, *College instrumental ensemble participation rates: A study of participants and non-participants at a liberal arts college*. Shenandoah University, 2014.
- [60] S. H. Cogdill, "The identification of factors contributing to first-year college students' mindset of singing ability, and the relationship of that mindset to intent to participate in singing activities," Doctoral Dissertation, The University of Nebraska-Lincoln, 2013.
- [61] B. K. Lapp, "Something to think about the rest of one's days: Music in a liberal arts education ", Doctoral Dissertation, Teachers College, Columbia University, 2012.
- [62] A. Moreno, "Prelude to music education: Investigating students' early life experiences before formal music education," Master's Thesis, Azusa Pacific University, 2024.
- [63] H. Yoo, "A motivational sequence model of high school ensemble students' intentions to continue participating in music," *Journal of Research in Music Education*, vol. 69, no. 2, pp. 167-187, 2021.
- [64] E. Cho, "The relationship between small music ensemble experience and empathy skill: A survey study," *Psychology of Music*, vol. 49, no. 3, pp. 600-614, 2021.
- [65] K. R. Anguiano, *Motivational predictors of continuing motivation and achievement for early adolescent instrumental music students*. The University of Iowa, 2006.

- [66] P. A. Evans, *Psychological needs and social-cognitive influences on participation in music activities*. University of Illinois at Urbana-Champaign, 2009.
- [67] J. D. Holster, "The influence of socioeconomic status, parents, peers, psychological needs, and task values on middle school student motivation for school music ensemble participation," *Psychology of Music*, vol. 51, no. 2, pp. 447-462, 2023.
- [68] E. Freer and P. Evans, "Choosing to study music in high school: Teacher support, psychological needs satisfaction, and elective music intentions," *Psychology of Music*, vol. 47, no. 6, pp. 781-799, 2019.
- [69] Ö. F. Şimşek and M. Demir, "Parental support for basic psychological needs and happiness: The importance of sense of uniqueness," *Social indicators research*, vol. 112, pp. 661-678, 2013.
- [70] B. Bogunović, O. Jovanović, N. Simić, and D. Mutavdžin, "Self-determination theory perspective on motivation and solo performance among students in higher music education in Serbia," *Psihologijske teme*, vol. 32, no. 1, pp. 105-124, 2023.
- [71] A. R. Legutki, "Self-determined music participation: The role of psychological needs satisfaction, intrinsic motivation, and self-regulation in the high school band experience," Doctoral Dissertation, University of Illinois at Urbana-Champaign, 2010.
- [72] L. Tian, Q. Tian, and E. S. Huebner, "School-related social support and adolescents' school-related subjective well-being: The mediating role of basic psychological needs satisfaction at school," *Social Indicators Research*, vol. 128, pp. 105-129, 2016.
- [73] U. Sekaran and R. Bougie, *Research methods for business: A skill building approach (7th ed.)*. Chichester. England: John Wiley & Sons, 2016.
- [74] L. J. Cronbach, "Coefficient alpha and the internal structure of tests," *psychometrika*, vol. 16, no. 3, pp. 297-334, 1951.
- [75] D. George and P. Mallery, "Reliability analysis," Routledge, 2018, pp. 249-260.
- [76] K. G. Jöreskog, "A general approach to confirmatory maximum likelihood factor analysis," *Psychometrika*, vol. 34, no. 2, pp. 183-202, 1969.
- [77] J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate data analysis: A global perspective*. Upper Saddle River, NJ: Pearson Prentice Hall, 2010.
- [78] C. Fornell and D. F. Larcker, "Evaluating structural equation models with unobservable variables and measurement error," *Journal of marketing research*, vol. 18, no. 1, pp. 39-50, 1981.
- [79] P. M. Bentler, "Comparative fit indexes in structural models," *Psychological bulletin*, vol. 107, no. 2, p. 238, 1990.
- [80] J. H. Steiger, "Statistically based tests for the number of common factors," in *The Annual Meeting of the Psychometric Society*, Iowa City, 1980.
- [81] J. C. Anderson and D. W. Gerbing, "Structural equation modeling in practice: A review and recommended two-step approach," *Psychological Bulletin*, vol. 103, no. 3, p. 411, 1988.
- [82] M. M. Dray, "Motivation and retention of instrumental music students in a suburban school district," 2014.
- [83] C. G. Hurley, "Student motivations for beginning and continuing/discontinuing string music instruction," *Visions of Research in Music Education*, vol. 16, no. 6, p. 7, 2021.
- [84] Q. Liu and Q. Wang, "Research on the current development status and construction paths of university music associations: Taking three universities in Zigong City as examples," *Modern Music*, vol. 11, pp. 192-194, 2024.
- [85] G. X. Shi, "Exploration on the practical paths of high school music education," *National Exhibition of Chinese Ethnic Groups*, vol. 18, pp. 170-172, 2024.
- [86] H. Wang, "Fostering a vibrant music club culture: Strategies for enhancing student engagement and participation in chinese high school music societies," *Journal of Interdisciplinary Insights*, vol. 2, no. 2, pp. 75-86, 2024.
- [87] J. M. Zhang, "Exploration on the music culture dissemination function of music associations in xinjiang universities: taking xinjiang normal university as an example," *Art Research*, vol. 1, pp. 118-120, 2022.
- [88] L. Cheng, "Exploring the low enrolment of music as a subject within Hong Kong senior secondary school education," *International Journal of Music Education*, vol. 41, no. 3, pp. 413-427, 2023.
- [89] C. De Francisco, E. I. Sánchez-Romero, M. D. P. Vilchez Conesa, and C. Arce, "Basic psychological needs, burnout and engagement in sport: The mediating role of motivation regulation," *International Journal of Environmental Research and Public Health*, vol. 17, no. 14, p. 4941, 2020.
- [90] R. W. Key Jr, "The impact of college students' marching band participation on academic achievement at predominantly black universities," *Online Submission*, 2024.
- [91] Y. C. Zhou, "A study on the motivation and influencing factors of college students' participation in music societies—a case study of music societies participants in East China Normal University," Master Dissertation, East China Normal University, 2023.
- [92] P. Evans and R. M. Ryan, "Intrinsic and extrinsic motivations for music performance," 2022.
- [93] A. J. Lonsdale and E. R. Day, "Are the psychological benefits of choral singing unique to choirs? A comparison of six activity groups," *Psychology of Music*, vol. 49, no. 5, pp. 1179-1198, 2021.
- [94] B. Tian, "Study on the development status of non-professional music societies in Xinjiang colleges and universities under the perspective of learning community," Master's Thesis, Xinjiang Normal University, 2021.
- [95] W. Chen, Y. Sun, and Y. He, "The relationship between parental autonomy support and children's self-concept in china—the role of basic psychological needs," *Behavioral Sciences*, vol. 14, no. 5, p. 415, 2024.
- [96] R. Granot et al., "'Help! I need somebody': music as a global resource for obtaining wellbeing goals in times of crisis," *Frontiers in psychology*, vol. 12, p. 648013, 2021.
- [97] S. Y. Bae, "Music learning motivation based on self-determination theory," *Journal of Music Education Research*, vol. 51, no. 2, pp. 75-94, 2022.
- [98] Z. Y. Ping, "Research on music learning motivation and self - efficacy of high school students: A case study of several middle schools in Luzhou district, Changzhi city," Master's Thesis, Northwest Normal University, 2020.
- [99] D. M. Rolandson, "Motivation in Music," *Contributions to Music Education*, vol. 45, pp. 105-126, 2020.
- [100] L. Venter and C. Panebianco, "High school learners' perceptions of value as motivation to choose music as an elective in Gauteng, South Africa," *International Journal of Music Education*, vol. 40, no. 2, pp. 244-259, 2022.
- [101] K. Elpus, "Access to arts education in America: The availability of visual art, music, dance, and theater courses in US high schools," *Arts Education Policy Review*, vol. 123, no. 2, pp. 50-69, 2022.
- [102] C. Hadjikou, "Students' motivation to engage in music lessons: The Cypriot context," *Research Studies in Music Education*, vol. 44, no. 2, pp. 413-431, 2022.

- [103] F. Koehler, M. Warth, B. Ditzen, and A. B. Neubauer, "Motivation to make music matters: Daily autonomous motivation, flow, and well-being in hobby musicians," *Psychology of Aesthetics, Creativity, and the Arts*, vol. 17, no. 6, p. 682, 2023.
- [104] E. Bucura, "Pathways of school and community music: Towards lifelong musicianship," *Journal of Arts & Communities*, vol. 13, no. 1, pp. 47-63, 2022.
- [105] G. Chapman, W. Emambocus, and D. Obembe, "Higher education student motivations for extracurricular activities: evidence from UK universities," *Journal of Education and Work*, vol. 36, no. 2, pp. 138-152, 2023.
- [106] M. Ratliff, "How participation in school music ensembles influences student sense of belonging," Doctoral Dissertation, California State University San Marcos, 2022.