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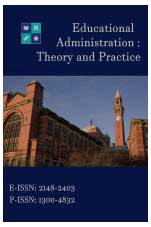

The Role of Blended Teaching Method in Vocal Music Learning - is Innovative Behavior a Determinant of Blended Instruction Adoption?

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Abstract

The study focuses on inventive behavior as a factor in the acceptance of blended instruction in China and the role that established individual self-determination theory plays in the learning of vocal music. An online and face-to-face survey of 355 employees from various colleges in China was used to acquire the data for the analysis. According to the findings of structural equation modeling (SEM), student competence has a positive impact on educational innovation. The research's conclusions also showed a connection between blended learning, instructional strategies, student aptitude, passion for music education, and educational innovation. The current study uses quantitative research, cross-sectional analysis, explanatory, and close-ended questions based. One goal is to provide a trimming teaching method to academics who are creating their training programs so they can apply it in their lectures. Future research on this subject should employ longitudinal or field testing to show the relationships between the constructs being studied. Important policy suggestions are made, as well as inquiries for additional study and suggested theoretical and practical ramifications.

Keywords: Innovative Behavior; Educational Innovation; Blended Learning; Teaching Methods; Students Competence; Passion for Music

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Introduction

Blended learning is an approach to music education that allows students more control over their learning by combining online and offline resources with traditional classroom activities and the guidance of a teacher. The incorporation of online teaching resources into the classroom has increased the popularity of blended learning, which has proven to be an effective method of teaching students. Based on the potential changes to the current teaching program and student learning experience, these blended techniques are classified as low-impact, medium-impact, or high-impact blends (Hrastinski, 2019). Every historical epoch has given both opportunities and challenges to the profession of music teaching and learning. Edward et al. (2018) agreed that due to our fast-changing, interconnected culture, music is more important than ever to people of all ages. Music education needs innovative approaches that acknowledge past achievements and anticipate future perspectives (Liu et al., 2021). Learners need innovations in vocal music to survive and progress (Edward et al., 2018; Iqbal et al., 2022). For this purpose, music education systems must be effective and efficient; they must accomplish their goals while making the best use of the resources at hand (Edward et al., 2019; Yang Wang, 2022).

Around the year 2000, blended learning, among many other educational trends, started to become more popular (Iqbal et al., 2022). Over the past 10 years, the use of technology in the classroom has expanded, and this has had an impact on how teachers educate their students. As a result, blended learning is progressing in the educational system (J. H. Kim, 2021). Programs for blended learning offer a secure learning environment. According to Bagheri et al. (2022), Blended learning has many benefits, such as making students more interested, improving their intellectual skills, and eventually making them more motivated and skilled. Likewise, Edward et al. (2018) claimed that blended learning brings together the best parts of traditional teaching methods and the Internet. It is likely to be the next successful way to teach students. In the modern era of education and learning, a more digital transformation between professors and students is required (Mehrvarz et al., 2021). As a result of attempting to incorporate technologies in a traditional ordinary classroom, a variety of teaching approaches, such as e-learning, remote learning, and internet learning, have emerged (Bada, 2022; E. Kim, 2013).

Chinese music education has been around for a long time, and Westerners have always been amazed by its uniqueness, elegance, and variety of styles (Yang Wang, 2022). Music education strategies rose to prominence in China at the turn of the twenty-first century, when the government shifted its focus to the revival of traditional culture across the country. There is a lot of discussion among policymakers and teachers about how music education needs to change for the twenty-first century. Blended learning emphasizes some of the most important parts of education in the 21st century, such as problem-solving, critical thinking, teamwork, real learning, the right use of technology, and cross-disciplinary instruction (Crawford, 2017). Therefore, one of the primary concerns goals of the Chinese educational system is to improve music instruction and increase the effectiveness of the education process based on cutting-edge innovations. Similarly, all curriculum designers around the world now prioritize enhancing students' proficiency (Bagheri et al., 2022). Due to changing vocational requirements in the 21st century, traditional classroom education isn't able to help students improve their actual understanding and critical thinking skills, but it might give them some ideas and explanations. If there is a passion for music learning, then it goes with strong emotions and feelings.

The main contribution of this study is the moderating effect of passion for music education. When passionate learners receive increased attention, their brains react by rewarding them with pleasure. This is what is meant by "having an artistic enthusiasm for music instruction" (Bada, 2022; Bagheri et al., 2022; Ferla et al., 2010). Passion for music is an important factor in understanding the well-being of the learners in the music education system (Bonneville-Roussy & Vallerand, 2020). The people in China who make music are as different from the music they make. Around the world, music has influenced civilizations and societies and has been passed down from one generation to the next. Passion for music is about feelings, drive, and what makes a person happy. For a successful rise, a person's actions should have an external motivation or purpose. Without purpose, education becomes meaningless. To achieve long-term success in music innovation, a supervisor must create an environment in which learners comprehend the vision

(purpose), can complete the task (proficiency), and believe in the task (passion). With blended learning, students can advance at their own pace. When necessary, students can review the course's topics and materials, and they can move on when they're ready. In this type of blended learning environment, a music learner will be intrinsically motivated (Majeed & Rehan Dar, 2022). Blended learning improves comprehension and drastically alters the educational experience for students. Unlimited opportunities for music learners are made available through the use of blended learning strategies.

The present study focuses on the role of blended teaching methods in vocal music learning and innovative behavior as a determinant of blended instruction adoption in China. Blended learning is a novel approach that combines the best features of both traditional in-class instruction and ICT (Information and Communication Technology)-supported learning, such as offline and online music education. It has the potential for constructive learning, computer-assisted learning, and collaborative learning (Sahni, 2019). The current study established its self-determination theory. Self-determination theory (SDT) has driven the development of innovative programs intended to cultivate more autonomous school motivation, thereby enhancing learners' perseverance and academic accomplishment (Su & Chen, 2022). The conceptual framework that is proposed and empirically tested in this study is built on these concepts.

Literature Review

Self-Determination Theory

According to the self-determination hypothesis, if students are given the resources they need, their blended learning will eventually improve following their learning objectives and procedures, and this use of the teaching methods will well in their education innovation. As a result, both formal education and blended learning have the potential to enhance students' educational innovation (Edward et al., 2018). According to self-determination theory, people participate in behaviors that they choose to do on their own and without the involvement of anybody else. This is especially true in environments where individuality is supported. Self-determination is currently used in music innovation education (Su & Chen, 2022).

Academic institutions have examined the psychological aspects of active innovative behavior according to the theory. According to the theory, an individual's important psychological demands serve as the internal driving force behind active creativity (Su & Chen, 2022). When performing work, one must feel efficient and effective to be competent. The capacity to take initiative and control one's own behavior while adhering to desires and ideals. Three major components of self-determination theory are autonomy, relatedness, and competence. Autonomy describes as a sense of having control and voluntarily supporting one's behavior (Edward et al., 2018). Competence refers to the feeling of having achieved expertise and being successful in one's endeavors. Finally, relatedness needs a sense of community and affiliation with others (Edward et al., 2018).

Blended Learning and Student Competence

Due to the growing use of technology in schools and its impact on teaching methods, the phrase "BL assigning" is relatively new in the realm of education. Many times, Edward et al. (2018, 2019) and Liu et al. (2021) described blended learning as the blending of in-person and online learning. (Crawford, 2017) asserted the description and emphasized that BL is not just integrating new technologies into courses; rather, it should be viewed as an opportunity to completely transform how courses are created, planned, and delivered using a blend of physical and online rules known as "bricks and clicks". Edward et al. (2018) came to the conclusion that one of the most effective ways to motivate the largest number of students was through the use of blended learning. According to Edward et al. (2018) study, the use of blended learning promoted students' writing abilities through mentoring.

Bagheri et al. (2022) assert that blended learning involves a change away from the traditional lecture and classroom collaborative methods of education and toward shifts that are more student learning. The current educational system requires student-centered instruction, and blended learning generally fits this requirement. Since the learning process itself enables the student to mimic the teacher, music instruction consistently uses examples. Thoughtful and attainable

instruction is needed to develop musical proficiency. The only person who can acquire knowledge, abilities, and practice, as well as a favourable attitude regarding learning the subject, is the student. At the start of the twentieth decade, when the globe demanded a new kind of educational system, the concept of competency was scarified. This innovative approach to education focuses on new ways of thinking as well as new ways of imparting knowledge, both of which are rapidly becoming obsolete (Crawford, 2017; Iqbal et al., 2022; Väkevä et al., 2017). The present system of education requires that students acquire knowledge and fundamental skills on their own. Numerous scholars and educators from all around the world have been spotlighting expertise education continually. Additionally, according to Edward et al. (2018), blended learning helped students' drawing abilities, enthusiasm, and student engagement. Although the studies favor the use of blended learning, some individuals have shown a clear preference for the classical approaches to education and learning for a variety of reasons, including but not restricted to their lack of expertise in blended learning (Bada, 2022; Mehrvarz et al., 2021; Webster, 2012).

H1: There is a significant relationship between blended learning and student competence.

Teaching Methods and Student Competence

According to this, Edward et al. (2018) provided an interactive explanation of competence that included four components, namely, Competence is a talent that everyone can learn; it also refers to responsiveness; expertise in a certain field or set of abilities; and desire, which is the drive to take risks and want to offer something original. However, numerous scholars had up until that point tried to define competence from various angles. According to Bagheri et al. (2022), the most widely used definition of competence is a mix of understanding, perspective, and abilities that are developed throughout the study of a specific profession and the capacity to carry out any task using the learned competency. The suggested subject has been the focus of research because it is crucial to learning and teaching when it comes to raising students' competence (Crawford, 2017). Universities now place a strong emphasis on hiring professors who exhibit innovative qualities like humility, boldness, fairness, fully accessible, sympathy, passion, vision, and inventiveness (Bagheri et al., 2022; Crawford, 2017; J. H. Kim, 2021; Van Doorn & Van Doorn, 2014). Numerous studies have demonstrated that different approaches typically receive noteworthy teaching honors. Of course, different teaching methods are used by different teachers. As a result, they employ various teaching techniques based on the topics, students, number of learners, and classroom resources that are accessible (Yueli Wang, 2022). Although there are several teaching methods and techniques, not all of them will ensure a dynamic and creative learning environment. This incorporates flipped classrooms, presume, teaching workstations, interactivity, student-centered learning, studying by doing, and role-playing. Furthermore, the adoption and use of these cutting-edge and engaging teaching techniques in the classroom will undoubtedly raise the standard of instruction and, more crucially, make learning fun for the students (Bada, 2022; Yueli Wang, 2022). Additionally, it has been stated that creative and participatory teaching strategies are the only approaches to improve the standard of education and that teaching is a significant force for self-evolution. As a consequence, it is almost essential for educators to be creative in how they present their courses, teach students new skills, and get them ready for the start of the twenty-decades (Liu et al., 2021). According to Edward et al. (2018), education is in a precarious condition that calls for a set of available ways to solve the obstacles. This will not be feasible until we take new teaching techniques into account.

H2: There is a significant relationship between teaching methods and student competence.

Mediating Role of Student's Competence

When the term "Students Competence" was first coined, it was not misused and fulfilled the aim of highlighting the necessity of pertinent information, desire, abilities, and last but not least, reflective thinking, including moral definition (Edward et al., 2018). At the start of the 21st decade, when the world demanded a new kind of educational system, the idea of competency was strongly highlighted. This innovative approach to education focuses on new ways of thinking as well as new ways of imparting knowledge, both of which are rapidly becoming obsolete. Similar to how it affects all parties, including learners, parents, teachers, school officials, experts, and decision-makers, educational innovation calls for their active support and engagement. Understanding the thought abilities that occur in the brain during learning the identification and development of abilities, skills, and competencies comes to mind when we think of students (Crawford, 2017; E.

Kim, 2013; Mehrvarz et al., 2021; Väkevä et al., 2017). As a result, we anticipate that higher education institutions will give every student the tools and conditions necessary to succeed in their academic endeavors (program content, coursework, institutional arrangement, research, money, assets, facilities, management, and coaching). Institution feeds education, and teaching in turn feeds the community. Participation, along with strong public and societal support, is vital for success since the global educational system depends on the commitment and duty of all societies to function effectively. Every period in history has brought both possibilities and difficulties to the profession of music teaching and learning. The modern era is no different. Edward et al., (2018) agree that music has never been so pervasive in individuals of all ages' lives in our fast-changing, highly connected culture. But it is impressive that the formal teaching of this music is still based on antiquated beliefs and methods, according to the environment. What is badly required are fresh approaches to planning and carrying out music education that honors past successes while also anticipating future perspectives (Bada, 2022; Ferla et al., 2010; Väkevä et al., 2017).

H3: Student competence mediates the relationship between blended learning and education innovation.

H4: Student competence mediates the relationship between teaching methods and education innovation.

Moderating Role of Passion for music education

The easily achieve of listening to music suggests that when we hear sounds of the proper quality, the brain triggers benefits. It's vital to first explain why the mind can cause us pleasure and suffering to comprehend why we have this predisposition (Bada, 2022; Mehrvarz et al., 2021). If the effect is intrinsic, an evolved viewpoint should assist understand why we feel regarding music and, maybe, make suggestions as to what aspects of the music engage our brain in a meaningful way. But the song is also a social concept that has multiple social roles (Edward et al., 2018; Iqbal et al., 2022). Only the inherent components can be explained biologically; traditional practices may be more significant when analyzing how music functions in a given civilization. There are more and more top-notch online tools and processes accessible to both educators and learners as a result of this economic growth shift in mindset and efforts to improve music education for youth (Liu et al., 2021). It is suitable to think about how human brains employ rewards and punishment to drive behavior to comprehend our attraction to music (Bada, 2022; Ferla et al., 2010; Väkevä et al., 2017). When certain sensory inputs are received, our brains respond by rewarding us with pleasure. This is what is meant by sensory quality. Seeing, listening, feeling, and touching are just a few of the senses that humans possess. Any activation of our perceptions can result in rewards and penalties, such as enjoyment and pain, where discomfort is associated with any kind of unpleasant experience. Listening and seeing are the main senses involved in visual experience (Iqbal et al., 2022). When it comes to music, the problem is why some sound impulses are processed in a way that makes pleasure come into play. One might also ask why this kind of pleasure is so readily susceptible to and improved by human ingenuity (Väkevä et al., 2017).

H5: Passion for music education mediates the relationship between students' competence and educational innovation.

Students Competence and Education Innovation

To innovate, we must look outside of what we are already doing and create a fresh concept that enables us to carry out our work in a different way (Yang Wang, 2022). Thus, the goal of each innovation is to produce something new that differs from what we've been doing, whether in terms of either amount or even both (Bagheri et al., 2022). Educational innovation must be put to use to have a significant, significant effect, which necessitates rapid dissemination and extensive adoption. The work, effort, and energy needed to achieve specific goals are typically what defines efficiency. In education, the fundamental factor determining learning effectiveness by the time and money spent (Liu et al., 2021). If we can learn the same material in less time and with less money, the process is more successful. Therefore, output rises if we can accomplish more with less effort. Therefore, advances in education should boost both the efficiency and efficacy of education. Educational innovations appear in a variety of contexts and formats (Van Doorn & Van Doorn, 2014). Innovative methods of delivering instruction exist, such as the utilization of modern

technology in education. There have been advancements in the selection, training, and compensation of teachers. According to Edward et al. (2018), the advancement of principles and application, education, learning and teaching, politics, technologies, institution and administration, institutional arrangement, and teacher preparation are all areas where innovation can be applied (Kim, 2013). It can be used in any area of education that has the potential to improve teaching, learning, and students. These include enhancing habits, motivation, self-evaluation, personality, and freedom as well as connection, connection, and educational effectiveness (Bada, 2022). The education system requires that students acquire knowledge and fundamental skills on their own (Iqbal et al., 2022). Numerous scholars and educators from all around the world have been spotlighting the strengths of education continually (Ferla et al., 2010). And this idea has been discussed today from a variety of aspects and viewpoints.

H6: There is a significant relationship between students' competence and education innovation.

Methodology

The conceptual framework for the study and its hypotheses were established with the help of self-determination theory (Figure 1). The study determines the role of the blended teaching method in vocal music learning and innovative behavior as a determinant of blended instruction adoption in China, as well as students' competence as mediators and passion for music education as moderators. The students are all native Chinese speakers and are all from China. We also followed ethical guidelines and obtained permission from the school administrators, as well as from the parents, students, and teachers. The staff, HODs, and administrators first gave their consent. These researchers gathered information via a face-to-face survey, an invitation to participate, and a succinct description of the study's goals. Given the size and scope of the investigation, non-probability sampling based on a practical sample method was used in this study. 355 university students in China will provide the data.

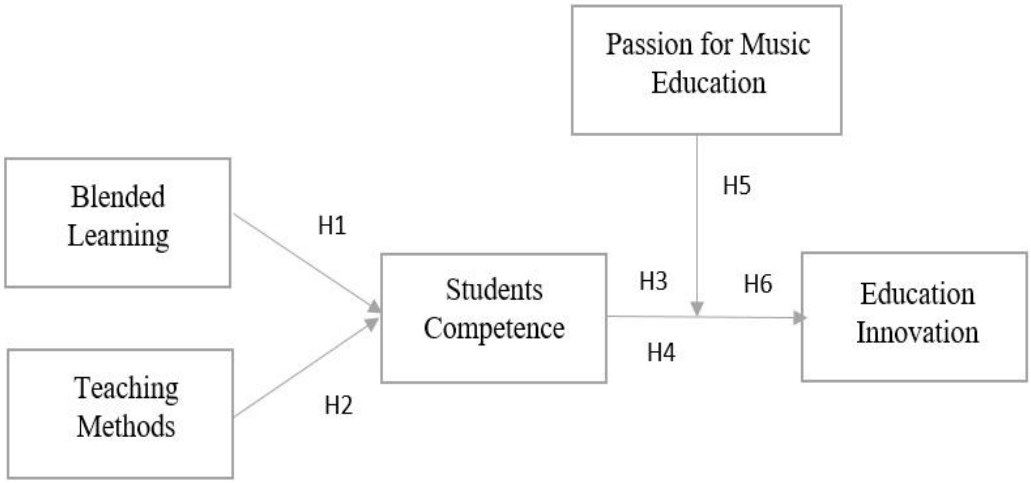

Figure 1. Illustrates the Framework that we Created Using the Components Indicated Above

Participants

The current study uses quantitative research, cross-sectional analysis, explanatory, and close-ended questions based. Students from Chinese colleges who are passionate about music and seek out cutting-edge education are the study's participants. A cover letter and survey questionnaire were delivered to each contact to enlist their voluntary involvement in this study after the proper department approval. The survey was then carried out in person. Participants were also expected to give information about their language skills in the cover letter because the poll was conducted

in English. Furthermore, all participant replies were totally kept private, and only the study's aggregate data conclusions were released to the public. (Avotra et al., 2021)Due to a language barrier and a lack of time, certain Chinese university presidents were initially barred from participating. The authors assert that 355 willing participants felt at ease with the survey's wording and supplied their consent willingly. Data were gathered from September to November 25, 2022. The researchers opted to stop collecting data after 355 questionnaires had been satisfactorily completed due to a shortage of time. A total of 355 complete and insightful survey responses from different Chinese universities were collected for the study, with an overall response rate of (87%). Through the use of a thorough, purposeful selection approach, the study's sample was selected. This refers to (Hamdollah & Baghaei, 2016) as "A method of collecting samples by capturing samples that are conveniently available close to a location or Internet service". In this study, the data are analyzed and the research hypotheses are evaluated using the PLS-SEM Smart PLS 3 approach (Yingfei et al., 2021).

Measurement Scale

A 17-item questionnaire was devised to determine the role of the blended teaching method in vocal music learning and innovative behavior as a determinant of blended instruction adoption in China, as well as student's competence as mediators and passion for music education as moderators, and self-determination theory involved.

Blended learning includes items "The introduction of modern technologies in music training is useful and I believe that the use of mobile apps has helped me improve my music skills" adopted by Yueli Wang (2022). Teaching methods include items "The curriculum does not meet the desires and tendencies of the students and the density of the curriculum, which makes the teacher in a race against time to cover the curriculum" adopted by Bada (2022). Students' competence includes items "I often feel other students understand the learning material better than I do and I'm confident I will pass all exams this year" adopted by Ferla et al. (2010). Passion for music education includes items "Every day I try to improve my music skills and I believe that the introduction of interactive learning environments into vocal training can help me increase my motivation to learn music skills" adopted by Yueli Wang (2022). Education innovation includes items "instruments? And Putting effort in the development of new things" adopted by Bagheri et al. (2022).

Results

Descriptive statistics of the demographics for the current study (N=355) are based on the evaluation of respondents. SmartPLS3 was used to assess the structural and measurement models.

Demographics

Table 1 displays demographic data as well as findings from recent studies on the role of blended teaching methods in vocal music learning and innovative behavior as a determinant of blended instruction adoption in China. It also highlights the role of student competence as a mediator and passion for music education as a moderator, as well as the role of self-determination theory. Gender, age, and educational attainment of Chinese university students were found to be the three most crucial variables in the model's evaluation shown in Table 1.

Table 1. Demographic profile

Demography	**Description**	**No. Of Responses**	**%**
Gender	Male	190	54
	Female	165	46
Age	20-35	185	52
	Above 35	170	48
Education	BS	145	40
	MS	120	34
	PhD	90	26

In the table above, the gender of male students was (54%) and female was (46%). University students aged 20-35 were (52%), while the age above 35 was (48%). Education in BS students was (40%) of respondents, MS University students were (34%) while Ph.D. students were (26%) in China.

Measurement Model

In the present study, structural equation modeling using partial least squares (PLS) was utilized to measure the results from the better of the model. Smart PLS was employed to carry out this measurement. Convergent validity, discriminant validity, confirmatory factor analysis (CFA), and average variance extracted (AVE), and all of them are included in this quality indicator. PLS analysis uses two primary criteria: validity and reliability (Hamdollah & Baghaei, 2016). This is because the main objective of model measurement is to estimate the goodness of the model. To ensure that the construct under examination is legitimate, discriminant and convergent validity analyses were both carried out. Convergent validity, also known as internal consistency of the variables, was examined using the average variance extracted (AVE) values and item loading values. In this convergent validity analysis, the items' consistency was examined.

Composite Reliability and Validity

Firstly, PLS-SEM was used to assess the factor loadings, validity, and reliability of the data collected from (355) students. Table 2 provides details on the item factor loading, validity, and reliability for the PLS measurement model. To assess an item's internal consistency, Cronbach's alpha test value, which must be (0.70) or higher, is generally utilized (Fornell & Larcker, 2014). For the variables under examination, Cronbach's Alpha and CR values were greater than (0.70). Convergence validity and high reliability were shown because the average variance extracted (AVE) values for discriminant validity were higher than 0.50 (Fornell & Larcker, 2014). The CR values, which ranged from (0.796) to (0.875), were over the threshold range of (0.70) as shown below in Table 2.

Table 2. Composite reliability, Cronbach's Alpha, and AVE values

Construct	Item	Loadings	CA	CR	AVE
Blended Learning	BL1	0.955	0.796	0.806	0.628
	BL2	0.956			
	BL3	0.743			
Education Innovation	EI1	0.784	0.841	0.893	0.675
	EI2	0.863			
	EI3	0.825			
	EI4	0.812			
Passion For Music Education	PMI1	0.896	0.875	0.925	0.805
	PMI2	0.898			
	PMI3	0.898			
Students Competence	SC1	0.821	0.800	0.869	0.625
	SC2	0.832			
	SC3	0.721			
	SC4	0.784			
Teaching Methods	TM1	0.724	0.796	0.867	0.621
	TM2	0.827			
	TM3	0.844			
	TM4	0.750			

"Note: CR=composite reliability; AVE=average variance extracted; CA= Cronbach's Alpha"

The preceding table shows that there is no issue for other variables other than "BL4". Remove any indicators with outside loadings of less than (0.40) from the frameworks (Hair & Sarstedt,

2021). The outer loading of lower-order constructions was investigated using a PLS-SEM method. The findings demonstrate that all builds have Cronbach's Alpha values greater than (0.789). As a result, all of the survey's metrics exhibit a high level of consistency. The measurement model is valid since the average variance extracted (AVE) is more than the cutoff value of (0.50).

Discriminant Validity

Additionally, each study design must show that it has discriminant validity. How one predictor variable differentiates from some of the other latent constructs is described by discriminant validity (Fornell & Larcker, 2014). The AVE value, related factor variability, and other range of fundamentals should all be less than the AVE value of the independent factors in order to evaluate the discriminant validity (Hamdollah & Baghaei, 2016). A concept is validated by discriminant validity, which involves contrasting it with other constructs. We performed extra research for structural analysis as soon as we were satisfied that the variables' reliability and validity exceeded all requirements. The HTMT scores below 1 further confirm the discriminant validity as shown in Table 3.

Table 3. Discriminant Validity

	BL	**EI**	**PME**	**SC**	**TM**
Blended Learning	0.793				
Education Innovation	0.501	0.822			
Passion For Music Education	0.600	0.569	0.897		
Students Competence	0.605	0.703	0.661	0.791	
Teaching Methods	0.709	0.669	0.640	0.755	0.788

Based on the results of the assessment of the level of empowerment of the education board and school committee for the achievement of character education programs in schools in the field implementation test, referring to the evaluation standard, the level of empowerment of the education board and school committee for the achievement of character education programs in schools using model instruments is included in the very high category. This includes all components of the developed model presented in Figure 2.

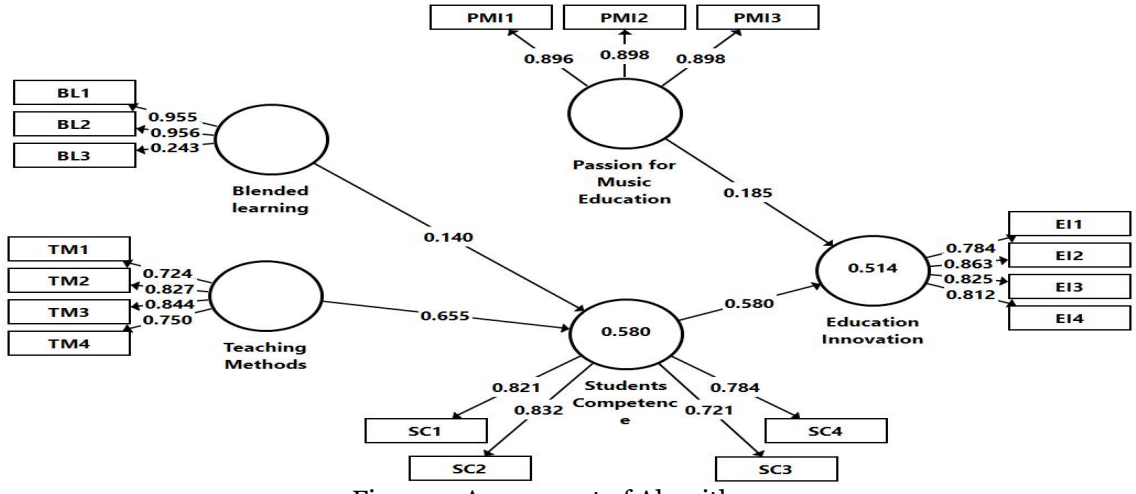

Figure 2. Assessment of Algorithm

In this investigation, the researcher used Smart PLS 3.0 as a tool. Before the inverse relationship is taken into account in this analysis, also known as the main regression model, the R square will be noted first. According to, R2 values of (0.13) should be viewed as weak, (0.33) as moderate, and (0.67) as strong. The table displays the parameter estimate coefficient of determination. The table below shows the relationship between student competence and

educational innovation (R square value: 0.514) shown in Table 4.

Table 4. Assessment of R square

	R^2
Education Innovation	0.514
Students Competence	0.580

The preceding figure shows that there is no issue for other variables other than "BL4". Remove any indicators with outside loadings of less than (0.40) from the frameworks (Hair & Sarstedt, 2021). The outer loading of lower-order constructions was investigated using a PLS-SEM method. The findings demonstrate that all builds have Cronbach's Alpha values greater than (0.789). As a result, all of the survey's metrics exhibit a high level of consistency. The measurement model is valid since the average variance extracted (AVE) is more than the cutoff value of (0.50).

Structural Equation Model

Using a PLS-SEM bootstrapping methodology, the structural model route coefficients reflecting the hypothesized correlations were statistically determined. The PLS-SEM assessment for the role of blended teaching method in vocal music learning and innovative behavior as a determinant of blended instruction adoption in China, as well as student's competence as mediators and passion for music education as moderator, as well as the concerned Self-determination theory, are all illustrated in this study. Bootstrapping receives ratings for accuracy, including biases, variance, standard errors, coefficient of determination, etc. By employing this method, it is possible to estimate the sample distribution for virtually every statistic that uses the survey method. It can also be used to create tests for hypotheses. When a parametric model is imprecise, inaccessible, or necessitates the employment of complex formulas for the determination of standard errors, it is typically utilized as an alternative to statistical methods (Hair & Sarstedt, 2021).

Direct Relation

The findings indicate a substantial link between blended learning and students' competence ($\beta = 0.140$, $t = 2.015$, $p = 0.044$). H1 is therefore acceptable. The findings demonstrate a substantial correlation between teaching methods and students' competence ($\beta = 0.655$, $t = 11.683$, $p = 0.000$). H2 is therefore accepted. The findings demonstrate a substantial correlation between students' competence and education innovation ($\beta = 0.580$, $t = 9.120$, $p = 0.000$). H2 is therefore accepted and depicted in Table 5.

Table 5. Direct Relation

	Original Sample	**T Statistics**	**P Values**	**Decision**
Blended Learning -> Student Competence	0.140	2.015	0.044	Supported
Teaching Methods -> Student Competence	0.655	11.683	0.000	Supported
Students Competence -> Education Innovation	0.580	9.120	0.000	Supported

Mediating Effect

After adding student competence as a mediating variable, the link between teaching methods and education innovation remained significant ($\beta = 0.380$, $t = 7.199$, p 0.026, respectively). After adding student competence as a mediating variable, the link between blended learning and education innovation remained significant ($\beta = 0.082$, $t = 2.142$, p 0.033, respectively). In mediation, "the parties meet with a mutually agreed-upon neutral third party who aids them in the discussion of their differences," as shown in Table 6, according to Hamdollah and Baghaei (2016).

Table 6. Mediating Effect

	Original Sample (O)	T Statistics	P Values	Decision
Teaching Methods -> Students' Competence -> Education Innovation	0.380	7.199	0.026	Accepted
Blended Learning -> Students' Competence -> Education Innovation	0.082	2.142	0.033	Accepted

Moderating Effect

A test of moderation was conducted, as advised, to discover the moderator variable that influences the direction or intensity of the relationship between the independent and dependent variables. According to (Hair & Sarstedt, 2021), "when there is an inconsistent or weak link between the independent and dependent variables", a moderator variable is often used. There are various approaches for "measuring moderating effects, such as the hegemonic regression approach," which includes three steps but suffers from the manual calculation of interaction terms using features, converts, and calculates. This claim is supported by the data in the table below, which demonstrate that students' enthusiasm for music education acts as a moderator of the relationship between student aptitude and educational innovation (B = 0.174, P = 0.024) represented in Table 7.

Table 7. Moderator Hypothesis Testing

	B-Value	T-Value	P Value	Decision
Students' Competence *Passion For Music Education -> Education Innovation	0.174	1.932	0.024	Accepted

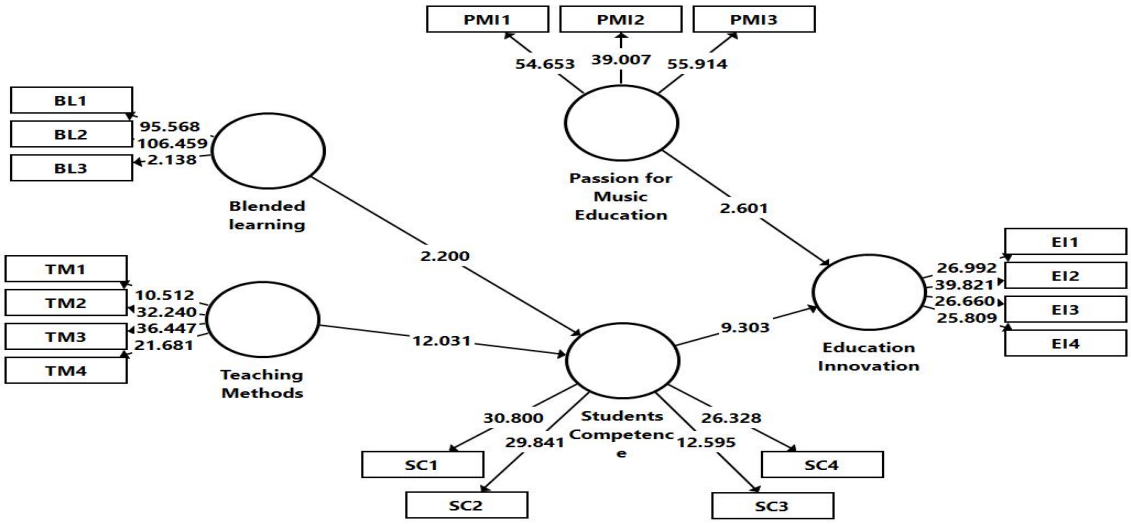

Figure 3. Assessment of Bootstrapping

Figure 3 shows that there is no issue for other variables other than "BL4". Remove any indicators with outside loadings of less than (0.40) from the frameworks (Hair & Sarstedt, 2021). The outer loading of lower-order constructions was investigated using a PLS-SEM method. The findings demonstrate that all builds have Cronbach's Alpha values greater than 0.789. As a result, all of the survey's metrics exhibit a high level of consistency. The measurement model is valid

since the average variance extracted (AVE) is more than the cutoff value of 0.50.

Discussion

This study examines the effect of blended teaching systems on vocal music learning, inventive behavior as a factor in blended instruction adoption in China, student competency as a mediator, enthusiasm for music education as a moderator, and the function of self-determination theory. The impact of blended learning and teaching strategies on educational innovation is also being determined. The evidence strongly supports each of the hypotheses.

The results of this study indicate a substantial link between blended learning and students' competence. Although consistently reiterating the improvement of the experimental and control groups, it has also been noted that students with a passion for music who worked in innovative learning environments showed an improvement in their performance on assessments (Edward et al., 2018). The students enjoyed the knowledge they got from music, which also provided them with opportunities to collaborate with expert authors, performers, colleagues, professors, and other music specialists in the real world. The fact that this research concluded that the blended learning method has worked well for teaching music at higher levels of education.

The results demonstrate a substantial correlation between teaching methods and students' competence. Institutions must focus on increasing the costs of education, increasing learning capacity, tying resources to expected results, and enhancing budget and time effectiveness (Yueli Wang, 2022). Therefore, in an attempt to uphold education's social and evolutionary aim and thus make better use of efficient educational technology, we must locate those contemporary instruments within a larger context of educational innovation and student competency. Students of vocal music education have benefited from technological advancements in synchronous environments in terms of flexibility, participant involvement, knowledge and experience sharing, and real-time feedback between teacher and student. Many different kinds of classrooms can be made, and synchronous cyber classrooms, electronic whiteboards, and interactive response systems can all be used together. As a result, students are encouraged to participate in activities that help them improve and gain confidence, as well as in group and individual work and emotional intelligence.

The results demonstrate a substantial correlation between student competence and educational innovation. Therefore, the key to a productive learner is a diverse approach to revitalizing the educational system that promotes learners' self-determination, individuality, rational thinking, and imagination. Implementing these educational strategies is fundamentally based on student interaction. The teacher can divide the class into groups based on interests and backgrounds to apply an evaluation in class. This will foster a collaborative environment where ideas can be shared. They specify the processes they will take and the strategies they will apply, allowing the learners to learn more about the issue, look at it from different perspectives, inspire discussion and reflection, conduct in-depth analysis, and come up with solutions. This strategy develops a revolution in the education system that stimulates innovative music education (Bagheri et al., 2022). Innovative education must become a shared concern of the entire community, for which we must create global public accountability to achieve results.

Between blended learning, teaching methods, and educational innovation, student competence has a significant mediating effect. These findings motivate educational leaders to reconsider the conventional teaching approach and to include advanced technologies in the curriculum (Iqbal et al., 2022). For effective blended learning, the rotation model is a highly practical approach at the university level. Teachers must act as organizers in the classroom because they know music education and have the skills to create and manage learning resources when they are not physically present. As a result, blended learning is developed, using both online and offline knowledge to consolidate, identify problems, and provide feedback. Before they reach their goal, teachers assign novel tasks to learners that they can do on their own time and that will help them learn more if they use the right technology tool.

Teachers can now offer a variety of interesting learning activities, such as interactive quizzes, simulations, and other assessment methods. Teachers can improve their student's learning

experiences and create more authentic and adaptable assessment methods by utilizing digital tools and theories of teaching and learning. Both teachers and students can greatly benefit from adopting these tactics for online and face-to-face sessions in the classroom. Furthermore, this research is among the few that provides proof that blended learning can help students learn music more theoretically and practically. Because of this, our research shows that teachers should use digital resources in their lessons to help students learn more. The findings indicate that a strong interest in music education has a significant impact on the balance of students' competence and innovative education. Learning mindsets are difficult to modify quickly because students' approaches toward practicing music are often more laid-back and free of learning fear and evaluation stress (Liu et al., 2021). Good music education requires collaboration between general education teachers, subject-matter experts, working musicians, and a variety of other institutions (Alfath, 2021).

Limitations

Despite the study's several serious flaws, new solutions were suggested to solve them. A survey cannot accurately reflect participants' thoughts or innovative educational practices. Likely, survey respondents don't always give honest answers. The main issue was that there were so few people, which made it difficult for mediators like student competence to successfully align. If there had been more participants, the results would have been more precise. Even with the support of some organization authorities, it was difficult to incorporate the data from the questionnaire method into a unified design.

There are occasions when choices are made without reading the question or all of the responses. The tendency of respondents to conceal information or make rash judgments will often have an impact on the veracity of the statistics. It was challenging to obtain better and more accurate results for this study because of the substantial restrictions caused by the small number of participants. The level of education of a consumer is an independent variable employed throughout the entire corpus of research. To make sense of the results, the researcher was compelled to combine and synthesize the data into a plan. There was yet another drawback to using a quantitative, closed-ended questionnaire. The cross-sectional design of the study makes it challenging to demonstrate a cause-and-effect relationship.

Conclusion

This study's major goal was to evaluate the efficiency of blended learning for teaching music and improvising skills to innovation in education. The survey sheds some light on how the students view blended learning's efficacy in raising music proficiency to university-level standards. The project focused on offering engaging educational possibilities using blended learning instruction for a very abstract painting. The study has revealed that discretion has a better potential for self-centered learning. The research findings would also inspire education policymakers, decision-makers in the field of education, and teachers to restructure their music lessons using blended learning settings to preserve the great integrity of educating this priceless art form for a better future.

This study will help future investigations better analyze and comprehend how various platforms might be combined to offer more conducive educational experiences for the instruction of challenging subjects within and outside of academic settings. Involves selecting expectations for student productivity and implementing cutting-edge music teaching strategies can help students develop a wider variety of skills, learn more about diversity through comprehensive instruction, and become more marketable for future careers. In the future to investigate the association between blended learning, learners' attributes predictors, and students' proficiency in Music, experts used several data analytic techniques.

Future Research

Future comprehension will be mediated by innovativeness, perceived quality education, and students' satisfaction. More people should be included in future studies, and case studies will be undertaken in creative methods in addition to using questionnaires. Focus groups, surveys, and interviews may have all been used in this study. Another issue questionnaires could receive a range of responses from participants. Through qualitative investigations and educational practices, issues can be resolved to determine how suggestions are used effectively and what effective techniques have been developed to save these recommendations for greater usage and flexibility. Future research on this subject should employ longitudinal or field testing to show the relationships between the constructs being studied.

Implications

The policymakers, administrators, and decision-makers could benefit much from this study. New determinants need to be examined in order to reduce unknowable contributory effects. The study determines the role of the blended teaching method in vocal music learning and innovative behavior as a determinant of blended instruction adoption in China, as well as students' competence as mediators and passion for music education as moderators. Other effective strategies should try to enhance students' competency to learn, perspectives toward it, and the acquisition of a wide range of academic skills. They should also aim to make learning more efficient. To foster good learning behavior in students, institutions should first implement an integrated curriculum of blended learning and music instruction. Furthermore, teachers must ensure that their instruction is successful in imparting knowledge while keeping the attention of the class on the students. For pupils to change their behaviors, teachers should recognize which students have little knowledge of blended learning and musical creativity. Finally, university administration should provide psychiatric counseling to assist teachers in identifying emotionally fragile pupils. Its foundation is extensive, reducing educational methodology that combines digital, instructional, and blended learning. One goal is to provide a trimming teaching method to academics who are creating their training programs so they can apply it in their lectures.

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