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The Influencing Factors of the Music Students' Satisfaction on Blended Learning

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Abstract

The objectives of doing this research are, to explore the influential factors for blended music students' satisfaction based on academic literature, to form a conceptual structure and to test the hypotheses related to each potential influential factor in the context of music blended learning, and to assess how these factors influence the music students' satisfaction. For achieving the objectives, this research uses a quantitative research method, specifically, using confirmatory factor analysis and structural equation modeling method to analyze the survey results data collected from the sample music students from Hunan Normal University. The results of the data analysis show that factors i.e., motivation, learning climate, perceived achievement goals, perceived task value, cognitive engagement, online attitude, and face-to-face attitude, all have positive and significant influences on music blended learning students' satisfaction, hence supporting the eight hypotheses raised in the research and making the conceptual structure model valid.

Keywords: Music Student Satisfaction, Blended Learning, Music Education

JEL Classification Code: I21, I23, P36

1. Introduction

The traditional face-to-face learning model has beenwidely accepted and used by countless educational institutions around the world. However, it is mentioned that such learning model creates a considerable disconnection between the students and the modern digital world which then leads to a failure in generating effective contribution to the student satisfaction, as well as learning experiences and other learning outcomes (Fisher et al., 2018). On the other hand, despite acting as a valuable alternative to the traditional face-to-face model, criticism regarding online learning has also been revealed by many researchers, for example, it is mentioned by Zamfir (2020) that online learners tend to have a weaker feeling about interpersonal connection than face-to-face students whose learning activities are held in the traditional in-class format. Syahputri et al. (2020) also claimed that students solely learning online tend to be more vulnerable to the external factors such as a downward economy, in which they are more likely to reflect loss of motivation and enhanced mental tension, and thereby diminish their learning satisfaction.

Blended learning is seen as a solution to the limitations of learning solely online or solely in-class, specifically, it offers flexibility to accommodate a variety of student characteristics, learning styles, and academic backgrounds which face-to-face learning approach is lacking; also, it enables the absence of both communication and the sense of community among students within a course to be minimized (Diep et al., 2017; Lei & Lei, 2019). The increasing implementation of blended learning in education has shown a trend in which the traditional face-to-face teaching and learning have been gradually shifting toward technology-mediated learning environments (Nah et al., 2015). Graham (2006) concluded a generally accepted definition of blended learning: the learning approach that consists of the combination of learning via face-to-face instruction and

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computer-mediated instruction. The viewpoint which regards face-to-face and online learning as the two vital ingredients of blended learning, has been supported by much relevant research (Hrastinski, 2019; Rahman et al., 2015; Wu et al., 2008), and the ratio of the 2 ingredients can vary substantially from one blended course to another (Lei & Lei, 2019).

Student satisfaction is stated as the key factor that can influence the success and failure of the implementation of any learning environment such as blended learning, in which a high level of student satisfaction positively influences the student's success, whereas a low satisfaction level could result in failure (Nah et al., 2015; Taghizadeh & Hajhosseini, 2020). Rahman et al. (2015) offered a clear definition of blended learning students' satisfaction, as it represents "the sum of students' feelings and attitudes that results from aggregating all the benefits that a student hopes to receive from blended learning environment system". In the academic field of music, blended learning courses have been more frequently established in educational institutions. In China, many music majors are being learned by students via blended learning model, especially during the Covid-19 pandemic (Zhu & Liu, 2020). However, academic scholars have rarely focused on blended learning in the world of music and investigate the influencing factors specifically for music students' satisfaction. With the enhancing trend of using blended learning in music education, it is vital to investigate how music students' satisfaction is being affected in the blended learning model, thereby optimizing related pedagogy for the music major.

The 2 research questions are:

1. What are the factors that can influence blended learning students' satisfaction proved by previous literature?

2. To what extent are these factors identified in research question 1 influential for university music students' satisfaction with the blended learning model?

2. Literature Review and Hypotheses

2.1 The Community of Inquiry Framework

The community of inquiry theoretical framework (CoI) is a prominent theory of blended learning. It is mentioned that the importance of fostering inquiry-based learning, which focuses on learning via meaningful engagement opportunities instead of direct instruction about content, has become vital in modern education (Cleveland-Innes & Wilton, 2018). The CoI framework is frequently used to create deep and meaningful learning in a blended learning environment and helps shift students from passive consumers in the traditional classroom to active, engaged members of a learning community. The CoI framework is identified as having 3 main components: social presence, cognitive presence, and teaching presence (Garrison et al., 2000). It is important to note that the 3 presences overlap and create an inter-dependence relationship within the model. Social presence refers to the ability to assert one's beliefs, feelings, and personality to build relationships, trust, and open communication on and offline; Cognitive presence refers to guiding students to work via the practical inquiry model – triggering event, exploration, integration, and resolution; Teaching presence refers to the ability to design, facilitate, and direct the social and cognitive presence to obtain decent learning outcomes (Garrison & Vaughan, 2012).

2.2 The Potential Influencial Factors

2.2.1 Motivation

In the education context, motivation is defined as the incentive that propels students to be devoted to learning activities (Wu & Hwang, 2010). A more recent definition states that motivation of learning is "the motivation of learners to continue their learning behavior or a demand for success in the learning process" (Huang, 2021). The role of motivation is vital for students as it offers energy, maintains positive student behavior, and ensures the students are actively involved in the learning process, hence effects the development of student learning (Tanti et al., 2020). Hariri et al. (2021) mentioned that motivation of learning can be activated and sustained by self-regulated learning and result in a positive influence on students' achievement. Tohidi and Jabbari (2011) stated that the motivation of learning can lead to some considerable impact on students, such as directing learning behavior toward goals, increasing effort and energy in learning activities, improving cognitive processing, and delivering enhanced satisfaction and better performance.

It is identified that there are two types of motivation, intrinsic motivation, and extrinsic motivation (Wu & Hwang, 2010). Intrinsic motivation is related to students' perceptions of engaging in a learning task for challenge, curiosity, or mastery, and reasons caused by their self-interests; Extrinsic motivation is related to exogenous reasons such as getting higher grades than their peers (Alkis & Temizel, 2018). In Zhang and Dang's study (2020), taking into consideration of its both intrinsic and extrinsic sides, motivation was tested to be a significantly influential factor for students' perception of the learning climate associated with blended learning. Huang (2021) also recognized the importance of motivation in the learning process and claimed that motivation helps students to learn with confidence. In Huang's study, the relationship between motivation and students' learning satisfaction was tested to be significantly positive

H1: Motivation has significant influence on learning climate for music students in blended learning.
H2: Motivation has significant influence on student satisfaction for music students in blended learning.

2.2.2 Learning Climate

Learning climate refers to the learning atmosphere with students learning in a class or a particular supporting platform within a learning environment (Wu et al., 2010). It is also stated as the prevailing attitudes, standards, and environmental conditions of the educational settings (Khan et al., 2019). Learning climate is essential to any learning model including blended learning, as it involves the mood, attitudes, and rules that students and teachers share in the classroom, and it inspires the exchange of learning ideas, knowledge, and experiences, which then strengthens the sense of community, and underpins teamwork (Rahman et al., 2015; Wu et al., 2010).

Many studies mentioned that the learning climate is an influential factor in students' satisfaction in the blended learning environment (Rahman et al., 2015; Wu et al., 2008). As in the specific academic field of music, Xiang and Yuan (2021) conducted an experiment with 51 college students in Vocal Music major on their satisfaction with the blended learning model. Their study shows that students' perception on learning climate significantly affects vocal music students' learning satisfaction (β=0.669, t=5.702, p<0.001). However, Vocal music is the only major considered in their study and therefore leaves space for further discovery on the relationship between learning climate and blended learning student satisfaction in the field of music.
H3: Learning climate has significant influence on student satisfaction for music students in blended learning.

2.2.3 Perceived Achievement Goals

Perceived achievement goal is the students' perceptions and attitudes toward their academic performances, the role of failure, the importance of effort, and individual competencies (Canfield & Zastavker, 2010). The achievement goal theory identified 2 basic goal orientations in the educational psychology context, mastery (task goal orientation) and performance (ego goal orientation). Task goals refer to students' learning improvement and mastery of a certain task, whereas ego goals refer to competence comparison among peers and gaining recognition from others (Marjanović et al., 2019). For a typical student in a music-related major, achievement goals include specific task goals in the short-term such as his/her performance in a concert, or long-term ego goals such as becoming a top-class musician.

Perceived achievement goals in blended learning can be explained as the students' perception on their academic achievement via a blended learning model. Diep et al. (2017) constructed a research model which contains the investigation on whether perceived achievement goals can cause a positive influence on blended students' satisfaction. The result from the structural model analysis indicated a significant standardized coefficient result (Beta=0.16, P<0.05), therefore, proven the perceived achievement goals is a valid factor that has a direct effect on student satisfaction in blended learning settings.
H4: Perceived achievement goals has significant influence on student satisfaction for music students in blended learning.

2.2.4 Perceived Task Value

Perceived task value is defined as the student's evaluation of the value and usefulness of the learning content (Pintrich et al., 1991). Greene et al. (2004) argued that perceived task value significantly affects students' learning strategies and learning outcomes, indicating the need for students to perceive the value of the learning content to their lives and goals. Being an indispensable part of blended learning, the use of digital technology in pedagogy, provides various types of digital learning content, such as PowerPoint material, broadcast recording, online discussion forums, etc. These digital learning contents help forming better blended learning experiences for students alongside the traditional learning content such as textbooks and print materials (Keengwe, 2018). Diep et al. (2017) investigated the relationship between perceived task value and student satisfaction in blended learning. They found that if the learning content in a blended learning setting is perceived by students as highly valuable, it encourages the students to dedicate more effort to their learning process, and therefore, obtain better learning outcomes and deliver higher satisfaction.
H5: Perceived task values has significant influence on student satisfaction for music students in blended learning.

2.2.5 Cognitive Engagement

There are 3 dimensions of student engagement, they are cognitive engagement, emotional engagement, and behavioral engagement (Xiao et al., 2020). Cognitive engagement is defined as the degree to which students apply mental effort in learning, a typical cognitively engaged student would be dedicated in learning and seek knowledge and challenge beyond the requirements (Trowler, 2010). In Xiao et al.'s study, all 3 dimensions of student engagement were tested, and cognitive engagement was the only dimension that was significantly correlated with blended learners' satisfaction. Thus, behavioral engagement and emotional engagement are not considered in the scope of this research. Xiao et al. (2020) mentioned that it is the cognitive strategies used to plan and organize learning options allows students to explore and find the suitable mix

of learning options, thus improve the students' learning experience and satisfaction. Moreover, as a valid predictor of blended students' satisfaction, cognitive engagement could also cause negative effects, for instance, distractions, loss of attention, late assignment submissions, and lack of persistence (Halverson & Graham, 2019; Trowler, 2010).
H6: Cognitive engagement has significant influence on student satisfaction for music students in blended learning.

2.2.6 Online Attitude and Face-to-face Attitude

Students' attitude is important for the learning process, as it has a significant influence on the student's behavior and the quality of learning outcomes (Hergüner et al., 2020). Students' attitude in a blended learning setting is defined as an affective response towards the performance of some type of blended learning related behavior, which includes positive affection such as belief, confidence, enthusiasm, etc.; and negative affections such as technology anxiety, fear, boredom, etc. (Hilton et al., 2020; Li et al., 2017). Students' attitude in a blended learning setting is formed by 2 components: students' online attitude and students' face-to-face attitude, both attitudes were found to significantly influence students' satisfaction in blended learning settings (Akkoyunlu & Yılmaz-Soylu, 2008; Li et al., 2017). Online attitude is defined as the desire, manner, and attitude of the individual toward online learning (Omar et al., 2012). Students with a positive online learning attitude are expected to show much more readiness to acquire knowledge, which could result in higher quality in their learning outcomes, and hence higher academic success (Hergüner et al., 2020). Face-to-face attitude refers to the students' attitude towards traditional face-to-face learning, it is mentioned that although face-to-face lessons are highly acceptable by students, the students' attitude towards face-to-face learning model still can be affected by many factors, for example, uncertain teaching quality due to the differing difficulties in different subjects; the personality of teacher perceived by students, etc., and these could all affect the students' face-to-face attitude and reflect in their satisfaction of learning (Keržič et al., 2019).
H7: Online attitude has significant influence on student satisfaction for music students in blended learning.
H8: Face-to-face attitude has significant influence on student satisfaction for music students in blended learning.

2.3 The Research Framework

The research framework is shown in figure 1. This study aims to investigate the relationship between each influential factor and the music students' satisfaction in blended learning. The factors are motivation, learning climate, perceived achievement goals, perceived task value, cognitive engagement, online attitude, face-to-face attitude, and music students' satisfaction in blended learning.

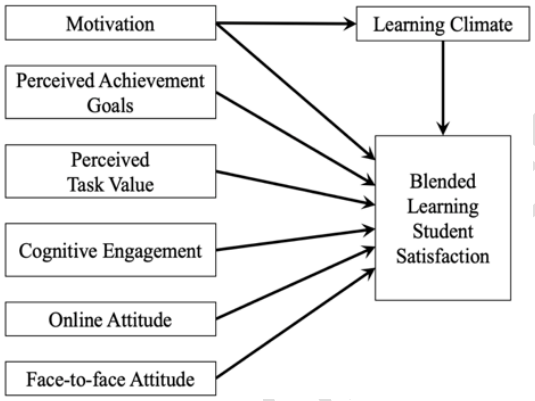

Figure 1: The Research Conceptual Framework

3. Methodology

Quantitative research method is used for testing the hypotheses. This study firstly identifies the target population and suitable sampling method, then constructs a survey instrument based on previous literature, then obtains the Index of Item-Objective Congruence (IOC) results from experts and conducts a pilot test to ensure the validity (via IOC) and reliability (via Cronbach's alpha) of the survey questions before sending out to all the sample participants, and finally sent out the survey to collect quantitative data from all sample participants. Data collected were analyzed by using the structural equation modeling (SEM) method and confirmatory factor analysis (CFA) method.

3.1 Sampling Process

The target population of the quantitative experiment is all 1098 music students who study music-related majors across different grades at the Music College of Hunan Normal University (HNU). They study various kinds of music, with or without instruments, and thereby can be seen as a comprehensive population similar to the students in any mainstream music university in China. By using the purposive sampling method, this study utilized a screening question to purposively select students who have previous or ongoing blended learning experiences from their music study at HNU, since only these students have first-hand opinion on the blended learning model. Students who did not learn any courses via blended learning model at HNU were not required to complete the survey. Practical examples of students using blended learning model are, video conferencing software applications frequently used for music virtual teaching and learning, educational online platform. Such as "Treenity" are being used by many music teachers from HNU to provide asynchronous online learning

materials and to organize online discussion. In total, 581 completed survey results with no missing data were collected and included in the final survey data set.

3.2 Main Survey Instrument

There are 8 constructs in the research framework in total, and there are 4 questions designed for each construct, therefore, there are 32 main questions designed in the survey of this study (see Appendix 1), all 32 main survey question items were based on instruments from previously published literature, the referred survey questions were adapted to this study's specific research setting where necessary.

3.3 Survey Instrument Validity and Reliability

The index of the Item Objective Congruence (IOC) is used as the validation method. The IOC is often used by academic scholars as the basis for screening the item quality of the survey (Laksana et al., 2019). For this study, three experts teaching music majors from HNU are invited to provide scores for the IOC measurement. All the results are deemed to be qualified.

To test the reliability of the survey constructs, a pilot test is conducted. The pilot test involved 30 music students from HNU with blended learning model experience. After collecting their completed survey, the results were organized and entered in SPSS for calculating Cronbach's alpha. By referring to the standard stated by George and Mallery (2003), reliability coefficients are acceptable when equal and greater than 0.6, in this study, the coefficients for each construct are calculated to be over 0.8, which indicates a good level of internal consistency, and thereby proves the reliability of the scale of the survey.

4. Data Analysis and Results

4.1 Demographic Information

In total, 581 completed survey results with no missing data were included in the final survey data set. Among the 581 sample participants (Table 1), 35.8% of the students are male and 64.2% of the students are female. For the age group, nearly 2/3 of the participants are within the range 20 to 25, the sum of the students in year group less than 20 or greater than 25 accounts for around 1/3. For the year of study, 76% of the students are from undergraduate year 2 to undergraduate year 4, whereas 24% of the students are from master year 1 to master year 3. For the major, 37.7% of the participants study Musicology, 30.6% of the students study Vocal Music, 20.8% of the participants specialize in Music Performance, and 10.8% study Music Education.

Table 1: Demographics of survey respondents (n=581)

Dimensions	Number (Percentage)
Gender	
Male	208 (35.8%)
Female	373 (64.2%)
Age	
<20	142 (24.4%)
20-25	378 (65.1%)
>25	61 (10.5%)
Year of Study	
Undergraduate year 1	98 (16.9%)
Undergraduate year 2	127 (21.9%)
Undergraduate year 3	111 (19.1%)
Undergraduate year 4	106 (18.2%)
Master year 1	41 (7.1%)
Master year 2	52 (8.9%)
Master year 3	46 (7.9%)
Major	
Musicology	219 (37.7%)
Vocal Music	178 (30.6%)
Music Performance	121 (20.8%)
Music Education	63 (10.9%)

4.2 Analysis and Results on Perceptions

Firstly, for the KMO and Bartlett's Test, it is calculated that the KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) of the data equals 0.928 (greater than 0.9), and the Bartlett's Test of Sphericity shows a statistically significant value of $p<0.001$. These indices indicate a high sampling adequacy and that the model is suited for factor analysis. Table 2 states the several detailed descriptive statistics of the data set, including the correlation among the variables, mean, standard deviation, skewness, and kurtosis. From the table 2, every 2 variables amongst all are positively correlated at a statistically significant level ($p<0.01$). All means are above 3 and all standard deviations are smaller than 1. Having all skewness and kurtosis (round-down) results within the range -1 to 1, all the variables of the data set are deemed to be normally distributed.

Table 2: Descriptive Statistics

Measurement Variables	1	2	3	4	5	6	7	8
Motivation	1							
Learning Climate	.424**	1						
Perceived Achievement Goals	.343**	.338**	1					
Perceived Task Value	.396**	.356**	.321**	1				
Cognitive Engagement	.376**	.376**	.355**	.410**	1			
Online Attitude	.367**	.382**	.298**	.432**	.399**	1		
Face-to-face Attitude	.366**	.366**	.325**	.370**	.392**	.333**	1	
Blended Learning StudentSatisfaction	.483**	.472**	.475**	.486**	.482**	.541**	.495**	1
Mean	3.198	3.139	3.199	3.218	3.166	3.236	3.242	3.259
Standard deviation	.984	.989	.980	.995	.997	.958	.935	.887
Skewness	-.383	-.371	-.328	-.374	-.344	-.401	-.343	-.246
Kurtosis	-.976	-1.033	-.902	-.961	-.1.062	-.825	-.969	-.981

As for the results of confirmatory factor analysis, factor loadings, Cronbach's alpha of each construct, composite reliability, and average variance extracted are listed in table 3. Shi et al. (2021) identified 3 levels for interpreting the magnitude of the factor loadings: low (0.4), medium (0.6) and high (0.8). In this research, all the factor loadings are above the medium level, ranged from the lowest factor loading 0.686 to the highest factor loading 0.816, suggest that all the factors extract sufficient variances from their corresponding variables. Moreover, the Cronbach's alphas of all 8 constructs of this research are acceptable and indicate a good level of internal reliability, as all the 8 Cronbach's alphas are greater than the acceptable level of 0.7. The CR (composite reliability) also assess the reliability and internal consistency of the items within a construct, and a CR greater than 0.7 and smaller than 0.9 is considered as a desirable level (Hair et al., 2014). All the results of CR from table 11 are within the desirable range (>0.7 and <0.9), hence the internal consistency of the constructs is deemed to be acceptable. In addition, the convergent validity needs to be examined by calculating AVE (average variance extracted) as it is the assessment to measure whether the indicators that designed to assess the same construct are correlated. Hair et al. (2014) claimed that for establishing convergent validity, the AVE value of any construct should exceed 0.5. As shown in table below, the AVE values for the 8 constructs are all above 0.5, thereby making the model adequate for convergent validity.

Table 3: Results of CFA for measurement model

Construct	Item	Factor loadings	Cronbach's alpha	CR (Composite reliability)	AVE (Average variance extracted)
Motivation	MO1	0.768	0.839	0.836	0.561
	MO2	0.747			
	MO3	0.750			
	MO4	0.731			
Learning Climate	LC1	0.799	0.845	0.849	0.584
	LC2	0.754			
	LC3	0.745			
	LC4	0.757			
Perceived Achievement Goals	PA1	0.788	0.834	0.837	0.562
	PA2	0.749			
	PA3	0.728			
	PA4	0.731			
Perceived Target Value	PT1	0.782	0.839	0.842	0.572
	PT2	0.714			
	PT3	0.762			
	PT4	0.765			
Cognitive Engagement	CE1	0.816	0.847	0.850	0.587
	CE2	0.760			
	CE3	0.722			
	CE4	0.763			
Online Attitude	OA1	0.786	0.830	0.834	0.556
	OA2	0.735			
	OA3	0.755			
	OA4	0.705			
Face-to-face Attitude	FA1	0.769	0.820	0.824	0.539
	FA2	0.686			
	FA3	0.735			
	FA4	0.744			

Construct	Item	Factor loadings	Cronbach's alpha	CR (Composite reliability)	AVE (Average variance extracted)
Blended Learning Student Satisfaction	SS1	0.772	0.823	0.822	0.535
	SS2	0.738			
	SS3	0.703			
	SS4	0.712			

Discriminant validity illustrates whether a test that is designed to measure a particular construct does not correlate with tests that measure other constructs, which means the indicators should have stronger factor loadings on their corresponding construct than on other constructs in the model (Fornell & Larcker, 1981). The cross-loadings in table 4 represent the square root of the AVE values. As all the cross-loadings are greater than its correlations with all other constructs, the discriminant validity of the constructs is thereby assured.

Table 4: Discriminant validity of constructs

Construct	1	2	3	4	5	6	7	8
1. MO	0.749							
2. LC	0.424	0.764						
3. PA	0.343	0.338	0.750					
4. PT	0.396	0.356	0.321	0.756				
5. CE	0.376	0.376	0.355	0.410	0.766			
6. OA	0.367	0.382	0.298	0.432	0.399	0.746		
7. FA	0.366	0.366	0.325	0.370	0.392	0.333	0.734	
8. SS	0.483	0.472	0.475	0.486	0.482	0.541	0.495	0.731

Notes: Diagonals (cross-loadings) stand for the square root of the AVE; other entries stand for the correlations.

4.3 Hypotheses Testing

Before testing the hypothesis of this research, the fitness of the structural model needs to be verified. After using AMOS 25.0 software to run the collected data, the results for the model fit indexes are: CMIN/DF = 1.601 (≤ 3), GFI = 0.932 (≥ 0.9), AGFI = 0.919 (≥ 0.9), NFI = 0.922 (≥ 0.9), IFI = 0.969 (≥ 0.9), TLI = 0.965 (≥ 0.9), CFI = 0.969 (≥ 0.9), RMSEA = 0.032 (≤ 0.08). It is seen that all values are within the range of recommended levels of fit (Kucuk & Richardson, 2019; Sahin et al., 2006), thereby making the fit of the model acceptable.

To report the hypotheses testing results, the resulting path coefficients of the research model shown in the structural model (Figure 2) and their corresponding p-values were illustrated in table 5. The path coefficient from MO to LC is 0.547, which is statistically significant at p<0.001 (β=0.547, p <0.001), therefore, H1 is supported and shows that motivation has a significant influence on learning climate for music students in blended learning, and such an influence is positive. H2 is supported (β=0.125, p=0.027), indicating that motivation significantly influences the blended learning student satisfaction. H3 is supported (β=0.122, p=0.006), showing that the influence of learning climate on blended learning student satisfaction is significant. H4 is supported by the path coefficient and significance level (β=0.212, p<0.001), indicating that perceived achievement goals has a significant influence on student satisfaction for music students in blended learning. H5 is supported (β=0.114, p=0.019), showing that perceived task value has a significant influence on student satisfaction for music students in blended learning. H6 is supported (β=0.097, p =0.038), indicating that the influence of cognitive engagement on blended learning student satisfaction is significant. H7 is also supported by the path coefficient and p-value (β =0.288, p <0.001), indicating that online attitude has a significant influence on blended learning student satisfaction. H8 is supported (β=0.206, p<0.001), showing that the influence of face-to-face attitude on blended learning student satisfaction is significant. Thus, all the (alternative) hypotheses (H1 to H8) from the proposed model are supported by the data whereas all the null hypotheses (H01 to H08) are rejected.

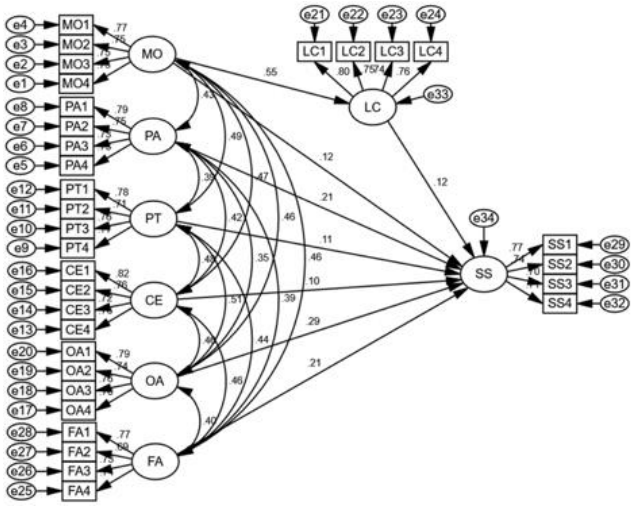

Figure 2: The Structural Model

Table 5: Hypothesis testing results

Hypothesis	Path	β (Path coefficient)	SE	C.R. (t-value)	p-value	Result
H1	MO→LC	0.547	0.069	10.666	***	Supported
H2	MO→SS	0.125	0.066	2.211	0.027	Supported
H3	LC→SS	0.122	0.038	2.764	0.006	Supported
H4	PA→SS	0.212	0.05	4.823	***	Supported
H5	PT→SS	0.114	0.054	2.350	0.019	Supported
H6	CE→SS	0.097	0.052	2.079	0.038	Supported
H7	OA→SS	0.288	0.061	5.880	***	Supported
H8	FA→SS	0.206	0.055	4.408	***	Supported

Notes: *** p<0.001

In the research model, the exogenous variable MO (motivation) affects SS (blended learning student satisfa ction) both directly and indirectly. The indirect effect i s illustrated by the arrow linking "Motivation" with "L earning Climate", and then linking "Learning Climate" with "Blended Learning Student Satisfaction", where le arning climate (LC) stands for the mediating variable. This mediation effect is statistically noticeable as the r elationships among the initial variable (MO), the media tor (LC), and the outcome variable (SS) are all signifi cantly correlated. The correlation between MO and LC is 0.424 (P<0.01), the correlation between MO and SS is 0.483 (P<0.01), the correlation between LC and SS is 0.472 (P<0.01). Due to the existence of the mediato r, the total effect of MO on SS needs to be calculated. The total effect equals the sum of the direct and indi rect effects. It is known that the direct effect of MO o n SS is 0.125. As for the indirect effect, it can be cal culated by multiplying the coefficient of the path from MO to LC, by the coefficient of the path from LC to SS, which is 0.547*0.122 = 0.067. Thus, the total effe ct of MO (motivation) on SS (blended learning student satisfaction) equals 0.125+0.067 = 0.192 (direct effect + indirect effect).

5. Discussions

5.1 Main Findings Discussions

By analyzing the research model from the effect size perspective, the dominant determining variable of blended learning student satisfaction (SS) is online attitude (OA), with the highest effect size of 0.288 in the research model. This effect size shows that online attitude has a moderate level of effect on blended learning student satisfaction. It means if a student has a positive attitude towards his or her online lessons within a blended learning course, such a student is very likely to be generally satisfied with the blended learning course. This is followed by perceived achievement goals (PA) with effect size of 0.212. This means ensuring students to feel that the blended learning approach is valuable for them to achieve their professional goals is vital for enhancing blended learners' satisfaction. The next influential factor is Face-to-face attitude (FA) with effect size of 0.208. It shows that, not only the quality of the online lesson, but also the quality of the face-to-face lesson needs to be maintained, to generate a positive learning experience for students in the blended course. By calculating the total effect, Motivation (MO) with the total effect size calculated as 0.192, is ranked as having the fourth strongest effect on Blended Learning Student Satisfaction, thereby indicating the importance creating learning incentives for improving blended students' satisfaction. Learning climate (LC) with effect size 0.122, perceived task value (PT) with effect size of 0.114, and cognitive engagement (CE) with effect size of 0.097, are ranked as the 3 least dominant variables that affect blended learning student satisfaction in the research model. Although the effects of these 3 variables are considerably small comparing to the other 4 mentioned above, the positive impacts that these 3 factors generate on the blended learning students' satisfaction are still unelectable.

By using the confirmatory factor analysis and structural equation modelling method to analyze the quantitative data collected from the sample participants, all the hypotheses from structural model were supported, as the standardized coefficients for all paths were positive at the significance level p<0.05. The results are shown as the figure 3 below. Thus, all the factors identified in the answers to research question 1, namely motivation, learning climate, perceived achievement goals, perceived task value, cognitive engagement, online attitude, and face-to-face attitude, all have positive and significant influence on music students' satisfaction with blended learning approach, in addition, learning climate acts as a mediator between motivation and blended learning student satisfaction. These hypotheses testing results making the structural model applicable.

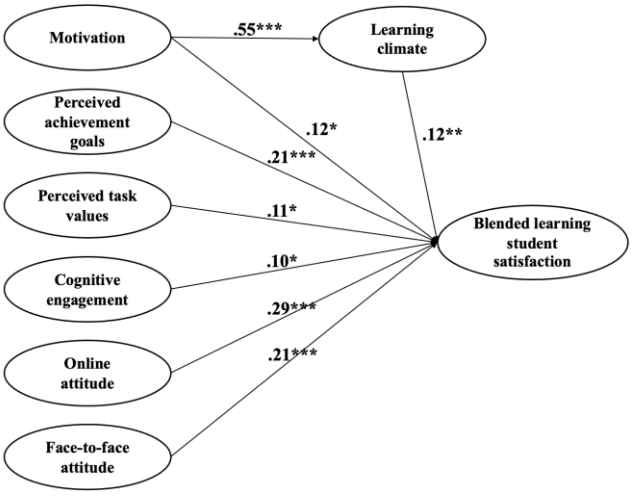

Figure 3: Summarized structural model (Notes: *** p<0.001; ** p<0.01; * p<0.05)

Nortvig et al. (2018) argued that the design of a blended course can influence student satisfaction and their learning outcome. Referring to the structural model and the influential factors of this research, music teachers can obtain a systematic view of the factors that they should raise extra awareness when designing a blended learning course. During the process of designing a blended learning curriculum, a music teacher can use the model of this research to assess, revise, and improve the quality of the curriculum referring to the 7 influential factors. For example, referring to the motivation factor, the course design needs to be interesting and triggers the students' motivation of learning; referring to the learning climate factor, both the on-campus and online classroom need to maintain a good learning atmosphere; referring to the perceived achievement goals factor, the blended course needs to make contribution to students' performances, helps them become better musicians; referring to the perceived task value factor , the content of the blended course need to be understandable and valuable to learn; referring to the cognitive engagement factor, the course design needs to attractive, specifically, making the students to devote more attention while studying this course; referring to the online attitude and face-to-face attitude factor, both the online and offline part of the blended course need to ensure a high level of quality, ensuring the students' attitude during the blended course.

5.2 Additional Findings Discussions

The first additional finding is regarding the quality of HNU's blended courses. By comparing the mean scores of the 8 constructs from the survey results (table 10), it is found that the highest mean (3.259) comes from the construct "Blended Learning Student Satisfaction", which shows that the students in HNU are generally neutral and positive in terms of their blended learning experiences. The lowest mean (3.139) comes from the construct "Learning climate". Despite the differences between the mean score of learning climate and other high scoring constructs are considerably small, learning climate can still be seen as the factor that needs the most attention if HNU eagers to enhance its quality of the blended learning course. Improving blended learners' perception on learning climate can be achieved referring to Boelens et al.'s study (2017) by taking actions in both online and offline classroom such as having a sense of humor, providing encouragements to students, and being aware of students' individual differences. In sum, the fact that the mean scores in all constructs are just above 3 certainly indicate that there is still a large room for future improvement for HNU in its blended pedagogy.

Another additional finding of this research is that "Face-to-face Attitude" obtained the second highest mean score (3.242) in the survey results and is higher than the mean score for "Online Attitude" (3.236). Thus, it is seen that the music students tend to have more positive feelings on their face-to-face learning within their blended learning approach than their feelings on their online learning. However, the standardized coefficient for "Online Attitude" (0.288) is higher than the standardized coefficient for "Face-to-face attitude" (0.206), which means that online attitude has more significant positive influence on blended student satisfaction than face-to-face attitude. Combining these results, it is found that students' attitude of their online learning should be highly emphasized, as making effort in improving online lessons' quality could lead to more enhancement in blended learners' satisfaction than making the same effort in improving face-to-face lessons.

6. Conclusion

Overall, this research studied the influencing factors of the music students' satisfaction on blended learning by conducting empirical research at the Hunan Normal University in China. By analyzing the survey results collected, all the 8 hypotheses (H1- H8) raised in this study were supported and the conceptual structure model were tested to be valid. Hence, the following 7 factors are deemed to be having positive and significant influence on blended music learners' satisfaction: motivation, learning climate, perceived achievement goals, perceived task value, cognitive engagement, online attitude, and face-to-face attitude. By establishing the structural model and generating the research findings, music teachers and faculties could benefit from this research by having a reference to improve their blended students' satisfaction. However, this study has 2 limitatio ns, firstly, the experiment of this study is conducted in

the HNU and the survey is only answered by the mus ic students from HNU, hence, students' opinions from other universities cannot be detected and the results of the survey may not be as comprehensive as if the exp eriment covered multiple universities from different regi ons of China. Secondly, this research does not consider the potential influences generated from any moderating variables. To be specific, factors such as different musi c instrument specialism and years of study with blende d model could have moderating impact on the structur al model and hypotheses testing results. Thus, one potential pathway for future research is to find a valid moderating variable for the structural model, and to test the significance of the influences of the factors under the moderator, such a moderating variable could be the type of music instrument, or amount of time studied with blended model, etc. Finding a valid moderating variable for the model of this research could generate analysis in a more in-depth level and deliver meaningful results for music scholar.

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