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Student Satisfaction of Dance Practical Courses in Liaoning Colleges under Blended Learning：A Structural Equation Modeling Approach

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Abstract

This study aims to explore the key influencing factors of Student Satisfaction with practical courses for dance majors in two universities in Liaoning Province under the blended learning mode, and to construct and empirically verify a causal relationship framework including Interaction, Teacher Support, Perceived Ease of Use, Perceived Usefulness, Student Course Engagement, Learning Motivation, and Student Satisfaction. This study adopts a quantitative research method. After expert content validity testing and a pre-survey with 40 students, 500 valid structured questionnaires were collected online via Questionnaire Star through purposive and stratified random sampling. Confirmatory Factor Analysis was used to test the scale validity, and Structural Equation Modeling was employed to estimate the path relationships between variables, followed by hypothesis testing and model fit analysis. The results show that all 8 research hypotheses are supported ($p<0.05$): Learning Motivation has the strongest direct impact on Student Satisfaction, followed by SCE and Interaction; Perceived Ease of Use has the most significant impact on Learning Motivation and the strongest positive effect on Perceived Usefulness; Teacher Support has a significant positive impact on both. Regarding the model's R^2 values: Student Course Engagement is 0.137, Learning Motivation is 0.516, and Student Satisfaction is 0.611, with good overall model fit. This study provides practical reference for dance educators to optimize blended practical courses and improve students' Learning Motivation and Course Engagement, as well as a reference for related research.

Keywords: Blended Learning, Student Satisfaction, Learning Motivation, Student Course Engagement, Interaction

Introduction

Amid the wave of educational digital transformation, practical dance teaching is undergoing profound changes. As a discipline highly reliant on physical perception and immediate interaction, the traditional teaching methods, which involve on-site demonstrations and real-time adjustments, have long restricted the boundaries of dance education (Giray, 2021). The precise control of movement details, spatial awareness, and emotional expression in dance is difficult to fully master through a single classroom session (Chen, 2025). With the penetration of Internet technology into art education, integrating digital technologies into dance teaching has become irreversible (You, 2022). However, systematic research on the application effect and student acceptance of blended learning for Chinese university dance majors remains scarce. At the policy level, educational informatization is a globally promoted strategy (Russell et al., 2013), with many countries incorporating it into their national frameworks. China has also issued policies advocating blended learning and flipped classrooms (Wong & Chapman, 2023), providing institutional support for dance majors to break time-space limitations and explore online-offline integration. Nevertheless, most existing blended learning studies focus on science, engineering, or liberal arts (Suson, 2024), ignoring dance practice's "physical" characteristics. In-depth research on blended learning's effect and satisfaction for dance majors is lacking, making it hard to address the core contradiction between "repetitive practice demand" and "limited classroom time"(McCarthy-Brown, 2017)—thus, there is an urgent need to fill this gap.

Based on this, this study takes dance majors in universities in Liaoning Province as the representative, focuses on Student Satisfaction with practical courses under blended learning, and aims to systematically verify the causal relationships between six core variables—Interaction, Teacher Support, Perceived Usefulness, Perceived Ease of Use, Student Course Engagement, Learning Motivation—and Student Satisfaction. It also aims to clarify how blended learning influences dance majors' Student Satisfaction, providing a scientific basis for optimizing blended teaching design for dance majors.

To achieve the above research objectives, this study explores the following core research questions:

1. Does Interaction have a significant impact on Student Satisfaction in the dance practice course under blended learning?
2. Does Teacher Support have a significant impact on Student Course Engagement?
3. Does Teacher Support have a significant impact on Learning Motivation?
4. Does Perceived Ease Of Use have a significant impact on Learning Motivation?
5. Does Perceived Usefulness have a significant impact on Learning Motivation?
6. Does Perceived Ease Of Use have a significant impact on Perceived Usefulness?
7. Does Student Course Engagement have a significant impact on Student Satisfaction in the dance practice course under blended learning?

8. Does Learning Motivation have a significant impact on Student Satisfaction in the dance practice course under blended learning?

Exploring these questions is theoretically, practically, and socially significant. Theoretically, it fills the gap in applying blended learning theory to art education—academics generally recognize blended learning as the organic integration of online and offline teaching (Mayadas & Picciano, 2007), with Student Satisfaction as its core evaluation indicator. Focusing on dance practical courses' unique "physical perception" and "immediate interaction" attributes (Giray, 2021), this study provides frontline empirical support. It also explores how dance practice integrates with blended learning, expanding the theoretical perspective on art education's integration with modern educational technology (Parrish, 2016). Practically, it identifies key variables influencing Student Satisfaction, providing specific directions for teachers to adjust their strategies. The core of blended learning is synergizing online and offline advantages through teaching design (Xue, 2023). This study explores effective paths to enhance students' Learning Motivation and experience, boosting teaching quality substantially. Socially, it responds to educational informatization policies and aligns with online-offline integrated teaching orientations (Wong & Chapman, 2023). It promotes online sharing and offline precise transmission of high-quality dance resources, narrowing the learning gap between students of different foundations and advancing art education equity (Hew et al., 2020). As a key cultural inheritance carrier, dance can cultivate skilled, innovative professionals by improving dance teaching quality, motivating cultural and artistic inheritance and innovation (Parrish, 2016).

Literature Review

Student Satisfaction (SS)

SS is a short-term subjective attitude formed by students' assessment of educational experiences and outcomes (Weerasinghe & Fernando, 2017): it is a positive evaluation of educational processes, a comprehensive academic, social, physical, and mental experience, and expected benefits in blended learning. Focused on research objectives, it can be measured by "teaching and learning process" and "complete student experience" (Aldridge & Rowley, 1998), forming a multi-dimensional framework—covering academic quality, social integration, administrative services, and personal development—shaped by students' subjective perceptions (Temizer & Turkyilmaz, 2012).

Measuring SS is key to understanding learning experiences, with its construction influenced by evolving learning methods (Wong & Chapman, 2023). Research shows blended learning yields significantly higher satisfaction than traditional teaching (Stanislaus, 2022), due to optimized outcomes, improved interaction, and integrated online-offline resources. It also serves as a core indicator of online learning effectiveness, essential for enhancing online teaching quality.

Interaction (IN)

Based on interaction theory, this study divides IN in blended learning into three core dimensions: student-content, student-teacher, and student-student interaction. This IN is mainly achieved through two methods: synchronous interaction, which emphasizes immediate feedback, and asynchronous interaction, which provides learners with time for reflection (Croxton, 2014).

In blended learning, IN connects learners, teachers, and content, and is crucial for knowledge acquisition and satisfaction (Croxton, 2014). The Interaction Equivalence Theorem states that at least one of the three IN forms must be high-quality to achieve good learning outcomes (Anderson, 2003), and their synergy further improves satisfaction.

As the foundation of learning, student-content interaction most significantly impacts satisfaction. Exposure to high-quality, engaging materials directly brings fulfillment, while accessible, innovative, practical online content stimulates interest and improves satisfaction (Kuo et al., 2014). Student-teacher interaction, the core of emotional support and learning guidance, creates a safe environment, enhances confidence, and its quality predicts online course satisfaction (Zhan et al., 2021). The role of student-student interaction is controversial: although it cultivates collaboration skills and a sense of belonging, and improves satisfaction and learning outcomes, its direct impact on satisfaction is weak, and its effectiveness depends on IN quality (Wiers-Jenssen, 2023). However, well-designed group tasks and online discussions in blended learning still have value; asynchronous discussions can encourage introverted students to express their views, and real-time collaboration can enhance team cohesion.

Although a few studies find no statistically significant correlation between IN and satisfaction, the overall positive impact of blended learning on SS is clear. Therefore, this study proposes the following hypothesis:

H1: Interaction has a significant positive impact on Student Satisfaction.

Teacher Support (TS)

TS is an important multi-dimensional factor influencing student development, referring to teachers' provision of informational, instrumental, emotional, or evaluative support to students (Malecki & Demaray, 2003). Emotional support focuses on students' emotional needs and sense of belonging, manifested as teachers' care, respect, and encouragement (Federici & Skaalvik, 2014), while instrumental support involves specific academic help (Patrick et al., 2007). While some studies mention other dimensions, the core framework consists of these two types of support. In blended learning, its role is more prominent: it reduces students' adaptation pressure, improves their acceptance of online tools, and stimulates Learning Motivation and Course Satisfaction (An et al., 2022).

As the key link connecting online and offline teaching, TS has a significant impact on students' course engagement. Based on Attachment Theory, teachers' positive attitudes provide

students with a sense of security, alleviate anxiety and learning fatigue, enhance their enthusiasm for participating in both online and offline learning, and help them set learning goals, adjust learning methods, and improve academic performance (Strati et al., 2017).

TS is also the core of stimulating students' Learning Motivation in blended learning. Self-Determination Theory states that TS meets students' three basic psychological needs—autonomy, competence, and relatedness—stimulating intrinsic Learning Motivation (Ryan & Deci, 2000). Given teacher support's significant positive impact on Student Course Engagement and Learning Motivation, this study proposes two hypotheses, this study proposes the following two hypotheses:

H2: Teacher Support has a significant positive impact on Student Course Engagement.

H3: Teacher Support has a significant positive impact on Learning Motivation.

Perceived Ease of Use (PEOU)

PEOU is a core concept of the Technology Acceptance Model (TAM), referring to learners' subjective judgment of the effort required to use a specific learning system (Huang & Liaw, 2018). Its manifestations vary by scenario: minimal effort perception in e-learning, task completion difficulty assessment in learning management systems, and platform friendliness/operational smoothness perception in blended learning (Mailizar et al., 2021)—all directly influencing learners' technology adoption willingness.

As a key component of TAM, PEOU influences learning behavior by fostering positive attitudes and enhancing Perceived Usefulness (Vululleh, 2018). A user-friendly system improves participation, reduces technical-related dropouts, and stimulates Learning Motivation by lowering thresholds and enhancing control (Adams et al., 1992); it also directly improves blended learning satisfaction.

In blended learning, TAM lays a theoretical foundation for the association between PEOU and Learning Motivation (Davis, 1993). As an extrinsic motivational factor, PEOU interacts with intrinsic motivation (Venkatesh et al., 2003), influencing Learning Motivation directly and indirectly via Perceived Usefulness (Wu & Chen, 2017). It is also positively correlated with Perceived Usefulness—acting as a prerequisite—and its improvement reduces learners' burden, fostering acceptance and enhancing Perceived Usefulness. Based on this, the following hypotheses are proposed.

H4: Perceived Ease Of Use has a significant positive impact on Learning Motivation.

H6: Perceived Ease Of Use has a significant positive impact on Perceived Usefulness.

Perceived Usefulness (PU)

PU, another core concept of the TAM proposed by Davis (1989), refers to learners' subjective judgment of whether a specific learning system is helpful for their learning (Huang & Liaw, 2018) —specifically, the belief that technology can improve work or learning efficiency, which directly influences technology adoption behavior. In education, it reflects students' judgment of learning tool efficiency (Haruna & Kiran, 2023); in online learning, it

refers to users' perception that online systems improve learning outcomes.

As a core variable of the Technology Acceptance Model, PU drives technology adoption by reflecting the improvement of task performance. In blended learning, it can enhance students' interest, Learning Motivation, and learning persistence; when perceived as efficient, it can also improve academic performance and intrinsic motivation (Puspitarini & Hanif, 2019). Theoretically, Self-Efficacy Theory and Self-Determination Theory support its connection with Learning Motivation: PU enhances students' confidence, meets intrinsic motivation needs (Rosli & Saleh, 2023), and is itself indirectly influenced by intrinsic motivation. Empirical studies confirm its significant positive impact on Learning Motivation, meeting students' learning value needs.

H5: Perceived Usefulness has a significant positive impact on Learning Motivation.

Student Course Engagement (SCE)

In this study, SCE is defined as the total physical and mental energy students invest in a specific course (Kazmi, 2010). At the course level, it refers to their physical and mental investment and interaction state in learning a particular course, with physical and mental investment and environmental interaction as its core. It also refers to the quality of effort students put into meaningful course activities (Krause & Coates, 2008). In blended learning, as a core educational quality indicator, SCE is influenced by individual, course, and environmental factors. Individually, intrinsic motivation and self-efficacy determine participation quality; pedagogically, teachers' immediate behaviors enhance emotional and interactive participation (Frymier & Houser, 2000); environmentally, flexible offline classroom arrangements promote interaction, while multi-channel online communication compensates for the lack of face-to-face interaction (Dow, 2008).

At the theoretical level, Self-Regulation Theory indicates that students with high self-efficacy are more likely to actively participate in blended learning, and such participation will indirectly improve their learning satisfaction (He et al., 2024). Empirical studies have shown that in the blended learning environment, students' participation in synchronous or asynchronous learning can directly improve satisfaction, and the application of higher-order skills and the improvement of interaction quality can also enhance students' satisfaction through the mediating role of engagement (Osman et al., 2024). In summary, in blended learning, there is a dynamic positive correlation between SCE and satisfaction, so the following hypothesis is proposed.

H7: Student Course Engagement has a significant positive impact on Student Satisfaction.

Learning Motivation (LM)

LM is a core determinant of educational outcomes, with a particularly salient role in blended learning environments. Defined as the internal drive propelling learners to persist in learning and pursue continuous improvement (Huang, 2021), it is divided into intrinsic and

extrinsic motivation: the former stems from learners' inherent interest and curiosity in knowledge itself, while the latter stems from external incentives such as academic achievements and teacher praise (Suson, 2024). Self-Determination Theory posits that cultivating their harmonious coexistence can markedly enhance students' learning experience and satisfaction (Qu, 2024). In the online-offline integrated blended learning model, motivation exerts an even more critical effect: interest-driven students show greater resilience when facing difficulties and thus derive more enjoyment from the learning process (Huang, 2021).

As a key criterion for measuring educational success, SS has been verified by numerous studies to have a positive correlation with LM. Satisfied students exhibit better academic performance and stronger learning persistence, while robust LM also increases students' sense of accomplishment in coursework (Suson, 2024). Motivated students tend to learn more actively and thus hold more positive evaluations of their educational experience, leading to the conclusion of this study that LM exerts a significant impact on SS.

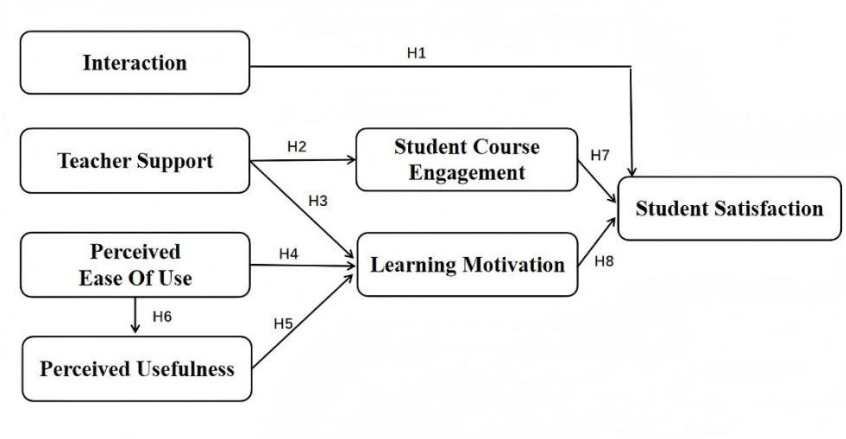
H8: Learning Motivation has a significant impact on Student Satisfaction.

Conceptual Framework

The conceptual framework of this study is derived from four theoretical models closely related to the research theme. Firstly, Suryanto et al. (2024) explored the impact of IN on SS in online education through the mediating role of social presence, providing a theoretical basis for their relationship in this study. Secondly, He et al. (2024) focused on the blended learning environment, verifying the positive impact of TS on SCE and satisfaction, which laid a theoretical foundation for the correlation among the three variables. Thirdly, Suson (2024) studied the influencing variables of SS in blended learning, confirming the significant roles of TS and LM as well as the correlation among various variables. Finally, Huang (2021) explored the intrinsic connections between PU, PEOU, LM, and SS, clarifying their IN mechanism. Based on the above four theoretical models, research objectives, and all core variables, this study proposes its conceptual framework.

Figure 1

Conceptual Framework



Note: Created by the author

This study takes SS with dance practical courses under the blended learning mode as the core research object. Based on existing research, seven core variables are identified, namely: IN, TS, PU, PEOU, SCE, LM, and SS. The research subjects are dance majors from two universities in Liaoning Province who participate in the blended learning of dance practical courses. Combined with the characteristics of the dance discipline, such as strong practicality and emphasis on physical perception and interactive communication, this study adopts a second-order interaction design and focuses on exploring the influence mechanism of various variables on SS in the blended learning scenario.

Research Methodology

Research Design

This study adopted a cross-sectional design, collecting data from undergraduate students majoring in dance at two universities in Liaoning Province at a specific time point (Creswell & Creswell, 2017). A questionnaire survey method was used for data collection, and structured questionnaires were distributed through the "Questionnaire Star" platform. The study invited two language experts to translate the questionnaire content and then invited three experts in education-related fields to conduct content validity (IOC) tests on the questionnaire. A pre-test was conducted with 40 participants, and after the pre-test, the formal distribution of the questionnaire was carried out. In the data processing stage, Jamovi and Amos software were used: confirmatory factor analysis (CFA) was adopted to test the structural validity of the scale, and then the structural equation model (SEM) was used to estimate the path relationships between variables, thereby completing the hypothesis testing and model fitting analysis (Field, 2024).

Population and Sample Size

This quantitative study selected undergraduate students majoring in dance from two universities in Liaoning Province, namely Shenyang Conservatory of Music and Liaoning Normal University, as research samples, with the sampling scope limited to sophomores, juniors, and seniors majoring in dance at these two universities. Calculated by Daniel Soper's statistical calculator, the minimum sample size meeting basic statistical requirements is 425. However, in actual research, for complex studies involving multiple variables, 500 samples are sufficient to support in-depth analysis of the relationships between variables and provide an adequate data basis for statistical tests (Taherdoost, 2017). Combining the statistical calculation results and actual research risks, this study distributed 793 questionnaires, and after data screening, the final sample size was determined to be 500.

Sampling Technique

In the initial stage of sampling, purposive sampling was adopted to identify core research participants. The focus was on undergraduate students majoring in dance with a blended learning experience at two universities in Liaoning Province. Subsequently, stratified random sampling was adopted. This method divides the sample into layers by grade and randomly selects samples within each layer to ensure the representativeness of each group and the randomness of the overall sample.

Table 1

Population and Sample Size by Company

University and major	Undergraduate	Sample Size
Dance Major in School of Music of Liaoning Normal University	116	73
Dance Major in Shenyang Conservatory of Music	677	427
Total	793	500

Source: Created by the author

The data collection period lasted nearly two months, covering October and November 2025. This survey focused on two universities in Liaoning Province that offer dance majors, n amely Shenyang Conservatory of Music and Liaoning Normal University. This survey was co nducted in the form of an online questionnaire distribution, using Questionnaire Star software t hroughout the process for questionnaire distribution, data collection, and preliminary statistics, so as to ensure an efficient research process and convenient data collection.

Results and Discussion

Demographic Information

A total of 500 participants were selected for this survey, and the specific data are shown in Table 2. In terms of gender, there were 117 males, accounting for 23.4% of the total number, and 383 females, accounting for 76.6% of the total number. In terms of educational level, there were 164 sophomores, accounting for 32.8%; 174 juniors, accounting for 34.8%; and 162 seniors, accounting for 32.4%. In terms of professional direction, there were 139 students majoring in Dance Studies, accounting for 27.8%; 149 students majoring in Choreography, accounting for 29.8%; 139 students majoring in Dance Performance, accounting for 27.8%; and 114 students majoring in Dance Studies (Normal Education), accounting for 22.8%. In terms of the frequency of blended learning use, 44 participants used it 1-2 times a month, accounting for 8.8%; 169 participants used it 3-6 times a month, accounting for 33.8%; 191 participants used it 7-10 times a month, accounting for 38.2%; and 96 participants used it more than 10 times a month, accounting for 19.2%. In terms of the frequency of consulting teachers, 17 participants never consulted, accounting for 3.4%; 165 participants consulted once a week, accounting for 33%; 238 participants consulted 2-4 times a week, accounting for 47.6%; and 80 participants consulted more than 5 times a week, accounting for 16%.

Table 2

Demographic Profile

Demographic and Behavior Data (N=500)		Frequency	Percentage
Gender	Male	117	23.4%
	Female	383	76.6%
Grade	Sophomore	164	32.8%
	Junior	174	34.8%
	Senior	162	32.4%
Major	Dance Studies	98	19.6%
	Dance Choreography	149	29.8%
	Dance Performance	139	27.8%
	Dance Education	114	22.8%
Frequency of use	1-2 times a month	44	8.8%
	3-6 times a month	169	33.8%
	7-10 times a month	191	38.2%
	more than 10 times a month	96	19.2%
Consultation frequency	0 times per week	17	3.4%
	1 time per week	165	33%
	2-4 times per week	238	47.6%
	more than 5 times per week	80	16%

Confirmatory Factor Analysis (CFA)

This study adopted CFA to test the convergent validity, discriminant validity, and overall goodness-of-fit of the measurement model, so as to evaluate the rationality and applicability of the measurement tool. The test results are shown in Table 3 below: the factor loadings of all latent variables range from 0.556 to 0.907 (> 0.30); Cronbach's Alpha >0.7, Construct Reliability (CR) > 0.7, and Average Variance Extracted (AVE) > 0.5, with all estimates being significant, indicating good convergent validity and internal consistency of each latent variable. In addition, the square root of all AVE values is greater than their correlation coefficients with other variables; the details are shown in Table 4, verifying the discriminant validity of the measurement model. This study selected 7 core goodness-of-fit indices (CMIN/df, GFI, AGFI, NFI, CFI, TLI, RMSEA), and the test results are shown in Table 5.1 and Figure 2 below: all indices meet the acceptable standards (CMIN/df = 2.219 < 5.00, GFI = 0.908 ≥ 0.85, AGFI = 0.887 ≥ 0.80, NFI, CFI, TLI all ≥ 0.80, RMSEA = 0.049 < 0.08), indicating a good fit between the measurement model and the observed data.

Table 3

Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variable	Source of Questionnaire	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
Interaction (IN)	Taghizadeh and Hajhosseini (2021)	4	0.801	0.654-0.756	0.800	0.502
Teacher Support (TS)	Federici and Skaalvik, (2014)	4	0.840	0.907-0.556	0.853	0.599
Perceived Ease of Use (PEOU)	Suson (2024)	4	0.857	0.813-0.719	0.860	0.606
Perceived Usefulness (PU)	Suson (2024)	4	0.867	0.824-0.735	0.869	0.625
Student Course Engagement (SCE)	Lin and Huang (2018)	4	0.799	0.699-0.730	0.800	0.500
Learning Motivation (LM)	Huang (2021)	4	0.817	0.591-0.827	0.828	0.550
Student Satisfaction (SS)	Amin et al. (2022)	4	0.875	0.834-0.757	0.876	0.639

Note: CR = Composite Reliability, AVE = Average Variance Extracted

Source: Created by the author

Table 4

Discriminant Validity

	SS	SCE	LM	IN	TS	PEOU	PU
SS	**0.799**						
SCE	0.578	**0.707**					
LM	0.666	0.506	**0.741**				
IN	0.569	0.451	0.706	**0.708**			
TS	0.303	0.329	0.378	0.384	**0.773**		

	SS	SCE	LM	IN	TS	PEOU	PU
PEOU	0.591	0.402	0.570	0.545	0.300	**0.778**	
PU	0.671	0.479	0.557	0.539	0.323	0.716	**0.790**

Note: The diagonally listed value is the AVE square roots of the variables
Source: Created by the author

Table 5

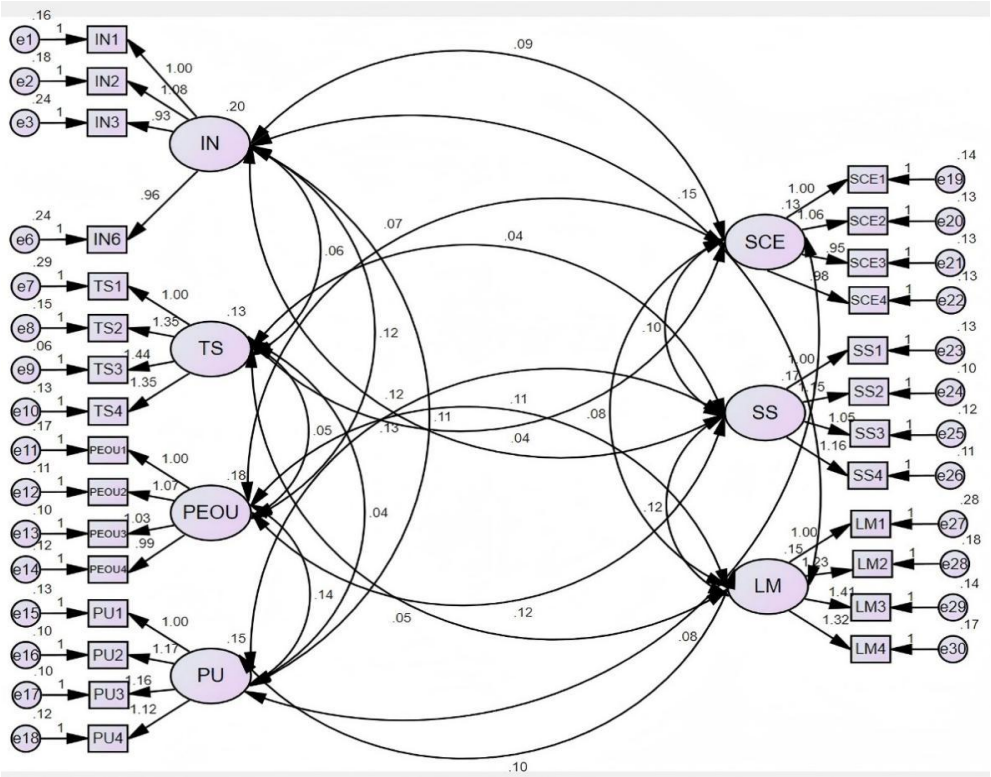
Goodness of Fit for Confirmatory Factor Analysis (CFA)

Fit Index	Acceptable Values	Statistical Values
CMIN/DF	<5.00(Al-Mamary & Shamsuddin, 2015)	730.006/329 or 2.219
GFI	≥0.85(Sica & Ghisi, 2007)	0.908
AGFI	≥0.80(Sica & Ghisi, 2007)	0.887
NFI	≥0.80(Wu & Wang, 2006)	0.910
CFI	≥0.80(Bentler, 1990)	0.948
TLI	≥0.80(Sharma et al., 2005)	0.940
RMSEA	<0.08(Pedroso et al., 2016)	0.049

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalized fit index, IFI = Incremental Fit Indices, CFI = comparative fit index, TLI = Tucker Lewis index, and RMSEA = root mean square error of approximation
Source: Created by the author

Figure 2

Measurement Model



Note: Created by the author

Structural Equation Model (SEM)

SEM is a causal relationship analysis method integrating construction, estimation, and testing. This study used SEM combined with AMOS software for calculation and model adjustment. The goodness-of-fit indices showed a good model fit, The specific details are shown in Table 5.2 and Figure 3, with the specific values as follows: CMIN/DF = 3.898, GFI = 0.850, AGFI = 0.819, NFI = 0.837, CFI = 0.873, TLI = 0.858, RMSEA = 0.076, indicating that the fit of the structural model has been verified.

Table 6

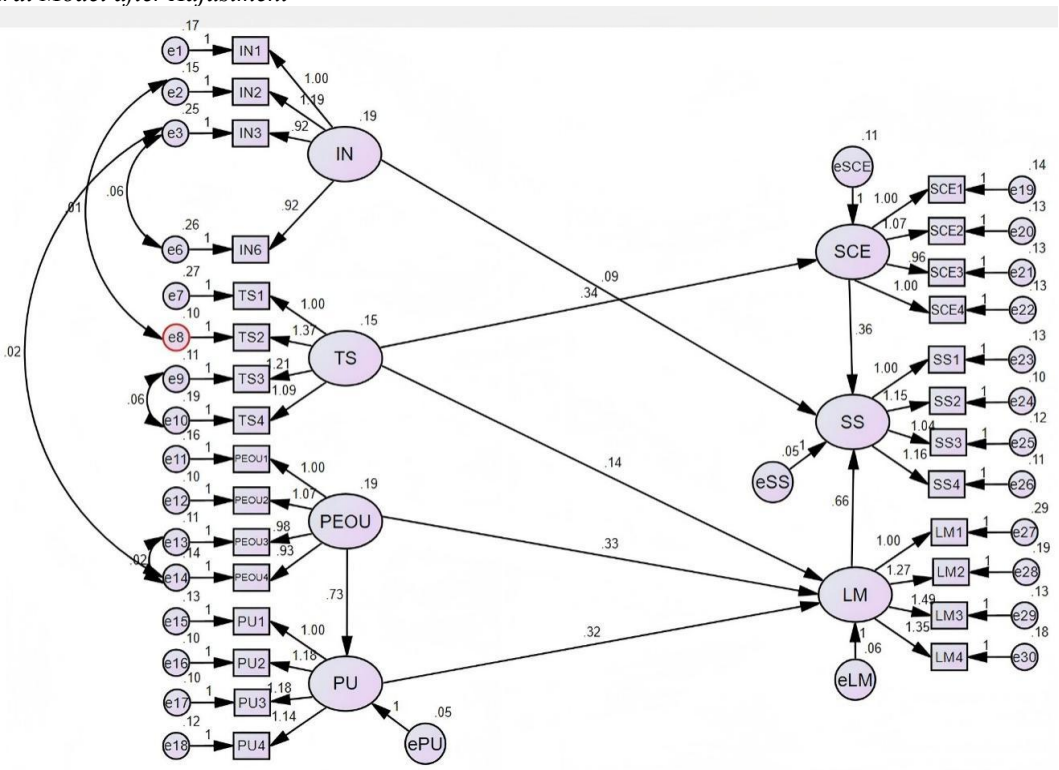
Goodness of Fit for Structural Equation Model (SEM)

Fit Index	Acceptable Values	Statistical Values
CMIN/DF	<5.00(Al-Mamary & Shamsuddin, 2015)	1313.472/337 or 3.898
GFI	≥0.85(Sica & Ghisi, 2007)	0.850
AGFI	≥0.80(Sica & Ghisi, 2007)	0.819
NFI	≥0.80(Wu & Wang, 2006)	0.837
CFI	≥0.80(Bentler, 1990)	0.873
TLI	≥0.80(Sharma et al., 2005)	0.858
RMSEA	<0.08(Pedroso et al., 2016)	0.076

Source: Created by the author

Figure 3

Structural Model after Adjustment



Note: Created by the author

Research Hypothesis Testing Result

This study conducted significance tests on 8 preset research hypotheses using standardized path coefficients, standard errors, and t-values. The test results are presented in Table 6 and Figure 4, and all hypotheses were supported at the significance level of $p<0.05$.

Among the paths directly influencing SS, LM exerted the strongest impact (β=0.663, t=9.717*), followed by SCE(β=0.364, t=7.603*); while IN had a relatively weak impact (β=0.110, t=2.653, p=0.008). In addition, among the paths affecting LM, PEOU had the strongest influence (β=0.396, t=4.170*), followed by PU(β=0.341, t=3.679*); and TS had a relatively weak impact (β=0.149, t=3.452*). TS had a significant effect on SCE(β=0.370, t=6.216*) with high significance. PEOU had the most prominent impact on PU(β=0.820, t=13.374*), which was the path with the strongest impact in this hypothesis test.

Table 7

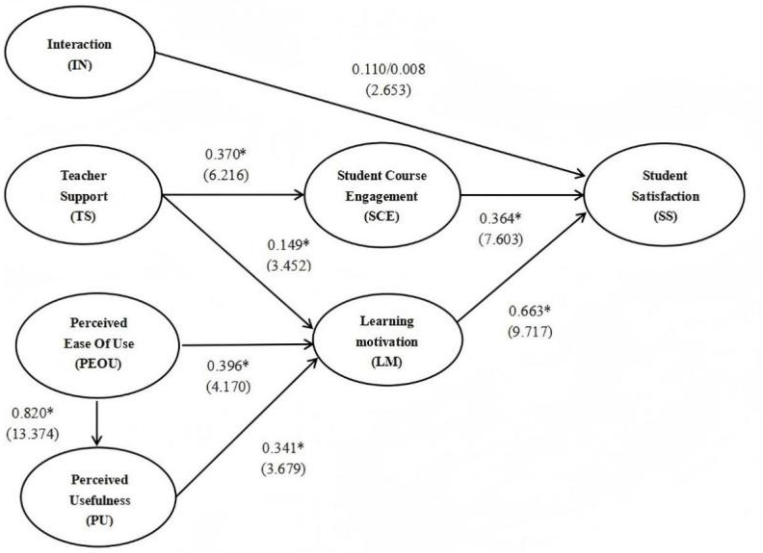
Hypothesis Result of the Structural Model

Hypotheses	Paths	Standardized coefficient (β)	S.E.	t-value	Result
H1	SS<---IN	0.110	0.034	2.653/0.008	Supported
H2	SCE<---TS	0.370	0.055	6.216*	Supported
H3	LM<---TS	0.149	0.040	3.452*	Supported
H4:	LM<---PEOU	0.396	0.079	4.170*	Supported
H5	LM<---PU	0.341	0.086	3.679*	Supported
H6	PU<---PEOU	0.820	0.055	13.374*	Supported
H7	SS<---SCE	0.364	0.048	7.603*	Supported
H8	SS<---LM	0.663	0.068	9.717*	Supported

Note: *p<0.05
Source: Created by the author

Figure 4

The Results of Structural Model



Note: Created by the author

Specific data is presented in Table 6 and Figure 4. H1 verified a significant positive im pact of IN on SS with a standardized path coefficient of 0.110, indicating that improved IN can enhance SS in blended learning (Suryanto et al., 2024). H2 showed a significant positive impa ct of TS on SCE with a standardized path coefficient of 0.370, which can reduce students' lear ning concerns, enhance their confidence, and promote their active participation in course learn ing (He et al., 2024). H3 confirmed a significant positive impact of TS on LM with a standardi zed path coefficient of 0.149; though its impact is weak, it can still stimulate students' internal motivation for active learning. H4 and H5 respectively verified the significant positive impacts of PEOU and PU on LM with standardized path coefficients of 0.396 and 0.341, and PEOU h ad a stronger impact: PEOU determines the operational convenience of the mode; the more co nvenient the operation, the stronger students' LM; the higher the PU, the stronger students' will ingness to learn actively (Huang, 2021). H6 verified a significant positive impact of PEOU on PU with a standardized path coefficient of 0.820, which is the path with the strongest impact e ffect among all hypotheses, indicating that students' perception of operational convenience wil l significantly improve their judgment on the practical value of the mode (Huang, 2021). H7 a nd H8 revealed that both SCE and LM have significant positive impacts on SS with standardiz ed path coefficients of 0.364 and 0.663, and LM had a slightly stronger impact: the higher the course engagement, the more fulfilling the students' learning experience and the higher their sa tisfaction (He et al., 2024); the stronger the LM, the more actively students can engage in learn ing, achieve ideal results, and further improve their learning satisfaction (Suson, 2024).

Table 8

Direct, Indirect, and Total Effects of Relationships

Independent Variables	Dependent Variables											
	SCE				LM				SS			
	DE	IE	TE	R2	DE	IE	TE	R2	DE	IE	TE	R2
IN	-	-	-	.137	-	-	-	0.516	.110	-	.110	0.611
TS	.370	-	.370		.149	-	.149		-	.233	.233	
PEOU	-	-	-		.396	.280	.676		-	.448	.448	
PU	-	-	-		.341	-	.341		-	.226	.226	
SCE	-	-	-		-	-	-		.364	-	.364	
LM	-	-	-		-	-	-		.663	-	.663	

Source: Created by the author

This study used AMOS software to construct a structural equation model, calculating t he direct, indirect, and total effects among latent variables. The model fitting effect was tested by R^2, with all dependent variables' R^2 values meeting the acceptable standard (≥ 0.1) (Chen, 2 025), and all results are shown in Table 7. Specifically, SCE's R^2=0.137 (13.7% variation expl ained), LM's R^2=0.516 (51.6% variation explained), and SS's R^2=0.611 (61.1% variation expl ained), indicating good overall model fit. Regarding variable effects: IN had a direct effect of 0.110 on SS (no indirect effect); TS directly affected SCE (0.370) and LM (0.149) (no indirect

effects) and indirectly affected SS (0.233); PEOU (direct: 0.396, indirect: 0.280, total: 0.676) a nd PU (direct: 0.341, no indirect effect) mainly acted on LM, with indirect effects on SS of 0.4 48 and 0.226 respectively; SCE (0.364) and LM (0.663) had direct positive effects on SS (no i ndirect effects).

Conclusions and Recommendations

Conclusion

This study used CFA to test the validity and reliability of the conceptual model, confirming that the measurement model had good fit, convergent validity, and discriminant validity; SEM was employed to analyze the causal relationships between various influencing factors and SS, clarifying their impact paths and intensities. The core research conclusions are as follows:

First, under the blended learning mode, interactivity had a significant positive impact on SS with practical courses (Suryanto et al., 2024). Although its impact on dance majors' satisfaction was relatively weak, it still verified that multi-dimensional IN (student-content, student-teacher, student-student) is the foundation for ensuring the effect of blended learning and improving SS with dance practical courses. Second, TS had a significant positive dual impact on both SCE and LM (He et al., 2024), providing instrumental and emotional support for students' learning. Third, as core constructs of the Technology Acceptance Model (TAM), both PEOU and PU had significant positive impacts on LM (Huang, 2021), and the positive effect of PEOU on PUwas the most prominent (Davis, 1989), which is consistent with the learning needs of dance majors. Fourth, SCE and LM were the core factors influencing satisfaction, among which LM had the strongest impact, which is crucial for optimizing learning effects.

In summary, this study achieved its expected objectives. Its influence mechanism is consistent with the characteristics of the dance discipline, and the action logic of each variable has been clarified, providing solid empirical support for the subsequent optimization of teaching practice.

Recommendation

Based on the above research conclusions, combined with the characteristics of blended learning for dance majors and the needs of educational digitalization, the following optimization recommendations are proposed for each key influencing factor, providing operable references for universities to improve SS with blended learning in practical dance courses and enhance teaching quality, as well as useful enlightenment for other art practical majors.

First, strengthen teacher training to improve their multi-dimensional support capabilities in blended learning (Federici & Skaalvik, 2014), enhance their emotional support and instrumental guidance capabilities, conduct digital teaching skill training, and help teachers

achieve the integration of online and offline teaching. Second, optimize curriculum design to improve students' course engagement and the quality of multi-dimensional interaction (Croxton, 2014), design online and offline interactive tasks based on the characteristics of practical dance courses, establish a linkage mechanism of "online learning - offline assessment", and stimulate students' enthusiasm for participation. Third, focus on stimulating LM to strengthen students' initiative in blended learning (Ryan & Deci, 2000), design hierarchical learning tasks to enhance intrinsic motivation, supplemented by external incentives, guide students to clarify the value of blended learning, and improve their learning consciousness. Fourth, establish a feedback mechanism to realize the continuous optimization of blended learning quality (Stanislaus, 2022), regularly conduct SS surveys, establish a normalized teacher-student communication mechanism, and optimize teaching design and platform construction based on feedback.

As a core component of art education, dance education needs to adapt to the trend of educational digitalization (You, 2022). Taking teachers and students as the main body and focusing on key influencing factors to optimize blended learning can effectively improve teaching quality, providing an empirical reference for the reform of blended teaching for dance majors and similar art majors in universities.

Limitation and Further Study

Due to the constraints of research conditions and scope, this study has limitations: the sample is only dance majors from two universities in Liaoning Province, excluding similar universities inside and outside the province, with the generalizability of the data remaining unclear. It fails to fully consider other potential influencing factors of SS under blended learning. The research objects are only college students, excluding teachers or administrators, and only quantitative research is adopted. Future research can expand the sample to different regions, clarify data sustainability, explore potential constructs, extend research objects to teachers and administrators, and supplement qualitative research to improve conclusions.

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