Effectiveness of Online Dance Teaching in College Dance Majors: Case of Jinjiang College of Sichuan University

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Abstract

Online is a popular media or pedagogical approach in schools these days, and dancing courses are no exception. Empirical research about the perceptions of students towards online dancing classes is rare. As a result, the goal of this study was to develop a model that explains students' continuing support for online dance classes: based on the three stages of learning (pre–class preparation, in–class learning, and post–class revision) as a predictive base for student satisfaction, following the theory of planned behavior model. The comparative and parallel plots demonstrate considerable changes in perceptions between online and traditional dance learning phases, which have significant consequences. Furthermore, to confirm the suggested model guided by the theory of planned behavior, this work used structural equation modeling (SEM) analysis. Specifically, this study discovered that the quality of online dancing learning is the weakest link during the learning stage, after–class revisions and feedback have received favorable comparative responses compared to traditional online dancing learning, which has less revision demand; and the traditional dancing learning mode demonstrates the weakest link in the after–class stage, relating to revision materials provision. Similarly, the traditional learning approach has demonstrated some laxity in terms of pre–class preparation compared to online, which provides more extensive preparation by its very nature. The most significant contributions are twofold, first, satisfaction has been shown to be an important driver in influencing the attitudes, subjective norms, and perceived behavioral control of the students towards the online dance teaching mode, and thus, secondly, this study contributes to the theory of planned behavior from the role of satisfaction. For this study, the theory

of planned behavior culminates in students showing continuing support for online dance teaching, which infers and reflects the effectiveness of the pedagogical interventions.

Keywords: Online dance teaching; Theory of planned behavior; student satisfaction

Introduction

Many universities have attempted to incorporate digital learning into university dance courses. Due to the widespread adoption of online technology in recent years, flipped classrooms (Xuto et al., 2022) and online tactics and education have become popular alternative pedagogical approaches (Hayward et al., 2021). Preliminary research suggests that professional use of flipped classes and online modes can be more satisfying for students in dance classes and are equally capable of developing cognitive and physical requirements (Chao et al., 2021). In order to more effectively assist dancing lessons, technologies also lead the way: Embedded dance teaching control systems based on field–programmable gate array (FPGA) and motion recognizing processing (Wu, 2021), dance semantics from live videos for real–time annotation (Shailesh and Judy, 2022), and modeling motion sensor data for enriching teachers' assessments of dance skills (dos Santos et al., 2022). Nonetheless, studies that look into how students perceive online dancing learning and compare it to traditional learning modes are scarce, prompting the researchers to conduct this study.

Dance classes have always been a complex topic to study. Few references address dance education, and the area is so vast that pinpointing exact needs is difficult (Bronmiller & Dickinson, 1988; Chao et al., 2021). A practical dance class requires students and teachers to integrate their physical, intellectual, and emotional selves (Soot and Viskus, 2014). Accordingly, online classes may present significant challenges: the integrative use of multimodal resources, such as imagery and verbal languages, at the same time (Douglah, 2021).

The fact that online mode may represent a pedagogical challenge is part of what motivates this study. As a result, researchers in the dance discipline regularly exploit exploratory factor analysis (Chao et al., 2021; Cunningham, 2007) and qualitative experimentation (Zhao, 2022) to help them discover new things. Researchers also resolve to technologies for discovery–oriented dance teaching: such as the motion–captured VR system that has shown promise in teaching Chinese Yao dance, and modern technologies can offer synchronicity and the ability to capture real–time motion, which have scientific advantages for exploratory research (Zhao, 2022). However, Zhao (2022) points out

that dance education is a social activity. It is critical to developing a compelling atmosphere that allows other students to watch others dance, debate the dance, and receive guidance, whether online or traditional learning.

Teaching dancing is complex, and in the process of dance teaching, teachers must pay attention to the explanation, decomposition, and demonstration of dance movements. Lin et al. (2019) note that short–term memories of less than three seconds can easily be forgotten, and may also affect teaching effectiveness. Therefore, applying new learning methods and strategies is a challenge that all dance teachers must face (Lin et al., 2019). To address the challenges, dance teachers resolve to use teaching aids such as digital teaching materials in online learning mode, and means that can improve students' autonomous learning ability (Chao, Wu & Tsai, 2021), especially in today's online learning prevalence, which is the focus of research topic in this study.

As more education moves online, and dance teaching is without exception, there are specific online implications, such as difficulties for student collaboration and many, which render a need to revamp systematically education resource management and online technology platforms (Lorenza and Carter, 2021). A significant gap exists in the domain of online dance teaching as to the degree to which the students, by perceiving the benefits relative to the traditional online dancing mode, continue to support the online dancing teaching mode. Continuing support for online dancing teaching mode is a phenomenon sharing loyalty program objective in any marketing campaign, which is known as the effectiveness of a promoting program (Curatman, Suroso and Suliyanto, 2021). Accordingly, this study intends to fill the gap in the extant literature relating to the degree to which the students will continue to support the online teaching mode in dancing classes, represented by loyalty, to signify the effectiveness of online means through comparative evaluation with the traditional online dancing mode.

Compared to the traditional online teaching mode, Professor Tian (2020), from Beijing Normal University, conducted a case study on online dance teaching during the COVID–19 pandemic period, and his results demonstrate numerous advantages, which can become areas of inspiration for this study, for effectiveness realization. Examples of benefits illustrated by Tian (2020) include "turning passive into active, repeating learning, highlighting individuality, emphasizing mastery and achievement, emphasizing sharing, multiple occurrences, complements, interacts, hybrid interaction with offline, easily promoting knowledge update, stimulating desire and curiosity to learn, highlighting the deepening of point–like knowledge points, and face–to–face teaching structure."

The gap this study intends to fill and contribute to the extant literature is presented in the following two research objectives. Through comparison between the online and traditional dance teaching modes in the first research objective, it can explain the state of satisfaction to lay the foundation for the inclusion of the theory of planned behavior to judge the continuing support for online dance teaching. Thus, the title of "effectiveness" is rationalized following effectiveness as inferred by how customers satisfying with the promoting programs and culminating in loyalty state (Curatman et al., 2021; Hanninen & Karjaluoto, 2017).

Research Objectives

In light of the foregoing background, this study sets up the following purpose:

1. The study's first goal is to compare students' perspectives of online dancing and traditional onsite dancing learning modalities by focusing on the pre–class preparation, in–class learning, and post–class revision stages and how they explain the students' satisfaction levels.

2. Second, the research looks at how satisfaction affects the three variables proposed by the theory of planned behavior to explain why people continue to support online dancing lessons (or loyalty to online dance classes).

Literature Review

Dance is "a form of artistic expression of communication that includes both body movement through time and space" (Wang, 2022). "Dance as dialog" is widely acknowledged (Catalano et al., 2021), prompting researchers to search for ways to establish meaningful dialog and learning effectiveness on dancing classes through online mode, which is quite a challenge. Students must pay attention on body and sensory awareness, as well as rhythmically synchronized movements. Laird et al. (2021) demonstrate that, using conscious dance tactics, students can improve their capacity for affect awareness and emotion regulation, as well as increase perceived emotional connectedness and decrease perceived isolation, which can lead to a variety of well–being benefits.

A generalized conceptual approach to learning is used to bridge the gap in the current literature relating to what is required for students to engage in an effective dancing learning process in lessons. A set of resources (human, physical, and financial), preparatory work, or infrastructure, and materials, including teacher facilitation and student learning interactions, must be ready and available during the learning process for learning events to be effective (Naeve, Sicilia & Lytras,

2008). In other words, certain ingredients must be present for dancing learning to take effect, and these ingredients include, for example, a focus on planning a course of learning, a learning environment that supports learning, and procedures that permit efficient learning (Buckler, 1996). For example, Catalano et al. (2021) use case studies to exhibit the role of preparatory (before class) works for dancing classes:

> *We needed to prepare the project participants to make art with their bodies and grasp what choreography meant before we started the dance portion of the session. For a number of reasons, several of the students were nervous about this phase of the program. As a result, we realized we needed to structure the experience for them, so they could begin slowly and participate in dance activities as a complete group to reduce their nervousness, and then progress to more complicated, small group work, choreographing their dance stories collectively.*

The three learning stages that are the empirical focus of this study, namely pre–class, during–class, and post–class, are considered for simplification. For digital or online learning styles, there are no exceptions. Hutain & Michinov (2022) highlight the importance of digital learning environments in the classroom, citing features such as quizzes and beyond (Wang and Tahir, 2020), as well as the ability for students to submit messages or engage in other forms of engagement for effective learning.

Lin, Hsia, and Hwang (2021) show that encouraging pre–class guidance and in–class reflection can effectively assist students' learning performance and increase students' self–efficacy and intrinsic motivation by utilizing an online software system in student facilitation. Many studies have recognized the importance of pre–class activities as elements that enhance student learning. Sun and Xie (2020) demonstrate the significant advantage of pre–class learning habits in impacting students' academic achievement trajectories over time by utilizing 104 undergraduate students from a flipped calculus I course at a big midwestern public institution.

Thus, in the context of online dancing teaching mode, the following three hypotheses lead to support the logic driven by the research objective's intention:

H1. The pre–class preparation stage is a strong predictor of student satisfaction with online dancing instruction.

H2. The stage of learning in class is a significant predictor of student satisfaction with online dancing instruction.

H3. The after-class review stage is a strong predictor of student satisfaction with online dancing instruction.

Although students in dance classes prefer to use interactive technology (Wang, 2022), research on online dancing teaching modes is generally weak. Therefore, hypotheses H1 through H3 give an exploratory basis for a knowledge contribution to the current literature. The conceptual model illustrated in Figure 1 is the result of combining the three hypotheses H1 to H3.

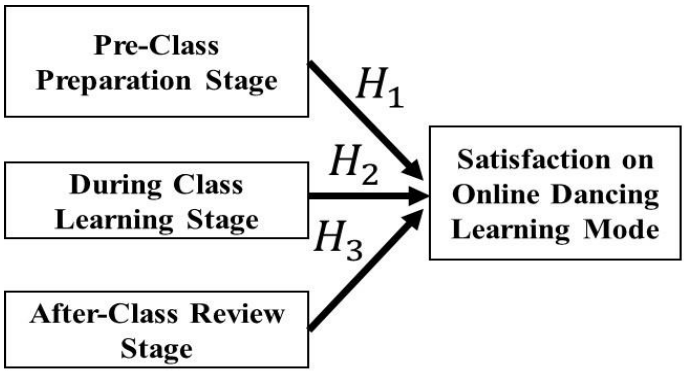

Figure 1. The Theoretical Model for Objective One

As online learning means dancing is in the early stage of acceptance and application in China, theory validation becomes crucial. As noted in An and Thomas (2021), when students can see evidence of what contributes to their dancing learning process, they will form a belief system that is conducive to pushing forward a new learning design. Accordingly, this study adopts the theory of planned behavior (TPB) to establish a link from Figure 1 to influence students' continuing support or loyalty to the online dancing learning mode, as shown in Figure 2.

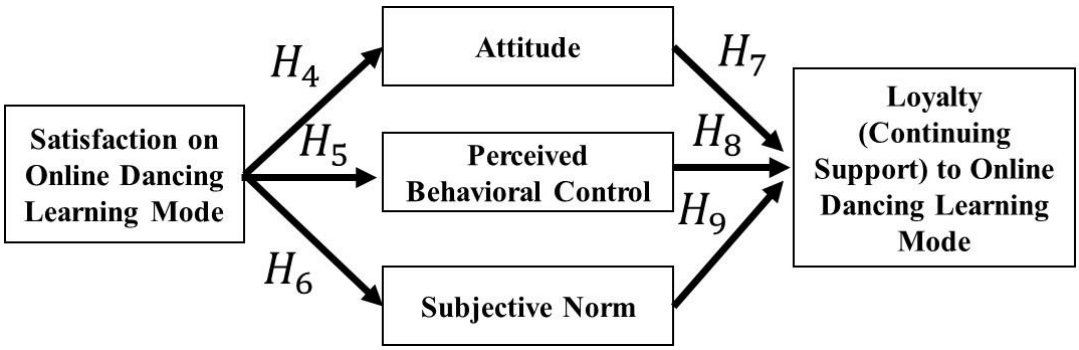

Figure 2. Theory of Planned Behavior Framework for Online Dancing Loyalty (or Continuing Support) (Addressing Objective Two)

The theory of planned behavior is a robust model that explains how a human intention and behaviors are formed (Jose & Sia, 2022): the ability to link the three stages of learning to, first, influence satisfaction on online dancing learning mode, then, to the three behavioral determining factors, namely, attitude, perceived behavioral control, and subjective norm, that explains loyalty or continuing support to online dancing learning mode.

Satisfaction, as shown in Figure 2, predicts attitude (H4), perceived behavioral control (H5), and subjective norm (H6), which, in turn, explains loyalty, as hypotheses H7, H8, and H9 suggest:

H4: Satisfaction is a significant predictor of attitude.

H5: Satisfaction significantly predicts perceived behavioral control.

H6: Satisfaction significantly predicts subjective norm.

H7: Attitude is a significant predictor of online dancing learning mode loyalty (continued support).

H8: Perceived behavioral control is a significant predictor of online dancing learning mode loyalty (continued support).

H9: Subjective norm is a significant predictor of online dancing learning mode loyalty (continued support).

Each variable of the theory of planned behavior has a well–defined meaning and definition in the available literature. According to Cordano & Frieze (2000), the attitude describes the evaluation of online dancing learning based on the students' expectations of the outcomes. The subjective norm depicts the general attitudes of the peers in the dance classes about the online learning mode. Subjective norm is a type of social presence that can influence how students learn in online mode, whether through words of influence or physically (Stewart, 2021). The feeling of ease and acceptance to do the mentioned online dancing learning shows perceived behavioral control (cf. Chan, Chong & Ng, 2022).

Research Methodology

This study underpins a positivistic view of the research, which assumes an objectivistic means to understand the dancing teaching phenomenon. As such, a questionnaire–based survey method is appropriate.

Measures

This research creates measuring items from the ground up for pre–class preparation, in–class learning, and post–class review stages of both online and traditional dance lessons. The dance education teachers were asked to participate in a focus group discussion and gain consensus from five peers. In doing so, the measurement would be more contextually connected with the students' learning experiences, and each question would be easy to respond to. The survey participants must be familiar with the learning context as the survey is exhaustive. Specifically, the pre–class items on online dance teaching capture teacher preparation, learning resources, and software operations. The during–class items on online dance teaching mode include web environment, software operations, the effect of teacher demonstration, environmental and equipment effects, learning anxiety, self–restraint, cognitive engagement, and collective collaboration and interaction. The after–class measurement items for online teaching mode include teachers' after–school arrangement, consolidation and review, and effort for more subjective initiatives of the students. The measurement design for the portion of the theory of planned behavior is rather simple, for the variables supported using the theory of planned behavior, and there are definitions to follow (Ajzen, 1991; Romero–Colmenares and Reyes–Rodriguez, 2022). The response format uses five–point Likert scale: 1 = strongly disagreed with the statement, 2 = disagree, 3 = neutral, 4 = agreed, and 5 = strongly agreed.

The participants were given a modest token of gift and were informed that the survey is anonymous and that the results only were meant for academic purposes. Participants' privacy is thus fully protected.

Hair et al. (2006) recognize the possibility of a lower–end reliability index for new questionnaire item development, but it should not be less than 0.60. The reliability assessment exceeded the minimum requirements as shown in the findings section.

Sample Size

This study uses equation 1 for sample size decision, which desires a 95% confidence level and ±5% precision. The resulting sample size yields 385, where p and q represent the sample parameter the study can control, namely gender, which is aimed on equal basis:

$$n = \frac{Z^2 pq}{e^2} = \frac{(1.96)^2(0.5)(0.5)}{(0.05)^2} = 385 \quad (1)$$

The controlled gender distribution would burden the sampling effort, but it is more representative. Other controllable criteria will be addressed as well because they will give relevant comparisons, allowing teachers to use the proposed theoretical principles outlined in the literature review section. Personal information such as ethnicity (Han and minority), current year at university, dancing lesson years, online learning location, and online learning modes are uncontrolled elements.

Sampling Procedure

An online questionnaire was used to collect data from undergraduate dance education students currently enrolled in dance classes at JinJiang College of Sichuan. The students are reliable informants for this study since they are familiar with dance education's approaches and standards. With the permission of the university administration, a letter of instruction noting ethical transparency and guarantee of autonomy was circulated to the students' personal emails. The instruction clearly notes that participation is voluntary. The questionnaires were designed in a way the students can answer online, and this provides a convenient organization of the data for further statistical analysis. The survey was conducted in May 2022.

Data Analysis

To address the research objectives, the researchers subjected the data acquired from survey participants to validity and reliability tests, followed by comparative and parallel plots analysis, and additional inferential statistical analysis such as structural equation modeling (SEM) analysis. The exploratory factor analysis (EFA) and correlations provide the assessments for convergent and discriminant validity: measurement item loading more than 0.5, the total variance explained (TVE) for each construct more than 0.50, and the square root of TVE more than the cross–correlations (Hair et al., 2006). This study uses the basic regression approach and structural equation modeling (SEM) analysis to meet the second research objective. The significance of the path coefficients, combined with the R–squared for the associated dependent variable, offers support for the postulated assumptions.

Research Results

A total of 478 valid responses were returned for statistical analysis. The participant profile is given in ANOVA and t–test table in the sequel, which has 41.4% of male, 58.6% female, 93.3% of han as the majority, and 6.7% minority. Majority of the responded students enrolled in year 1 for 41%, followed by 39.7% in year 2, 7.5% in year 3, and 11.7% in year 4. In terms of dancing lesson

years, students with less than 1 year at 19.7%, 1–3 years for 36%, 4–6 years for 39.3%, and the remaining 5% for students with more than 6 years of lessons. Quite on the equaled basis, the students use Tencent 46.4%, and Ding Ding 53.6%. The modes of dance teaching are live mode for 86.6%, live+record for 6.7%, and both at 6.7%.

The analysis supports the hypothesis that the quality of pre–class preparation, during–class learning, and after–class revision stages are essential. Their qualities lead to satisfaction and can significantly influence the attitude of both the students and their peers, and enable them to gain the confidence that they can perfect the dancing lessons. Thus, the theory of planned behavior provides a valuable framework for understanding online dancing classes and student motivation.

Validity and Reliability Assessments

This study evaluates the variables' validity and reliability (expressed by Cronbach's Alpha) before inferential statistical analysis. Quality measurements are apparent: evidenced by the square root of total variance explained (TVE) in diagonal terms greater than the cross–correlation coefficients in Table 1. As a result, the study has discriminant validity. In addition, TVE greater than 0.50 and factor loading of each item greater than 0.50 (not shown) indicates convergent validity. Reliability is evidenced by Cronbach's Alpha (α) greater than 0.6–0.7. (Hair et al., 2006). The values for KMO (Kaiser–Meyer–Olkin) and TVE are determined using exploratory factor analysis (Total Variance Explained). The following formula (Dodge, 2008; Gonick, 1993; Klein, 2013; Vogt, 2005) computes the KMO:

$$KMO_j = \frac{\sum_{i \neq j} r_{ij}^2}{\sum_{i \neq j} r_{ij}^2 + \sum_{i \neq j} u_{ij}} \qquad (2)$$

Where $[\mathbf{r_{ij}}]$ is the correlation matrix, and $[\mathbf{u_{ij}}]$ is the partial correlation matrix.

The KMO threshold is 0.8, which indicates how well the collected data is suited to factor analysis: Nevertheless, 0.6 to less than 0.8 is regarded as mediocre and middling. Overall, the exploratory factor analysis sampling adequacy is maintained.

Table 1. Validity and Reliability Assessments

	Alpha	TVE	KMO	OB	OD	OA	TB	TD	TA	S	PBC	A	SN	L
OB	0.67	0.64	0.724	0.8										
OD	0.895	0.648	0.805	-.474**	0.805									
OA	0.717	0.563	0.724	.257**	.282**	0.7503								
TB	0.68	0.617	0.594		.312**	.343**	0.7855							
TD	0.912	0.652	0.904	-.354**	.641**	.215**	.638**	0.8075						
TA	0.722	0.58	0.718		-0.106	-0.054	-.512**	-.257**	0.7616					
S	0.804	0.689	0.806	.347**	-.570**	0.013	-0.074	-.520**	-.231**	0.83				
PBC	0.815	0.73	0.691	.448**	-.632**	-0.008	-0.067	-.533**	-.169**	.822**	0.854			
A	0.788	0.702	0.7	.453**	-.714**	-0.109	-.134*	-.578**	-.134*	.778**	.759**	0.838		
SN	0.853	0.773	0.733	.371**	-.591**	0.043	0.058	-.375**	-.346**	.738**	.730**	.761**	0.879	
L	0.845	0.76	0.725	.164*	-.542**	-0.123	0.078	-.271**	-.414**	.653**	.662**	.605**	.746**	1
Thresh	0.6-0.7	0.5	0.6											

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Comparing Traditional and Online Learning Modes

The comparisons between the traditional dancing learning and online dancing learning in three stages, namely before learning, during learning, and after learning, are shown in Figure 3, 5 and 7. The measurement scales are Likert five scales: 1 = strongly disagreed, 2 = disagreed, 3 = neutral, 4 = agreed, and 5 = strongly agreed.

The scales represent how students rate the quality of preparation and acceptance at various stages:

> *such as before learning, when students are asked about the formation of a learning group, preparatory materials such as video, pre-arranged activities, and software required for online learning, in order to provide students with the necessary resources and learning facilitation to perfect dancing learning in both online and traditional modes.*

The overall scales of student perceptions below four imply a relatively poor quality to match the student's expectations.

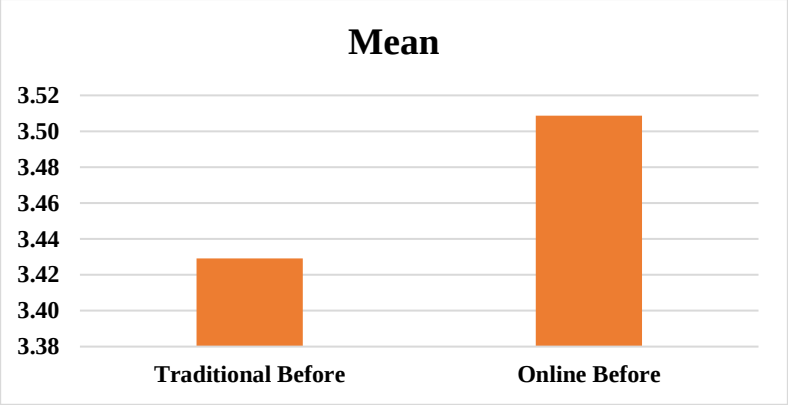

Figure 3. Comparison of Perceptions between Traditional Learning and Online Learning at Before Learning Stage

Online learning in dance classes requires additional preparations in terms of both hardware and software and learning materials, as the students perceive, as seen in Figure 3 and the parallel plots in Figure 4.

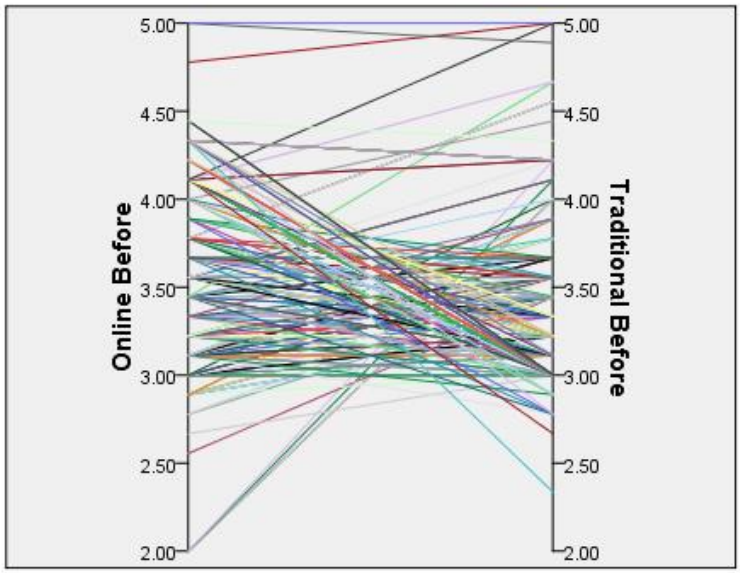

Figure 4. The Parallel Plots Between Online Before and Traditional Before Classes

Before the statistical analysis, the negatively phrased items for the during–stage in the online learning mode, and the traditional after–learning revision is reversed in the response scale (1 → 5, 2 → 4, 3 maintained, 4 → 2, 5 → 1), for instance: internet interruption and online mode operations complexity; teachers not providing model videos and revision materials to solidify the learning foundation. The reversed scales turn all perceptual levels into positive and make comparisons relatively simple.

Both Figure 5 and Figure 6 (parallel plot) show a significant agreement that the quality level during-learning stage of traditional mode is higher than what the online mode can provide. In Figure 6, the students who provide a higher score for during-learning phase at traditional mode state mostly lower results for online, though some pupils believe otherwise.

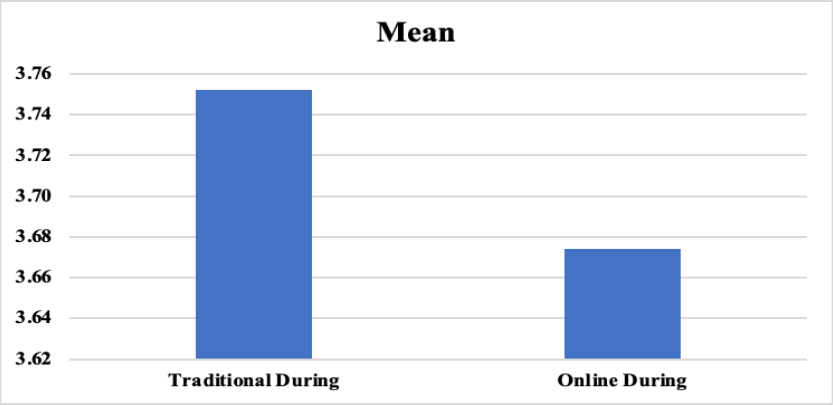

Figure 5. Comparison of Perceptions between Traditional Learning and Online Learning at During Learning Stage

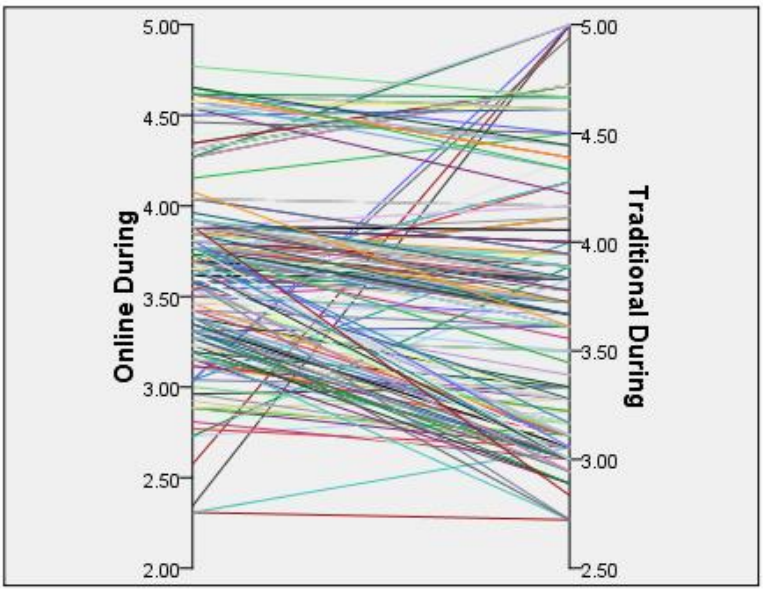

Figure 6. The Parallel Plots Between Online During and Traditional During Classes

Compared to after classes in traditional mode, as shown in Figure 7, the online-after classes appear to have advantages from the students' perspective in terms of more materials provided for revision. Teachers provide more opportunities to compensate for the lack of face-to-face learning for exchanging ideas, allowing students to improve their mastery of dancing lessons and knowledge. However, the parallel plots in Figure 8 suggest that such an average outlook should be approached

with caution since there are two groups of pupils, one agreeing with the trend in Figure 7 and also an extreme opposite in Figure 8.

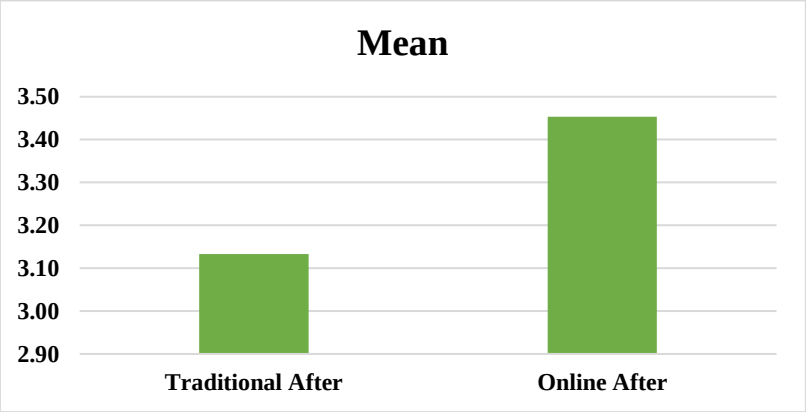

Figure 7. Comparison of Perceptions between Traditional Learning and Online Learning at After Learning Stage

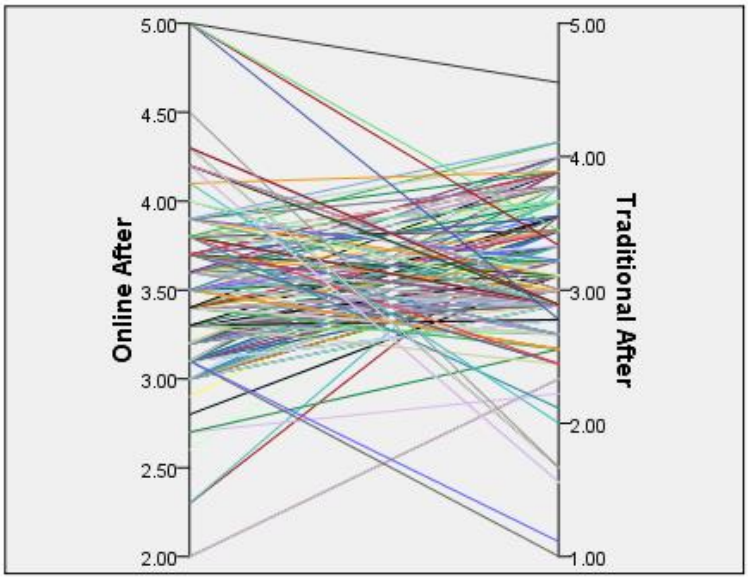

Figure 8. The Parallel Plots Between Online After and Traditional After Classes

Hypotheses Supports

The result of the structural equation model (SEM) paths supports how well fit the theory of planned behavior to explain students satisfying the online dancing classes can significantly influence attitude of the student, their peers (in terms of subjective norm), and forms confidence perceptions, leading to continuing support (loyalty). A 59 per cents of variance explained for loyalty indicates a strong model (Hair et al., 2006).

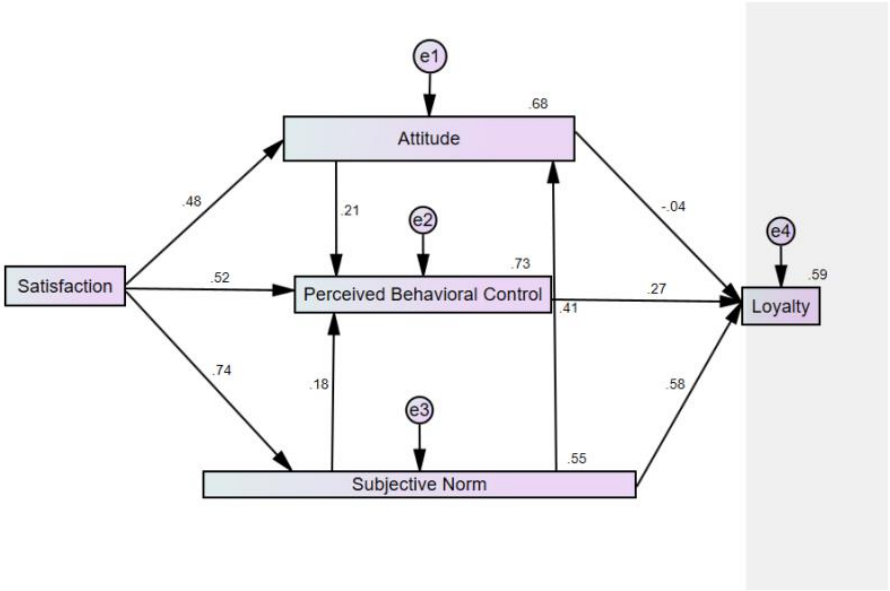

Figure 9. SEM Path Model

The robustness of the model, which supports Hypotheses H4 to H9, are reflected in the SEM statistics as follows: Chi–square 3.053, P = 0.081 (> 0.05 Sig. value, meaning good model fit), and incremental fit indexes at NFI = 0.997, RFI = 0.953, IFI = 0.998, TLI = 0.968, and CFI = 0.998, and absolute fit error RMSEA = 0.093, slightly over 0.07 (Hair et al., 2006).

By including the three online dance teaching perceptions of the students, namely before, during, and after–class perceptions, Figure 10 indicates a significant negative relationship between the during–class online mode perceptions, as a predictor, and satisfaction, at a regression path weight of –0.63. Thus, H2 is supported, but bearing the fact that the during–class performance is a weaker link. Figure 10 shows no significant support for H1, with beta = 0 for before–class performance perceptions, and shows significant positive support for H3, with beta = 0.19 for after–class performance perception. The after–class performance indicates that the teacher will, in general, provide more demonstration sample videos for the students to consolidate and practice after class, provide practices and request students to return the review video, and teacher pointing out student's problems by reviewing the submitted videos. The above is relating to teachers' after–school arrangement. There are also perceptions of students improving their learning ability, and taking more subjective initiatives for the online teaching mode.

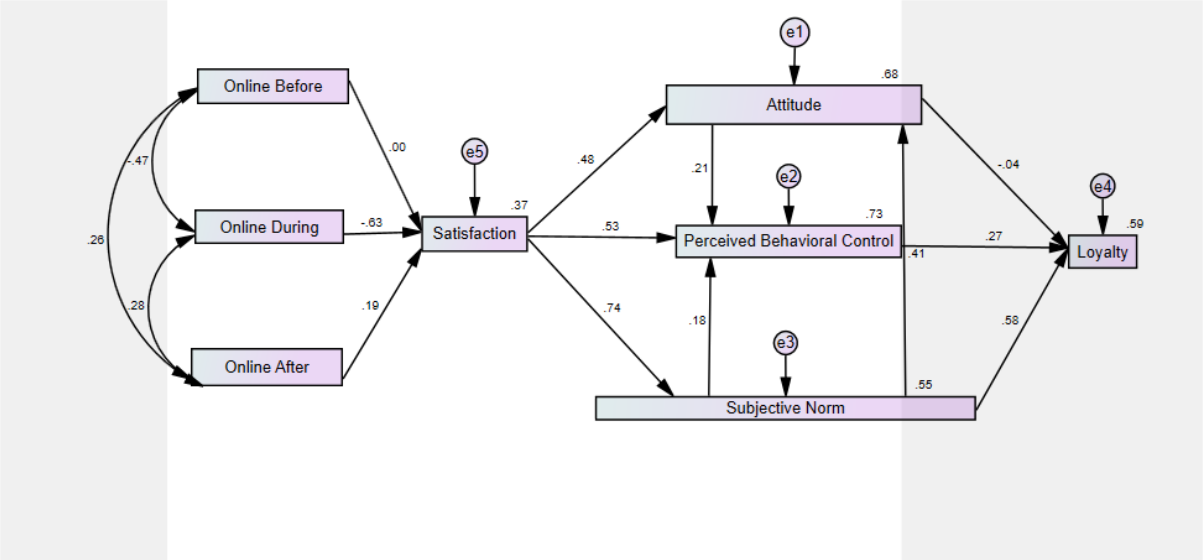

Figure 10. The SEM Structure with Pre–Class, During–Class, and After–Class Perceptions of the Students and the Drivers for Satisfaction

The ANOVA (Analysis of Variance) and T–Tests in Table 2 reveal some areas of statistical significance:

- Male students have more vital positive impressions of before, during, and after online classes than female students, except after–class revision.
- Students from minority ethnic groups have much more favorable evaluations of traditions before and during.
- Both online and traditional dance classes have more positive impressions as the university year progresses, but the general pattern of linkage is not always evident.
- The least satisfied home location has the least potential for online dancing class control and attitude.
- Students that use the Ding–Ding online platform are happier and more accepting.
- Students believe that employing video recording alone is ineffective in the learning process and that combining video recording and live is, therefore, more beneficial.

Table 2 ANOVA and T-Test Comparisons

		Qty	%	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11
Gender	**Male**	198	41.4	3.54	3.68	3.42	3.56	3.84	2.99	2.50	2.65	2.56	2.64	2.71
	Female	280	58.6	3.48	3.66	3.47	3.33	3.68	3.23	2.41	2.60	2.39	2.38	2.66
	t			0.87	0.27	-0.75	3.86	2.17	-3.66	1.20	0.47	1.54	2.27	0.46
	Sig. (2-Tailed)			0.38	0.78	0.45	0.00	0.03	0.00	0.23	0.63	0.12	0.04	0.64
Ethnicity	**Han**	446	93.3	3.51	3.66	3.45	3.41	3.73	3.14	2.44	2.61	2.46	2.47	2.66
	Minority	32	6.7	3.50	3.81	3.49	3.63	4.00	2.93	2.59	2.73	2.45	2.70	2.97
	t			0.07	-1.33	-0.39	-1.89	-1.91	1.62	-0.97	-0.51	0.04	-1.01	-1.40
	Sig. (2-Tailed)			0.94	0.18	0.69	0.05	0.05	0.11	0.33	0.61	0.97	0.31	0.16
University	**Year 1**	196	41	3.74	3.37	3.34	3.12	3.26	3.31	2.67	3.05	2.90	2.77	2.93
	Year 2	190	39.7	3.27	3.97	3.54	3.57	4.06	3.05	2.19	2.21	2.04	2.15	2.43
	Year 3	36	7.5	3.15	3.79	3.28	3.59	3.93	2.93	2.57	2.24	2.46	2.37	2.35
	Year 4	36	11.7	3.70	3.60	3.63	3.87	4.26	2.85	2.43	2.75	2.34	2.76	2.86
	F			19.80	43.89	6.38	39.77	101.90	9.20	12.58	20.93	20.86	10.14	7.24
	Sig.			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dance Learning Experience	< 1 Year	94	19.7	3.62	3.55	3.35	3.25	3.56	3.31	2.51	2.81	2.60	2.46	2.72
	1-3 Year	172	36	3.48	3.77	3.43	3.45	3.82	3.16	2.31	2.44	2.34	2.37	2.66
	4-6 Year	188	39.3	3.46	3.66	3.51	3.43	3.71	3.08	2.50	2.65	2.47	2.54	2.66
	6 Year Above	24	5	3.62	3.60	3.58	3.94	4.33	2.70	2.87	3.00	2.81	3.17	2.97
	F			1.19	2.79	1.93	8.01	7.78	5.28	4.01	2.87	1.70	3.17	0.51
	Sig.			0.31	0.04	0.13	0.00	0.00	0.00	0.01	0.04	0.17	0.03	0.68
Online Location	Classroom	366	76.6	3.55	3.62	3.45	3.31	3.63	3.20	2.49	2.70	2.55	2.53	2.72
	Home	112	23.4	3.37	3.84	3.47	3.80	4.15	2.91	2.31	2.36	2.20	2.38	2.58
	Bedroom			3.51	3.67	3.45	3.43	3.75	3.13	2.45	2.62	2.47	2.50	2.69
	F			5.25	9.70	0.11	60.21	47.30	14.82	3.89	6.83	7.63	1.25	1.15
	Sig.			0.02	0.00	0.74	0.00	0.00	0.00	0.05	0.01	0.01	0.26	0.29
Online Platform	Tencent	222	46.4	3.23	3.93	3.50	3.48	4.01	3.06	2.20	2.26	2.02	2.17	2.54
	Ding Ding	256	53.6	3.75	3.45	3.42	3.39	3.53	3.20	2.66	2.93	2.86	2.77	2.82
	Zoom			3.51	3.67	3.45	3.43	3.75	3.13	2.45	2.62	2.47	2.50	2.69
	Other			3.93	3.50	3.48	4.01	3.06	2.20	2.26	2.02	2.17	2.54	0.00
	F			72.39	91.88	2.11	2.20	55.75	4.06	42.21	42.33	77.98	31.59	6.21
	Sig.			0.00	0.00	0.15	0.14	0.00	0.05	0.00	0.00	0.00	0.00	0.01
Online Mode	Live	414	86.6	3.40	3.67	3.40	3.40	3.74	3.14	2.46	2.59	2.46	2.48	2.73
	Video Record	32	6.7	4.22	3.96	3.96	4.28	4.58	2.46	2.07	2.35	2.08	2.50	2.50
	Both	32	6.7	4.17	3.43	3.58	3.00	3.03	3.67	2.65	3.27	2.98	2.67	2.33
	F			40.83	5.56	14.45	49.15	44.43	27.39	4.30	5.70	4.75	0.33	1.94
	Sig.			0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.72	0.15

Note: V1 = Online before. V2 = Online during. V3 = Online after. V4 = Traditional before. V5 = Traditional during. V6 = Traditional after. V7 = Satisfaction. V8 = Perceived behavioral control. V9 = Attitude. V10 = Subjective norm. V11 = Loyalty.

Discussion

This study investigates the antecedents of continuing support of online dancing mode using Ajzen's (1991) theory of planned behavior (TPB).

Using both simple regression and structural equation model (SEM) analyses, this study validates the robust utility of the theory of planned behavior, including the three predictors to student satisfaction; thus, all hypotheses supported, with some detailed phenomena extracted from the comparison and parallel plots.

Based on the comparison and parallel plots, this study discovers that the quality of online dancing learning is the weakest link during the learning stage. Without improving the online process, it will lead to lower overall quality perception and satisfaction. Stewart (2021) highlights the essential impact of social presence in influencing students' online writing, even though it is never a straightforward issue. Because students are under the impression that they would not be able to get recognized in the necessary dancing moves and practices, being online throughout the performance is a significant challenge.

Furthermore, in line with Cheng and Li (2020) on continuous feedback as a valuable tool for online TESOL classes, this study finds that after-class revisions and feedback have received favorable comparative responses compared to traditional online dancing learning has less revision demand. In reality, as observed by Launay et al. (2021), not only does online learning require the use of revision resources, but the traditional learning model is also in high demand. In this study, the traditional dancing learning mode demonstrates the weakest link in the after-class stage, relating to revision materials provision. Similarly, the traditional learning approach has demonstrated some laxity in terms of pre-class preparations compared to online, which provides more extensive preparation by its very nature.

Conclusion

The three stages of online dancing learning, namely preparation, during, and after-class revision, are linked to impact the determining elements as recommended in the theory of planned behavior. To the authors' knowledge, no other publications in the existing literature have addressed and presented the use of the theory of planned behaviors to analyze the students' loyalty perceptions or continued support for the online dance mode. This study cleverly employs student

satisfaction as a predictor of the three stages of online learning activities that students and teachers must plan.

Implications

Both theoretical and practical consequences are presented.

Objective one provides numerous important implications. In the domain of pre–class preparation, the traditional learning model has fallen short when compared to online dance learning, which by its very nature the online mode provides more detailed preparation. As a result, teachers must strengthen their traditional learning mode preparation efforts to give a better impression to the students of the efforts the teachers exerted. In addition, in traditional dance learning, teachers should pay more attention to the supplement and expansion of learning resources before and after classes, and support students with the after–class review. In the domain of online dance learning, teachers should pay more attention to students' immediate feedback and strengthen their skills in applying and using technology platforms when teaching online dance.

Furthermore, as this study demonstrates, online dancing learning poses a significant difficulty since students are frightened of missing out on the types of coaching required to develop dancing skills. Thus, online teachers should be more systematic in their planning, teaching execution stage, and post–teaching evaluation and continuous improvements, so as to reduce the uncertainties and risks that may be faced by the students, which is similar to uncertainty reduction strategies for loyalty (Shin, Lee, and Yang, 2017). Factors such as the affective (emotional) condition of the students, such as satisfaction in this study, which has significant weight on students' continuing support, should be emphasized, which shares the finding of Hancox et al. (2017).

In short, the findings of this study provide useful data references for improving online dance learning. The next step is to discuss the weak link of the online dance learning model – the in–class learning stage, and how to solve problems based on further research.

Body of Knowledge Implication

This study adds to the body of knowledge relating to the application of the theory of planned behavior in the educational field. The three domains of the learning or teaching journey provide a longitudinal breakdown of the drivers of locus of control (Tseng et al., 2022) to first influence the satisfaction of the students. Satisfaction is rarely discussed in the theory of planned behavior applications, no matter in education or consumer behavior fields, and this study fills the gap by identifying it as a significant affection or emotion base for the theory of planned behavior. The role

of satisfaction in the theory of planned behavior, is nevertheless, not rare from the Buddhist perspective of human psychology (Tan, 2022; Tan et al., 2022): That is, with the stimulation and encountered experiences, feeling arises, which in turn, influences perceptions, and thus induces the formation of activities such as loyalty, and this is how consciousness is further reinforced. The Buddhist cannons recognize these as the five aggregates of clinging (Tan, 2010, 2022; Tan et al., 2022). Accordingly, the proposed framework for online dance teaching interventions, as shown in Figure 11, is a theory–based intervention, that takes roots in learning and teaching journeys' intervention. The satisfaction and the ability to strongly influence attitude, subjective norm, and perceived behavioral control of the students towards online dance teaching provide a theory–based approach to infer effectiveness of interventions, sharing effectiveness concept in marketing in Curatman et al. (2021).

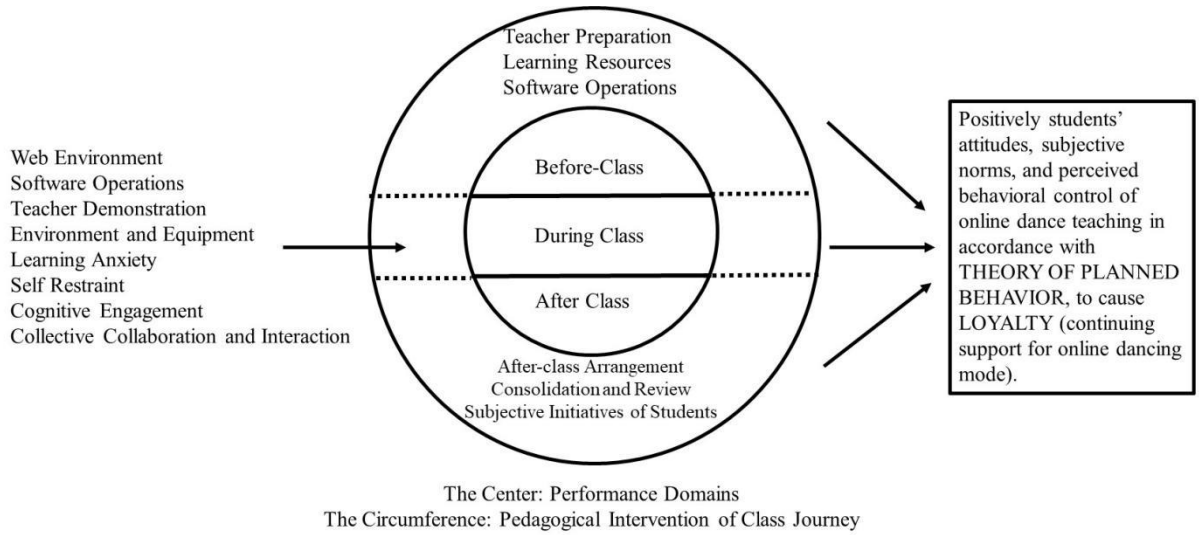

Figure 11. The Proposed Framework for Online Dance Teaching Interventions

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