

# Investigating Psychological Motivations to Use Online Physical Learning: A Theoretical Study in the Dance Education

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**Introduction:** Online education has become increasingly popular during the COVID-19 pandemic. Despite its potential for breaking down environmental, geographic, time, and space constraints, many scholars have found that online education still has much room for development. Online physical education, and especially dance education, face challenges due to the high demands of physical interactions and safety requirements. However, only a few scholars have explored the psychological motivations in the context of higher education dance students. Therefore, this study enriches this stream of literature by investigating the motivations of students' intention to use online dance learning.

**Methods:** Structural equation modeling is performed in this study. Empirical data were collected from China to examine the relationship between constructs. This study uses self-determination theory to build a theoretical framework and deeply explore the psychological factors that affect students' attitudes and behavior towards online dance learning. Based on self-determination theory and perceived value theory, the study investigates the interrelationships among the seven latent structures: perceived autonomy on flexibility, perceived online class arrangement competence, perceived usage competence, perceived relatedness with instructors, attitudes, perceived value, and intention to use online dance education.

**Results:** The structural equation modelling results indicate that perceived autonomy, perceived competence, and perceived relatedness have a positive influence on attitudes, and attitudes have a positive influence on perceived value and the intention to use online dance education. All hypotheses proposed in the theoretical framework are supported by the empirical data analysis.

**Discussion:** This study extends the self-determination theory to the online dance education context, providing a new perspective for understanding students' motivation to use online dance classes. The research results also provide theoretical support and management inspiration for the sustainable development of art and physical higher education, particularly online dance education.

**Keywords:** online learning, physical education, self-determinant theory, psychology research, perceived value, structural equation modelling

## Introduction

The coronavirus pandemic in the last three years has significantly impacted people's lifestyles and society in many ways.<sup>1</sup> As a result of technological advancements, people have become accustomed to remote working, online conferences, and contactless shopping. The education industry has also been affected, with more schools opening online classes to minimize physical contacts. The shift from physical to online classes has numerous advantages, including flexibility in time and place, increased effectiveness of acquiring knowledge, removal of barriers, streamlined communication, and inspiration for students to develop ideas.<sup>2</sup> Scholars have also suggested that online learning helps deal with shortages of academic staff and enables students to customize their course progress (Arkorkor & Abaidoo, 2015). However, some researchers have found that online learning can be challenging in terms of setting up equipment and providing corrective feedback.<sup>3</sup> Therefore, exploring students' attitudes and satisfaction with online teaching is essential, particularly in the context of the pandemic.

Online dance education has also become increasingly popular among higher education students in the art and physical field. China currently uses several well-known educational platforms in the field of dance education, such as Zoom and

TikTok.<sup>4</sup> However, the rise of online dance teaching is accompanied by both opportunities and challenges, and understanding students' attitudes and intentions is critical for the sustainable development of online dance education.<sup>5</sup> Despite existing studies on students' attitudes toward online education, there is a lack of theory-based empirical research in the field of dance education. As dance education involves physical and artistic interactions between students and teachers, it has its own unique characteristics that should be studied individually.

To fill this research gap, our study aims to design a theory-driven model to explain the psychological factors influencing students' attitudes and intentions to use online dance education platforms. We selected the self-determination theory to explain the three important psychological drivers of the desire to participate in activities: autonomy, competence, and connection. This theory has rarely been used in the field of dance education. Our research question is, "How do the aspects of self-determination theory, autonomy, competence, and connection, influence students' intention to use online dance platforms?"

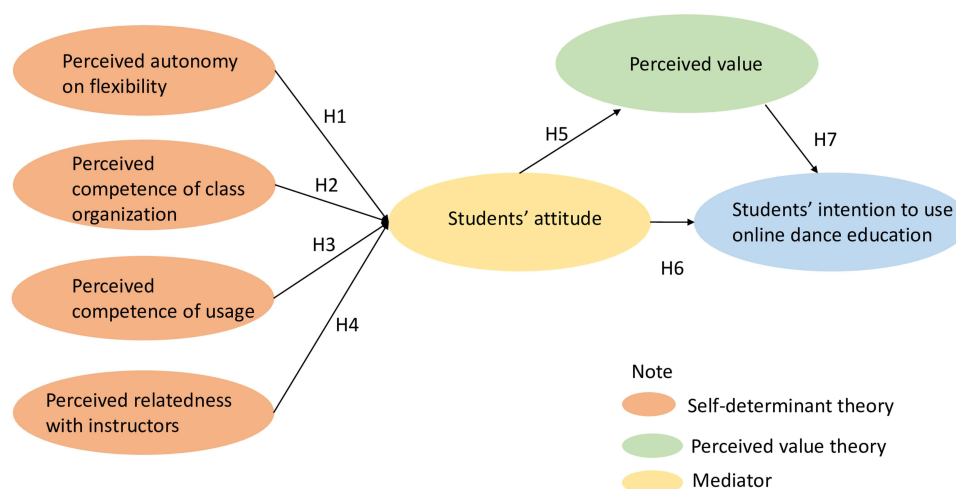
To address the research question, we designed questionnaire survey and administrated the survey online to collected data. We collected data from online dance participants in China and the data are collected from February 1st, 2023 to February 10th, 2023. A total of 198 valid responses are collected for structural equation modeling analysis to find out the relationships between different concepts.

Overall, our study provides theoretical support and management inspiration for the development of online dance education, especially during the pandemic. To the best of the author, our study is the first to operationalize self-determinant theory to understand students' motivations to use online dance learning. Due to the unique demands of dance education, such as the need for close communication and feedback, this study can enhance educators' understanding of students' needs and promote the sustainable development of online learning.

## Literature Research Model

Our research model is constructed from self-determinant theory and presented in Figure 1.

Self-determination theory explains how human motivation and personality affect behavior.<sup>6</sup> This theory is based on three key concepts: perceived autonomy, perceived competence, and perceived relatedness. Perceived autonomy refers to the psychological need to regulate one's actions, and it means "the feeling one has a choice and willingly endorses one's behavior".<sup>7</sup> Perceived competence refers to the psychological need to be able to achieve desirable results with one's actions and means "the experience of mastery and being effective in one's activity".<sup>7</sup> Perceived relatedness refers to the psychological need to communicate and relate to others and means "the need to feel connected and a sense of belongingness with others" (<https://www.urmc.rochester.edu>). These three constructs are essential motivations for individuals to pursue goals in society.



**Figure 1** The research model.

The theory has been used to study motivations to engage in education. For example, Sun, Li<sup>8</sup> used self-determination theory to study motivations to participate in physical education, while Lavigne, Vallerand<sup>9</sup> used a self-determinant approach to study persistence in science education. However, this theory has been rarely used to specifically study students' attitudes towards online dance education. Therefore, this study makes a contribution to research by employing self-determination constructs to study the factors influencing students' attitudes and intentions to use online dance education.

In our study, we adapted the constructs of self-determination theory for the special characteristics of online dance education. For perceived autonomy, we consider that during the COVID-19 pandemic, students are restricted by social distancing measures and lose a lot of control on their flexibility to arrange life. From this perspective, online dance education provides flexibility to students during social isolation and gives students more efficacy in themselves. Therefore, autonomy on flexibility is presumed to be an important factor to encourage students to have a high evaluation of online dance education. For perceived competence, students demand well-structured courses to make progress and ensure they can dance safely. From this dimension, we consider that online dance education should be well organized to make students clear about each dance step. Moreover, students should use different platforms, such as Tiktok and Zoom, and rely on the internet to take classes. The ease of use and positive experiences during usage can be important. Therefore, perceived competence of class organization and competence of usage are presumed to influence students' perceived value of online dance courses as well. Lastly, as for perceived relatedness, students have demands to interact with instructors so that they can receive in-time guidance and encouragement. This demand cannot be overlooked by online dance education. Hence we presume that the feeling of relatedness with instructors is important, and propose the construct named perceived relatedness with instructors.

Perceived value theory is used to study the mediation relationship between attitude and intention to use online dance classes. Perceived value theory states that rational people tend to select things that convey the highest value.<sup>10,11</sup> This theory is suitable because if students perceive that online dance classes can provide them with economic values such as cost reduction from time flexibility, functional values such as high-quality displays, and social benefits such as safety protection in the health pandemic, they will be more willing to use online dance classes.<sup>12</sup> The application of this theory can help us to understand students' subjective evaluations about online dance education. Furthermore, the combination of self-determination theory and perceived value theory can provide a deep understanding of how to enhance students' perceived value by enhancing internal motivation.

Furthermore, building on previous research that has demonstrated that perceived value is influenced by attitudes and can also affect users' behavioral intentions,<sup>13</sup> we make an additional assumption about the relationship between students' attitudes, perceived value, and intentions to use online dance classes. By examining these hypotheses, we can investigate whether the relationship between attitude, perceived value, and intention is applicable to the online dance education field. The detailed hypotheses are presented below.

## Research Hypothesis

### Perceived Autonomy on Flexibility and Students' Attitude

Students are largely constrained by space and movement during the coronavirus pandemic due to government restrictions on going to public areas.<sup>14</sup> Dance schools are also high-risk areas and many have been forced to close to control the spread of the virus. During this time, online dance classes have allowed students to continue their classes from the safety of their homes. Students only need a phone or computer to attend classes regularly, without having to commute to a physical location. Online dance classes can provide students with more time flexibility and greater control over their schedule. The high level of perceived autonomy can make students view online dance as a valuable option and develop positive attitudes towards it. Previous studies have also supported the positive influence of perceived autonomy on attitude (Chen, 2022, Chen and Hypnar, 2015). Therefore, we hypothesize that:

H1: Perceived autonomy on flexibility has a positive influence on students' attitude to online dance education.

### Perceived Competence of Class Organization and Students' Attitude

Dance education follows a strict curriculum.<sup>15</sup> For example, in Chinese classical dance, different levels of courses correspond to different materials. Instructors should carefully design course materials based on students' progress. For online dance

classes, students display their movements remotely, and this places even higher demands on instructors' ability to observe students and organize the entire class. Students have a high demand for personalized and diversified dance learning.<sup>16</sup> They also demand well-structured courses to protect themselves from getting hurt. When students find that there is an expert managing their online class, and their needs for well-structured classes are satisfied, they are presumed to have a more positive attitude towards the progress they can make during online dance classes. Therefore, we hypothesize that:

H2: Perceived competence of class organization has a positive influence on students' attitudes to online dance education.

### **Perceived Competence of Usage and Students' Attitude**

Access to online systems has been identified as a critical success factor in online education.<sup>17</sup> Previous studies have also identified challenges associated with using online classes, such as a lack of knowledge on how to use the online platforms (Ambawati et al, 2021). If users perceive themselves as competent in using online platforms, they tend to be more confident and, therefore, have more positive attitudes towards online education.

Regarding online dance education, students are expected to be able to operate the platform well and have good knowledge of how to communicate with instructors, how to upload their videos, and how to receive feedback. If students can easily use online dance platforms and have high-quality online demonstrations from instructors, they are more likely to be satisfied with online dance education. Therefore, we hypothesize:

H3: Perceived competence of platform usage has a positive influence on students' attitudes to online dance education.

### **Perceived Relatedness with Instructors and Students' Attitude**

Dance requires extensive interaction with instructors, and students need timely and constructive feedback to improve their skills. If instructors fail to provide timely feedback, students may develop incorrect techniques, which become increasingly difficult to correct over time. Additionally, the COVID-19 pandemic has increased feelings of loneliness.<sup>18</sup> In online dance classes, where there is a physical distance between students and instructors, the sense of connection can be even more important. Therefore, we hypothesize that:

H4: Perceived relatedness with instructors has a positive influence on students' attitudes to online dance education.

### **Students' Attitudes and Perceived Value**

Perceived value refers to users' overall perception of a product's utility, which is measured by weighing the benefits against the costs of the product.<sup>19,20</sup> Previous research has found that users' positive attitudes can positively influence perceived value, while negative attitudes can negatively affect perceived value.<sup>13</sup> The underlying logic is that when users have a positive and favorable attitude towards a product, they are more likely to evaluate it highly than when they have negative emotions. Therefore, if students perceive online dance education as interesting and enjoyable, they are more likely to evaluate it positively. Based on these arguments, we hypothesize that:

H5: Attitudes toward online dance education have a positive influence on students' perceived value.

### **Students' Attitude and Intention to Use Online Dance Education**

Many studies prove user attitudes have a significant influence on user behavior.<sup>21-23</sup> From a social psychological dimension, user's positive psychological conditions can affect user behavior to different degrees. If students feel online dance classes are satisfactory and interesting, the positive attitudes can motivate them to be willing to take online dance courses. Therefore, we hypothesize that

H6: Students' attitudes to online dance education have a positive influence on the intention to use online dance education.

### **Perceived Value and Intention to Use Online Dance Education**

Perceived value positively influences students' intention to use online dance classes, as students are more likely to choose products that offer them the greatest value.<sup>24</sup> If students believe that online dance classes provide them with sufficient

benefits, such as time flexibility, safety, high-quality teaching, and effective communication, they are more likely to use online dance classes to improve their skills. Therefore, it is hypothesized that perceived value has a positive impact on students' intention to use online dance classes.

H7: Perceived value has a positive influence on the intention to use online dance class education.

## Methodology

### Measurement Items

We use measurement items to measure the seven latent constructs listed in the previous section. The constructs, measurement items and sources are listed in Table 1. The items are adapted from literature and developed to match the purpose of this study. All items are measured on seven-point Likert scale.

### Sampling Process

To test our research model, we collected data through an online survey. Prior to conducting the survey, we obtained ethics approval from our home university, and after review by the ethics committee, it was determined that the survey did not reveal any personal information and was therefore exempt from further ethical review. The approval code for the study is

**Table 1** Measurement Items

Construct	Items	Source
Perceived autonomy on flexibility	Learning through online tutorial gave me the flexibility to adjust my learning time	Szczepańska and Pietrzyka, <sup>14</sup> You, <sup>25</sup> and <sup>26</sup> designed by authors
	Learning through online tutorial made me have the flexibility to divide their time between dance learning and other jobs	
	Learning through online tutorial makes me save commuting time	
Perceived online class organization competence	Course material is presented in a well structure	Szczepańska and Pietrzyka, <sup>14</sup> You, <sup>25</sup> and designed by authors
	The learning objectives in the online tutorial has been conveyed properly	
	The material in the online tutorial has been arranged in a logical sequence and understandable	
	The structure of the material in online tutorial already covers all the material I need to learn	
Perceived usage competence	I do not encounter any difficulty in responding to the discussion	Szczepańska and Pietrzyka, <sup>14</sup> You, <sup>25</sup> and designed by authors
	The instructor guidance shown in the online tutorial has good quality	
	I have no difficulty using online dance learning	
	Online dance learning as a whole has a good display quality	
Perceived relatedness with instructors	I can get efficient feedback from online instructors	Szczepańska and Pietrzyka, <sup>14</sup> You, <sup>25</sup> and designed by the authors
	I feel encouraged during online dance learning	
	The instructor pays attention to every online participate	
	The interaction between students and instructors are well established	
Attitudes	I feel that online dance learning is interesting	Szczepańska and Pietrzyka, <sup>14</sup> You <sup>25</sup>
	I feel that online dance learning improves my dancing ability	
	I am satisfied with the whole system of online learning	

(Continued)

**Table 1** (Continued).

Construct	Items	Source
Perceived value	I feel that the online dance class is reasonably priced	Yuen, Song <sup>12</sup>
	I feel that using the online dance class is time efficient	
	I feel that using the online dance class is useful for improving my skills	
	I feel that using the online dance classes would have positive effects on the society	
Intention to use online dance class	I will encourage others to use online dance learning	Yuen, Choo <sup>27</sup>
	I am positive about the future use of online dance learning	

XFEC-2023-001. The survey was administered in Chinese using the online survey platform “Jianshu”. Participants who completed the survey were rewarded with \$2.

The survey consisted of three sections. The first section included a filter question to screen out respondents who had not taken online dance classes. If respondents answered no to this question, they were directed to stop answering the survey. The second section included measurement items, which were rated on a 7-point Likert Scale. We also included an attention checker in this section to ensure participants were paying attention to the survey instructions. The third and final section consisted of demographic questions.

The data collection period was from February 1st, 2023 to February 10th, 2023. After removing incomplete and failed attention check questionnaires, a total of 198 completed surveys were collected.

## Data Analysis Method

We proceed to test the theoretical model using a two-step process. First, confirmatory factor analysis is done to test the reliability of the measurement model. Next, structural equation modeling is done to test the proposed hypotheses.

## Results

### Demographic Analysis Results

The demographic information of the respondents is shown in Table 2. Concerning the gender distribution, females take a larger proportion, due to the characteristics of dance. In China, more females take dance classes than males. Concerning

**Table 2** Demographic Information

Category	Item	Frequency	Percentage
Gender	Female	126	63.6%
	Male	72	36.4%
Age	19–30	102	51.2%
	31–40	51	25.8%
	41–50	30	15.2%
	Above 50	15	7.8%
Education	Below Bachelor's degree	43	21.8%
	Bachelor's degree	115	58%
	Master's degree and above	40	20.2%

the age distribution, most respondents are below 30 years old, indicating that the responses more reflect the opinions of younger generations. Concerning the education distribution, most respondents hold a Bachelor's degree, meaning that they are able to answer the questionnaire items reasonably.

### Confirmatory Factor Analysis Results

We first did confirmatory factor analysis to test the reliability and validity of the measurement model. The results are listed in Table 3 as follows.

The measurement model has a good model fit. The statistics of model fits are as follows: the Comparative Fit index is 0.972, the Tucker-Lewis index is 0.963, the Bollen's Incremental Fit index is 0.970. The three values are all higher than the critical value of 0.95.<sup>28</sup> The root mean square error of approximation (RMSEA) is 0.053 and the standardized root mean square residual (SRMR) is 0.044, well below the critical value of 0.08.<sup>28</sup> The factor loadings are all larger than 0.70 and CR values are larger than 0.80, so the items are reliable. The AVE values are all larger than 0.5, which means that convergent validity is supported.

The results of discriminant validity are listed in Table 4. We observe that the squared correlation between any pair of constructs is lower than the AVE values, so the discriminant validity is supported. Hence, the measurement model is suitable for doing structural equation modelling.

### Structural Equation Modelling Results

Structural equation modelling is performed using AMOS. The results are listed in Table 5. The model fits are satisfying. The CFI, TLI and IFI are higher than 0.95. RMSEA and SRMR are 0.053 and 0.044 respectively, below 0.08. All hypotheses are supported by empirical data. H1, H2, H3, and H4 are supported at a 0.95 significance level; moreover, H5 to H6 are significant at a 0.001 significance level.

**Table 3** Confirmatory Factor Analysis Results

Constructs	Item	Standardized $\lambda$	CR	AVE
Perceived autonomy	AOT1	0.750	0.672	0.891
	AOT2	0.870		
	AOT3	0.856		
	AOT4	0.799		
Perceived competence of online class organization	ORG1	0.848	0.664	0.887
	ORG2	0.809		
	ORG3	0.781		
	ORG4	0.822		
Perceived competence of usage	USG1	0.803	0.667	0.800
	USG2	0.827		
Perceived relatedness	RAT1	0.749	0.627	0.834
	RAT2	0.822		
	RAT3	0.804		
Attitude	ATD1	0.769	0.621	0.867
	ATD2	0.830		
	ATD3	0.765		
	ATD4	0.787		
Perceived value	PEV1	0.814	0.632	0.837
	PEV2	0.778		
	PEV3	0.793		
Intention to use	IT1	0.833	0.683	0.812
	IT2	0.821		



**Table 4** Discriminant Validity

	AOT	ORG	USG	RAT	ATD	PEV	IT
AOT	<b>0.891</b>	0.202	0.313	0.288	0.360	0.263	0.375
ORG	0.450	<b>0.887</b>	0.288	0.253	0.498	0.393	0.491
USG	0.560	0.537	<b>0.800</b>	0.321	0.290	0.139	0.327
RAT	0.537	0.503	0.567	<b>0.834</b>	0.524	0.292	0.583
ATD	0.601	0.706	0.539	0.724	<b>0.867</b>	0.611	0.511
PEV	0.513	0.627	0.374	0.541	0.782	<b>0.837</b>	0.425
IT	0.613	0.701	0.572	0.764	0.715	0.652	<b>0.812</b>

**Note:** The bold numbers on the main diagonal are AVEs.

**Table 5** Structural Equation Modelling Results

Relationships	Estimate	P	Supported
Perceived autonomy of flexibility → Attitudes	0.326	<0.05	Supported
Perceived competence of class organization → Attitudes	0.231	<0.05	Supported
Perceived competence of usage → Attitudes	0.311	<0.05	Supported
Perceived relatedness with instructors → Students' attitudes	0.413	<0.05	Supported
Students' attitudes → Perceived value	0.651	<0.001	Supported
Students' attitudes → Intention to use online dance education	0.374	<0.001	Supported
Perceived value → Intention to use online dance education	0.476	<0.001	Supported

To be specific, perceived autonomy of flexibility is shown to have a positive influence on attitudes ( $\beta = 0.326$ ,  $p < 0.05$ ). This finding is consistent with previous research that has identified perceived autonomy as an important predictor of attitudes towards using online educational technologies.<sup>26,29</sup> Our results extend this research by being the first to demonstrate that the relationship between perceived autonomy and attitudes also applies to the context of online dance education. This is an important finding given that during the COVID-19 pandemic, students have been subject to various social-distancing policies that have restricted their ability to attend in-person classes. Providing time and space flexibility through online dance classes has been a valuable way to help students maintain their interest in dance education.

In addition, our study found that perceived competence of class organization ( $\beta = 0.213$ ,  $p < 0.05$ ) and usage ( $\beta = 0.311$ ,  $p < 0.05$ ) have a positive influence on attitudes. This finding is consistent with previous research demonstrating that perceived competence is an important factor in technology adoption in education.<sup>30</sup> We make novel contribution to this literature by providing a deeper understanding of competence in the context of online dance education, using two constructs (class arrangement and system usage) to represent perceived competence. Our findings suggest that students value well-organized online dance classes that are comparable in quality to offline classes. They also value user-friendly online dance systems that are easy to use. These findings suggest that instructors need to be mindful of the importance of good design and functionality when developing online dance education systems.

Furthermore, our study found that perceived relatedness has the highest influence on students' attitudes towards online dance classes ( $\beta = 0.413$ ,  $p < 0.05$ ). This finding is consistent with previous research that highlight the importance of perceived relatedness in predicting attitudes towards technology use.<sup>31</sup> Moreover, our study makes novel contributes to this literature by specifically examining the role of perceived relatedness in the context of online dance education. Our findings suggest that dance education is a highly interactive activity, and that the sense of relatedness with instructors is especially important in the online context where direct observation and guidance are more challenging. Instructors should be aware of the importance of fostering a sense of relatedness with students to promote positive attitudes towards online dance classes.

Finally, our study found that positive attitudes towards online dance classes have a positive influence on students' intention to use them via the mediation effect of perceived value. This finding is consistent with previous research demonstrating that attitudes have a positive influence on perceived value, which in turn has a positive influence on intention to use.<sup>32–34</sup> Our study extends this literature by demonstrating that perceived value partially mediates the



relationship between attitudes and intention to use online dance classes. Instructors should be aware that fostering positive attitudes towards online dance classes may increase students' perceived value of these classes and ultimately their intention to use them.

## Limitations

This study has limitations as well. First, this study only uses self-determinant theory and perceived value theory to build the model. Future studies can try using more theories or combine different theories to find out more influential factors. Second, this study is done in mainland China. Different countries or regions can have different characteristics. Therefore, the future study can do research in different counties to validate results. Third, further research can collect more demographic information and compare the difference between different groups (eg, female and male).

## Conclusion

### Summary of Results

Our study investigates the factors influencing students' attitudes during online dance classes. Using the three dimensions of self-determination theory, we explore the psychological factors that shape students' attitudes and intentions towards online dance learning. We develop four latent constructs that align with the three dimensions: perceived autonomy of flexibility, perceived competence of class organization, perceived competence of platform usage, and perceived relatedness with instructors. We hypothesize that these constructs affect students' intention to use online dance education through their attitudes towards it. We propose five hypotheses based on this model and collect data from students in China to test them. Using confirmatory factor analysis and structural equation modeling, we find support for all hypotheses. The results show that perceived autonomy of flexibility, perceived competence of class organization and platform usage, and perceived relatedness with instructors have a positive influence on attitudes, which in turn have both direct and indirect positive effects on students' intention to use online dance education. Overall, our study contributes to the literature on online education by exploring the role of self-determination theory in predicting students' attitudes towards and intention to use online dance classes. Our results provide insights into how autonomy, competence, and relatedness influence students' attitudes towards online dance classes, and how those attitudes, in turn, predict intention to use these classes.

## Implications

Our study contributes to the literature by providing insights into the factors that influence students' attitudes towards and intention to use online dance classes. Our findings highlight the importance of self-determination theory in understanding these factors and suggest that instructors should be mindful of the importance of autonomy, competence, and relatedness when designing and delivering online dance education. These findings have implications for education policymakers, practitioners, and researchers seeking to improve the quality and effectiveness of online dance education.

The theoretical contributions refer to the extension of theories, development of models and items, and the collection of empirical data. Firstly, this study extends the self-determination theory to the online dance education context, providing a new perspective for understanding students' motivation to use online dance classes. While the self-determination theory has been used in education to explore students' motivations, online education and dance education can have their own unique characteristics and require additional research. Therefore, the extension of the self-determination theory to online dance education helps to explain the explanatory power of the theory and provide additional support to the contents. Secondly, this study develops constructs for online dance education using the self-determination theory, enhancing our understanding of how motivations trigger students' intention to use online dance classes. The measurement items are shown to be reliable and valid. The items can be revised for use in other studies. The proposed research model and corresponding measurement items provide a good reference for future studies on how intrinsic and extrinsic motivations influence students' attitudes and intentions towards online dance education. Thirdly, the focus on autonomy, competence, relatedness, and motivation improves our understanding of important drivers of students' attitudes towards online dance education. Thirdly, this study provides empirical evidence on students' intention

to use online dance classes. Given that there is limited research in this area, this study enriches existing studies by studying this topic and providing empirical data.

This study provides several managerial implications as well. Firstly, as the autonomy of time is shown to be an important motivator, dancing educators should provide a flexible timetable that considers students' backgrounds and learning hours. For example, they can arrange more demanded classes at night for people who work from home during the daytime. They can also understand students' demands and try to maximize time efficiency. Secondly, as the results shown that students care about the effective arrangement of classes, instructors should prepare a detailed class arrangement plan, which they can post on social media to make it easy for students to read. They can also send the plan to students individually and update it regularly. This strategy can make students feel that the online dancing classes are well arranged, and they are able to learn dancing skills step by step. Thirdly, the quality of classes is shown to be of critical importance to students' intention to use online learning, therefore, dancing schools should choose good partners to provide high-quality dancing classes to students. They should effectively collect students' feedback and improve service quality. Fourthly, the communication online is an important motivator of students' use intention, considering that dance education requires timely feedback on gestures. Therefore, instructors should have good communication with students during online dance classes. They should pay attention to each student by controlling the class size and improving the screen quality. They should provide effective feedback to students and correct their motions as they did in physical classes. They should make sure the communication with students is not delayed due to online teaching. Good communication and interaction with students can be a critical factor in improving students' willingness to use online dance learning. Lastly, instructors should try to enhance students' perceived value of online dance classes. The functional, economic, and social values of online dance classes can be passed on to students through social media like WeChat. They should continue to motivate students to foster a positive attitude and a high perceived value of online dance classes.

## Data Sharing Statement

The data used in this study is confidential.

## Ethical Approval

This study complies with the Declaration of Helsinki. An official exemption has been obtained from the Institutional Review Board of Xinyang Normal University. The approval code is XFEC-2023-001. The study is exempted from the ethical review due to the satisfaction of specific requirements, which include the anonymity of data; the exclusion of invasive questions; the exclusion of environmental manipulation.

## Informed Consent

Written informed consent to participate in this study was provided prior to commencing the questionnaire survey.

## Disclosure

The author declares no competing interests.

## References

1. Li X, Yuen KF, Wang X, Wong YD. Contactless technologies adoption during the coronavirus pandemic: a combined technology acceptance and health belief perspective. *Technol Anal Strateg Manag*. 2021;35:1–14.
2. Li D. The shift to online classes during the COVID-19 pandemic: benefits, challenges, and required improvements from the students'. *Electron J e-Learn*. 2022;20(1):1–18. doi:10.34190/ejel.20.1.2106
3. Teymori AN, Fardin MA. COVID-19 and educational challenges: a review of the benefits of online education. *Ann Med Health Sci Res*. 2020;18:3.
4. Li Z, Zhou M, Lam KKL. Dance in Zoom: using video conferencing tools to develop students' 4C skills and self-efficacy during COVID-19. *Think Ski Creat*. 2022;46:101102. doi:10.1016/j.tsc.2022.101102
5. Li X, Wang X, Wei C. Antecedents of continuance intention in online learning systems among vocational college students: the moderating effect of gender. *Front Psychol*. 2022;2022:13.
6. Ryan RM, Deci EL. *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. Guilford publications; 2017.
7. Chen W, Hypnar AJ. Elementary school students' self-determination in physical education and attitudes toward physical activity. *J Teach Phys Educ*. 2015;34(2):189–209. doi:10.1123/jtpe.2013-0085

8. Sun H, Li W, Shen B. Learning in physical education: a self-determination theory perspective. *J Teach Phys Educ.* 2017;36:277–291. doi:10.1123/jtpe.2017-0067
9. Lavigne G, Vallerand R, Miquelon P. A motivational model of persistence in science education: a self-determination theory approach. *Eur J Psychol Educ.* 2007;22:351–369. doi:10.1007/BF03173432
10. Jiang L, Jun M, Yang Z. Customer-perceived value and loyalty: how do key service quality dimensions matter in the context of B2C e-commerce? *Serv Bus.* 2016;10(2):301–317. doi:10.1007/s11628-015-0269-y
11. El-Adly MI, Eid R. An empirical study of the relationship between shopping environment, customer perceived value, satisfaction, and loyalty in the UAE malls context. *J Retail Consum Serv.* 2016;31:217–227. doi:10.1016/j.jretconser.2016.04.002
12. Yuen KF, Song S, Li X, Wang X. Service recovery strategies for crowdsourced transportation: an examination of their impacts on user loyalty. *Technol Anal Strateg Manag.* 2021;35:1–15.
13. Salehzadeh R, Pool JK. Brand attitude and perceived value and purchase intention toward global luxury brands. *J Int Consum Mark.* 2017;29(2):74–82. doi:10.1080/08961530.2016.1236311
14. Szczepańska A, Pietrzyka K. The COVID-19 epidemic in Poland and its influence on the quality of life of university students (young adults) in the context of restricted access to public spaces. *J Public Health.* 2021;2021:1–11.
15. Lin C-M. *Perceptions of Dance Instructors Regarding General Dance Education Curricula in Taiwan.* University of South Dakota; 2005.
16. Mao R. The design on dance teaching mode of personalized and diversified in the context of internet. *E3S Web of Conferences;* 2021:03059.
17. Volery T, Lord D. Critical success factors in online education. *Int J Educ Manag.* 2000;14(5):216–223.
18. Wang X, Wong YD, Yuen KF. Rise of 'lonely' consumers in the post-COVID-19 era: a synthesised review on psychological, commercial and social implications. *Int J Environ Res Public Health.* 2021;18(2):404. doi:10.3390/ijerph18020404
19. Jiang Y, Wang X, Yuen KF. Augmented reality shopping application usage: the influence of attitude, value, and characteristics of innovation. *J Retail Consum Serv.* 2021;63:102720. doi:10.1016/j.jretconser.2021.102720
20. Lin CH, Sher PJ, Shih HY. Past progress and future directions in conceptualizing customer perceived value. *Int J Serv Ind Manag.* 2005;16(4):318–336. doi:10.1108/09564230510613988
21. Yuen KF, Koh LY, Tan LYH, et al. The determinants of virtual reality adoption for marine conservation. *Technol Soc.* 2023;72:102170. doi:10.1016/j.techsoc.2022.102170
22. Li X, Zhou Y, Wong YD, et al. What influences panic buying behaviour? A model based on dual-system theory and stimulus-organism-response framework. *Int J Disaster Risk Reduct.* 2021;64:102484. doi:10.1016/j.ijdr.2021.102484
23. Li Z, Wang X, Li X, et al. Post COVID-19: health crisis management for the cruise industry. *Int J Disaster Risk Reduct.* 2022;71:102792. doi:10.1016/j.ijdr.2022.102792
24. Yuen KF, Wang X, Ma F, et al. The determinants of customers' intention to use smart lockers for last-mile deliveries. *J Retail Consum Serv.* 2019;49:316–326. doi:10.1016/j.jretconser.2019.03.022
25. You Y. Online technologies in dance education (China and worldwide experience). *Res Dance Educ.* 2020;2020:1–17.
26. Chatzisarantis NL, Hagger MS, Wang CKJ, et al. The effects of social identity and perceived autonomy support on health behaviour within the theory of planned behaviour. *Curr Psychol.* 2009;28:55–68. doi:10.1007/s12144-009-9043-4
27. Yuen KF, et al. A theoretical investigation of user acceptance of autonomous public transport. *Transportation.* 2022;2022:1–25.
28. Hu LT, Bentler PM. Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural equation modeling. a Multidisciplinary Journal.* 1999;6(1):1–55.
29. Chatzisarantis NL, Hagger MS, Smith B. Influences of perceived autonomy support on physical activity within the theory of planned behavior. *Eur J Soc Psychol.* 2007;37(5):934–954. doi:10.1002/ejsp.407
30. Jahanban-Isfahlan H, Hadidi Tamjid N, Seifoori Z. Educational technology in Iranian high schools: EFL teachers' attitudes, perceived competence, and actual use. *Educ Res Int.* 2017;2017:1.
31. Ahn J. Understanding the role of perceived satisfaction with autonomy, competence, and relatedness in the CSR context. *J Sustain Tour.* 2020;28(12):2027–2043. doi:10.1080/09669582.2020.1788040
32. Choi W-S, Lee S-B. The effect of servicescape of an eco-friendly restaurant on customer perceived value, attitude and behavior intention. *Culi Sci Hos Res.* 2012;18(5):45–62. doi:10.20878/cshr.2012.18.5.004004004
33. Luo B, Li L, Sun Y. Understanding the influence of consumers' perceived value on energy-saving products purchase intention. *Front Psychol.* 2022;12:6331. doi:10.3389/fpsyg.2021.640376
34. Jiang Y, Lau AK. Effect of restaurant consumers' anticipated emotions on perceived value and behavioral intention in the COVID-19 context. *Front Psychol.* 2022;13:1013209. doi:10.3389/fpsyg.2022.1013209

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