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Are We Ready for a Change? A Study on Visual art Education Teachers' Perception and Attitude towards Online Teaching during the Covid-19 Outbreak

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Abstract

The sudden outbreak caused by COVID-19 has challenged every corner of the education system. Since all schools worldwide were asked to close and face-to-face classes were cancelled, the teachers who were previously reluctant to change their conventional teaching approach had no option but to shift entirely to online teaching. Therefore, this present study was set to determine the Visual Art Education (VAE) teachers' perception and attitude towards adopting online teaching. The study also aimed to predict factors that might influence their decision to adopt online teaching in art classrooms. The study synthesized the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Expectation-confirmation Model (ECM) as the theoretical grounding of the study. As an outcome, a model of online teaching for the VAE subject area was presented. A sample of 424 VAE teachers in Malaysia took part in answering an online survey. The Structural Equation Modelling (SEM) was employed in analyzing the data and confirming the proposed online teaching model of the study. Results from the study demonstrate that teachers' facilitating conditions have the most significant direct effect on their decision to adopt online teaching. Overall, the proposed model accounted for 49.6 percent of the variance in the VAE teacher's decision to adopt online teaching. It is hoped that this study will act as a guide to the Ministry of Education, school administrators, and teachers' training institutions towards establishing a Malaysian standard for adopting online teaching, especially in the context of the VAE subject area.

Keywords: COVID-19, Online Teaching, Visual Art Education, Technology Acceptance Model, Teachers' Perception, Attitude

Introduction

The global spread of the COVID-19 pandemic has challenged the global education ecosystem. In order to avoid the spread of the virus and ensure the continuity of the educational processes, schools worldwide were asked to close and face-to-face classes were cancelled. This announcement of physical closure has required school teachers to shift from conventional classrooms to online modes of teaching. Undoubtedly, this paradigm shift could generate changes in teachers' agreement and perception of online teaching, especially before the pandemic (Coman et al., 2020). Nevertheless, this dramatic transformation has also caused compulsory modification of teachers' perceptions and attitudes toward the possibilities and significance of online teaching and learning approaches (Ribeiro, 2020). Although previous studies have acknowledged the potential of online learning through its flexibility (Dhawan, 2020), interactivity (Leszczynski et al., 2018), self-pacing (Singh & Thurman, 2019), improve students' learning abilities (Muhaisen, 2020) and performance (Habes et al., 2019), teachers' migration from conventional to online teaching and learning approaches were reported to be unpleasant (Sia & Abbas, 2020; Putri et al., 2020). Although teachers agreed toward implementing online teaching into their instruction process, the majority of them have not adopted it optimally (Schlenz et al., 2020) and without proper planning (Abhinandan, 2018).

Likewise, in another subject area, Visual Art Education (VAE) teachers are also encouraged to embark on online teaching and learning. The changes caused by the pandemic outbreak have provided the VAE teachers with a new way to enhance and transform art learning, which will extend the subject pedagogy (Rahmat, 2020; Jochum, 2019). The VAE teacher's online teaching strategies also will actively involve students in constructing, processing, evaluating and synthesizing their ideas (Hogan et al., 2020), which promotes a new way of perceiving and practising art (Stands & Purtee, 2018; Baker et al., 2016). However, many factors might influence the VAE teachers' decision to integrate online teaching into art classrooms (Dilmac, 2020). Identifying the stumbling blocks that impinge on teachers' decision to adopt online teaching was seen to be a critical outcome of the study. In addition, with limited published research under the same aims, it is expected that findings derived from the study will provide suggestions and guidelines in ensuring the effective adoption of online teaching in art classrooms.

Online Teaching in Art Classrooms

Technology has played a pivotal role during the present pandemic crisis. The implementation of the Movement Control Order (MCO) caused by the COVID-19 pandemic has urged the VAE teachers who were previously reluctant to change have no choice but to accept the modern teaching and learning approach through online applications. Although previous studies have informed that online teaching in art classrooms would allow students to construct their representation of knowledge (Lemon, 2019), which results in an active, constructive, intentional, cooperative and authentic learning experience (Pavlou, 2020), its integration is far from reaching its target (Rahmat & Wing, 2019). Some studies indicated that online teaching would decrease students' creativity, artistic expression and understanding of art forms (de Eca et al., 2017). These inconsistent findings have highlighted the importance to determine the VAE teacher's perceptions and attitudes toward adopting online teaching.

Undoubtedly, there are many factors, in turn, that inhibited teachers' decision to adopt online teaching. Research findings have indicated that time-consuming (Milbrandt et al., 2015), inadequate support, insufficient feedback, poor working condition (Rahmat & Wing, 2017), and uncompensated work (De Eca et al., 2017) has decreased the VAE teachers' attention toward adopting online teaching into art classrooms (Baker et al., 2016). In a similar vein, previous studies have identified heavy workload, time consuming and lack of professional development (Rahmat & Wing, 2019) as key factors that block the VAE teachers' interest toward integrating online teaching. These factors have been addressed in several technology adoption theories, and can be classified into particular constructs or categories, as shown in Table 1.

Table 1
Construct of Factors Contributing to Teachers' Online Adoption

Constructs	Description	Previous Theories
Perceived Usefulness (PU)	Teachers' acceptance	Technology Acceptance Model (TAM)
Perceived Ease of Use (PEOU)	Teachers' confidence	Technology Acceptance Model (TAM)
Social Influences (SI)	School administration, government and friends support	Unified Theory of Acceptance and Use of Technology (UTAUT)
Facilitating Conditions (FC)	Resources, technical support, professional development	Unified Theory of Acceptance and Use of Technology (UTAUT)
Attitude (ATT)	Teachers' disposition	Technology Acceptance Model (TAM)
Online Adoption (OA)	Teachers' actual usage	Unified Theory of Acceptance and Use of Technology (UTAUT)
Continuance Intention (CI)	Teachers' intention to continue the adoption	Expectation-Confirmation Model (ECM)

Based on identified constructs, the present study set out to determine factors affecting the VAE teacher's attitude (ATT), online teaching adoption (OA) and continuance intention (CI). It was expected that outcome of the study together with the testes research model would provide clear information to VAE teachers on appropriate intervention in ensuring successful online teaching adoption happens. In addition, through limited published research on similar aims, it is also expected that findings derived from the study will provide suggestions and guidelines for school administrators, teacher training institutions, and the Ministry of education pertaining to successful online teaching adoption in art classrooms.

Methodology

This study employed a quantitative research method. Data of the study were collected through an online survey, which is the most appropriate method owing to its capability in determining the broad picture of the understudied phenomenon. The VAE teachers in Selangor, a state in Malaysia were identified as targeted participants of the study. Out of 887

VAE teachers who were serving in the National Secondary Schools in Selangor, 424 teachers (47.8 percent) responded to the questionnaire, thus becoming the respondents of the study. The questionnaire consisted of questions focusing on scales measuring the constructs of the study. All the item questions were adopted from the TAM (Davis, 1989), UTAUT (Venkatesh et al., 2003), and ECM (Bhattacherjee, 2001) questionnaires and were addressed through a five-point Likert-type scale (SD – strongly disagree to SA – strongly agree). The data collected were then analyzed through descriptive statistical analysis using SPSS, followed by the Partial Least Squares (PLS) of variance-based Structural Equation Modelling (SEM) in addressing the research questions based on the proposed model of the study. As a technique that applied multivariate statistical analysis, SEM was useful in representing translations of a series of hypothesized cause-effect relationships between predictor and predicted variables (Hair et al., 2017).

Findings

In ensuring a detailed discussion of research findings, data analysis of the study was conducted in three phases, namely (1) the VAE teachers' perception and attitude toward adopting online teaching, (2) assessment of the measurement properties, and (3) the structural model. The result concerning the VAE teachers' perception and attitude toward online teaching adoption were reported based on a percentage (%), mean (M), and standard deviation (Std. Dev) values. All the responses obtained were computed in getting the average score for each of the determinants. Finally, the overall score for both determinants was added in representing the VAE teachers' perception and attitude toward adopting online teaching in the art classroom.

Table 2
Mean and Standard Deviation for Perception and Attitude

Determinants	SD		D		N		A		SA		M	Std Dev
	n	%	n	%	n	%	n	%	n	%		
Perception	15	3.5	37	8.7	64	15.2	196	46.2	112	26.4	4.22	1.36
Attitude	21	4.9	32	7.6	55	13.0	183	43.2	133	31.4	4.05	1.19
Overall	36	8.4	69	16.3	119	28.2	379	89.4	245	57.8	4.15	1.28

m mean, *std dev* standard deviation

As is seen in Table 2, the majority (72.6 percent) of VAE teachers stated a positive perception toward adopting online teaching in art classrooms. A similar result was reported on their attitude, where (74.6 percent) of them have shown a positive attitude toward online teaching adoption. As a result, the mean (M) score of 4.15, with a standard deviation (Std. Dev) equal to 28, indicates that the VAE teachers have posed both positive perceptions and attitudes toward adopting online teaching in art classrooms.

Assessment of the Measurement Properties

The convergent validity was employed in assessing the stability and consistency of the survey items for each designed construct. Under that objective, the value of Cronbach's alpha coefficient, composite reliability, and the average variance extracted (AVE) were determined. As presented in Table 3, all the reflective variable has met the recommendation (Hair et al., 2017).

Table 3
Cronbach's Alpha Coefficient, Composite Reliability, and the Average Variance Extracted (AVE) of Constructs

Constructs	Cronbach's Alpha	Composite Reliability	AVE
Perceived Usefulness (PU)	0.88	0.91	0.63
Perceived Ease of Use (PEOU)	0.85	0.89	0.66
Social Influences (SI)	0.88	0.90	0.70
Facilitating Conditions (FC)	0.89	0.92	0.60
Attitude (ATT)	0.93	0.94	0.72
Online Adoption (OA)	0.88	0.91	0.65
Continuance Intention (CI)	0.88	0.90	0.70

Further, the discriminant validity analysis was carried out to assess the degree to which items of a particular scale measure their constructs. In determining the discriminant validity of the measurement model, the square roots of the AVE should be larger than its correlation with other constructs (Hair et al., 2017). As referred to in Table 4, all constructs have met the recommendation, thus confirming that discriminant validity was acceptable.

Table 4
Correlation of latent and square roots of AVE constructs

Variables	PU	PEoU	SI	FC	CI	ATT	OA
Perceived Usefulness (PU)	0.63						
Perceived Ease of Use (PEOU)	0.46	0.64					
Social Influences (SI)	0.27	0.35	0.62				
Facilitating Conditions (FC)	0.13	0.08	0.29	0.65			
Continuance Intention (CI)	0.32	0.35	0.27	0.10	0.47		
Attitude (ATT)	0.50	0.40	0.27	0.15	0.28	0.55	
Online Adoption (OA)	0.33	0.27	0.45	0.54	0.19	0.25	0.62

The Structural Model

The structural model was employed in determining the cause-effect relationship between the predictor and predicted constructs of the study. For that reason, the path coefficient (B) value was determined in assessing the significance of the path coefficient between constructs, while the coefficient of determination (R^2) value was used to determine the explanatory powers of the model.

As shown in Figure 1, the strongest direct impact on predicted contracts was reported on between FC toward OA ($B = 0.523$, $t = 16.18$, $p < 0.001$). A strong direct impact was also found on the relationship between PU toward ATT ($B = 0.399$, $t = 7.22$, $p < 0.001$), SI toward OA ($B = 0.166$, $t = 5.34$, $p < 0.01$) and SI toward CI ($B = 0.241$, $t = 2.93$, $p < 0.01$). The findings also inform that the highest R^2 value was recorded on the relationship between PU, SI, and FC toward OA. With the R^2 value of 0.496, this result indicates that VAE teachers' PU, SI and FC have jointly remarkable almost 50 percent of the variance associated with the current measure on online adoption (OA) in art classrooms.

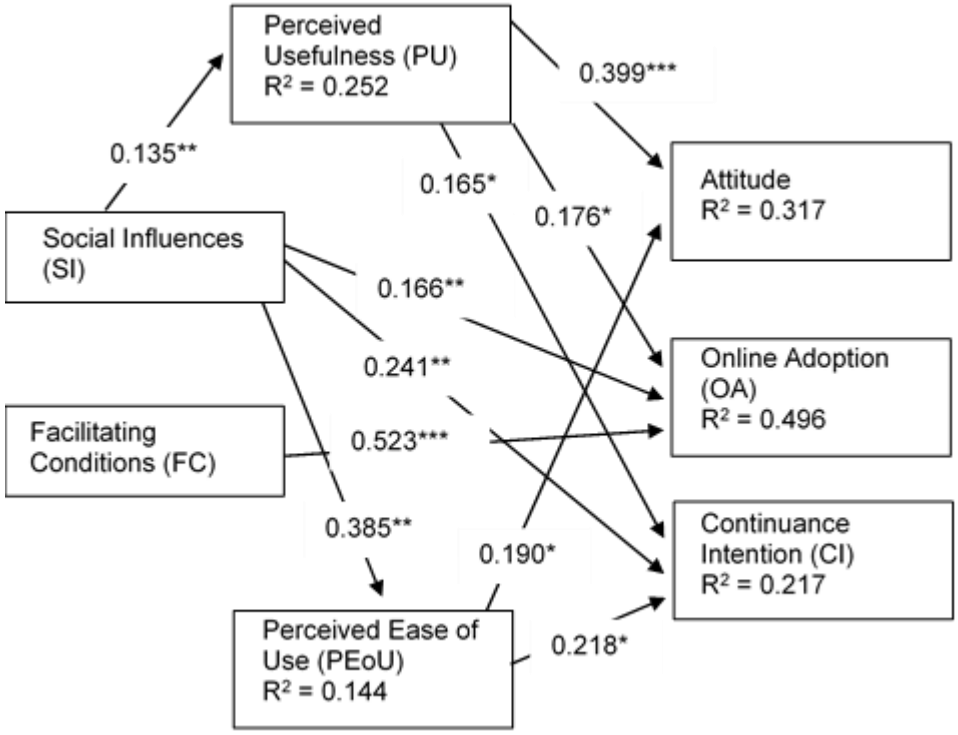

Figure 1. The Structural Model

Discussion

The present study is aimed to determine the VAE teachers' perception and attitude toward adopting online teaching in art classrooms. Findings from the descriptive analysis have informed that the VAE teachers have presented a positive perception and attitude toward adopting online teaching in art classrooms. With respect to factors that influence the VAE teachers' decision to adopt online teaching, the study has indicated that Facilitating Conditions (FC) have contributed the highest effect on their online adoption (OA). This result implies that the VAE teachers who agreed with adequate facilities and infrastructures for online teaching were more likely to adopt it in art classrooms. Facilities in terms of technical support, learning resources and internet connection are important to enhance the use of educational technology (Nizar et al., 2019). Based on this present finding, it is suggested that to assist teachers to adopt online teaching, facilities and resources provided for them need to be prepared in supporting their decision. Without sufficient quantity and quality of online facilities, it would be demanding for the VAE teachers to adopt it into their teaching in art classrooms.

The effect of the VAE teachers' Perceived Usefulness (PU) and Perceived Ease of Use (PEoU) toward their attitude (ATT) and continuance intention (CI) also deserves further attention. These findings suggest that online teaching needs to be perceived as useful by the VAE teachers if they are to form a positive attitude toward adopting it into their teaching. Based on these results, it is also clear that the VAE teachers will develop a positive attitude toward adopting online teaching when its usage is perceived to be an enhancement to their productivity and relatively free of effort. In addition, results from the study indicate that the VAE teachers may continue to adopt online teaching if they believe that using it does not require a lot of effort and that it will help them to gain more desired benefits. It is believed

that through useful, enjoyable and constant training (Kulal & Nayak, 2020), the VAE teachers' perceived value of online teaching is likely to improve, thus ensuring its continued usage.

Conclusion

Undoubtedly, online teaching adoption has become essential and a foothold at every level and area of education. Through its potential in promoting a global, interactive and dynamic learning environment, online adoption into classroom instruction has enriched teachers' instruction. Thus, noted as a key influencer of any education change, teachers' willingness and positive attitude toward adopting online teaching into classroom instruction is vital. This situation might also be in line with the provision of sufficient support by the authorities in ensuring the VAE teachers successfully adopt online teaching. This finding suggests that the VAE teachers need to be supported by an appropriate infrastructure for them to adopt online teaching. The authorities, such as the school administrators also need to consider the level of teachers' technical support and the provision of access to continuous professional development, if online teaching is to be provided is to be successfully adopted in art classrooms. It appears that the more support that the VAE teachers receive, the more likely will adopt it.

In addition, findings indicated that the VAE teachers' perception of the usefulness and ease of use of online teaching were important predictors of their attitude and continuance intention to adopt online teaching have required modification on the curriculum for the VAE teacher training programs. The focus of the curriculum should be more on its usefulness and ease of use in art classrooms. The study findings also highlight the importance of involving the VAE teachers in continuous professional development courses. The conduct of professional development courses that are tailored to meet the VAE teachers' specific needs and match pedagogical approaches and institutional setup is also recommended. Finally, specific policies and guidelines for the VAE teachers, therefore, need to be provided by the Ministry of Education to ensure the success and effectiveness of online teaching adoption, especially in art classrooms.

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