Research on the Acceptance of Applying Micro Films to Music Education

Chen-Feng Wu[1], Pin-Chang Chen[2], Yun-Hui Chu[3]

[1]*Department of Information Management, Yu Da University of Science and Technology, Miaoli, Taiwan*
[2]*Department of Banking and Finance, CTBC Business School, Tainan, Taiwan*
[3]*Wenlin Junior High School, Miaoli, Taiwan*

Abstract - *This study aims to investigate the acceptance of micro films to music education. In this study, the quasi-experimental method is adopted for the research methodology, and the Technology Acceptance Model (TAM) is used as the theoretical basis of research framework. Besides, the teaching behavior scale of applying micro films to music courses is as the research tool, and thirty students of the ninth-grade of Junior High School in Miaoli, Taiwan are taken as the research sample to conduct teaching experiment. The result of this study shows that it is feasible to apply micro films in music education.*

Key Words: Music Education, Micro Films, Technology Acceptance Model (TAM)

1. INTRODUCTION

1.1 Research Background

With the concern from the society, 12-year public education has been launched in Taiwan. Art and humanity aim to cultivate students' artistic interest, encourage them to actively participate in artistic activities and enhance their artistic literacy, such as perception, imagination and creativity. According to research report on effect of music to release the pressure from the Industrial Technology Research Institute of Taiwan, music can properly deal with the stress. For junior high school students who tend to be impulsive, it is the positive measure to be relaxed. In addition, with prevalence of broadband network and mobile devices, the low-threshold films such as micro films are presented by online video platform. Hence, the single-way entertainment is transformed into interactive sharing. It becomes students' common online entertainment in recent years.

1.2 Research Motivation

Modern educational policy emphasizes students' multiple intelligence. Students are the subjects of learning, and teachers are the guides who create confident and lively learning environment. In order to improve instructional approaches, this study integrates the courses of performance art and information. Through drama performance, filming, montage and manufacturing of micro films, students experience creative instruction. This study thus explores students' acceptance of the instruction and feasibility [3].

1.3 Research Objective

In order to enhance junior high school students' learning of opera, this study combines micro films, music instruction, current teaching materials and self-designed teaching materials. Thus, students learn skills of different subjects and more interesting instructional activities can be developed. This study intends to validate junior high school students' acceptance of micro films in drama instruction of music courses and feasibility and investigate the effect on students' behavior.

2. LITERATURE REVIEW

2.1 Music Education

According to basic concepts of art and humanity in Grade 1 to 9 Curriculum Guidelines, art and humanity mean artistic learning and human literacy. It applies the art course to cultivate artistic and human literacy [1]. Since ancient time, the Chinese have cultivated people's virtue by music. It suggests that morality and emotional expression are the essence of music. By voice, people are cultivated by aesthetics and obtain internal satisfaction. They pursue the goal of beauty and it is the persistent meaning of music education. Performance of opera is rich and complete. By different cultural backgrounds and artistic patterns, the audiences enhance vision and literacy, respect others and learn the life [2].

In addition, drama education means to apply drama in school curriculum. Collaborative learning is important part of drama instruction. In classroom, collaborative learning environment is provided. Students learn with peers in different teams. They support, criticize and share with each other and finally share the results. The presentation of multiple intelligence and learning of group cooperation are the important values of drama instruction [3].

2.2 Micro Films

Recent researches suggest that screen of Smartphone has become the fourth screen of necessity in life. People treated mobile state, short-term browsing and internet communication as the conditions of filming. According to definition of micro films, playing time of micro films should be in ten minutes. Micro films in Taiwan are generally classified into three types including micro films of commercial, promotion and drama [4]. Upon different

applications, these original films through systematic planning and manufacturing, short term, micro manufacturing period and micro cost and playing by internet can exchange significant value by little cost. They convey the information to audiences and it is the most significant advantage of micro films [5].

2.3 Technology Acceptance Model

After modifying the Theory of Reasoned Action, American scholar Fred Davis developed the Technology Acceptance Model (TAM) in 1975 [6], as shown in Fig -1. It simplifies the Theory of Reasoned Action upon precise and theoretical bases [7].

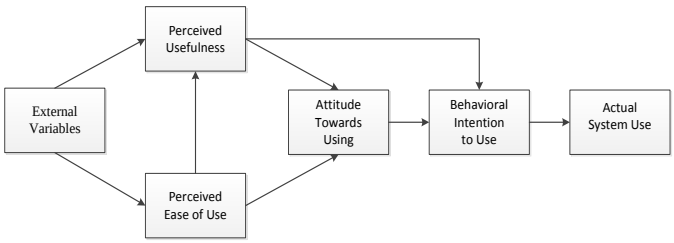

Fig -1: Technology Acceptance Model

TAM aims to investigate users' acceptance factors when approaching new information technology system. PU (perceived usefulness) and PEOU (perceived ease of use) are the two major concepts of the theory. TAM is the most commonly applied in statement of information technology behavior [8].

3. RESEARCH METHODOLOGY

3.1 Research Procedures

This study collects related data to establish research direction and feasibility. After reviewing related literatures, research methods and steps are constructed. This study designs the research tool "behavior and attitude scale of micro films in music education". By using quasi-experiment, thirty students of junior high school in Miaoli, Taiwan are applied as research subjects. Four weeks of experimental instruction are conducted on experimental group by using the drama of Turandot Opera as music teaching material. Before and after the experimental instruction, the subjects are filled in behavior and attitude scale of micro films in music education as pretest and posttest. Finally, this study analyze data to obtain the research results.

3.2 Research Methods

Behavior and attitude scale of micro films in music education designed by this study is based on related research literatures. It investigates students' behavior, attitude and acceptance of the instructional model before and after experimental instruction.

This study examines the pretest and posttest data of behavior and attitude scale of micro films in music education. Descriptive statistical analysis is conducted on hypotheses. T test of pair samples is conducted to determine if experimental group students have significantly different learning behavior and attitude before and after instruction.

3.2.1 Item analysis

Item analysis aims to examine propriety and reliability of items of scale. The items which are inappropriate or lack discrimination are eliminated or revised. CR >3.000 of the items is the criterion of discrimination. Through test for homogeneity, it obtains product-moment correlation of total and items. Items lower than 0.4 have low homogeneity with total scale and they should be eliminated. 29 items designed in this scale match the standard and they are all remained.

3.2.2 Factor analysis

After item analysis, this study conducts factor analysis by 29 items to examine the construct validity of scale. By Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity, it tries to find the propriety. When KMO is between 0 and 1 and indicator value is above 0.60, factor analysis can be conducted. KMO test of this scale is 0.878, suggesting that the items have common factors. After factor analysis, factor loading of all items are above 0.55 and eigenvalues are more than 1. Hence, they are all remained.

3.2.3 Reliability analysis

Reliability analysis is adopted to measure stability, consistency and precision of items. By α, this study intends to find if the items meet the minimum between 0.65 and 0.70. After analyzing perceived usefulness and attitude toward use, the researcher realizes that α are above 0.70 which are relatively good. Perceived ease of use, behavioral intention, life application after course and total behavior and attitude scale are above 0.80 which are extremely good.

3.2.4 Validity analysis

Validity is adopted to validate validity and precision of content of research tool. This study conducts questionnaire validity analysis by expert validity. Four experienced experts of artistic instruction in junior high school are invited to examine the content of questionnaire in order to make sure that the result of test can explain the goals predicted. Finally, after the examination and revision of adviser and four experts, this study constructs the formal questionnaire of behavior and attitude scale of micro films in music education.

4. DATA ANALYSIS

4.1 Basic statistics of behavior and attitude of micro films in music education

There are 30 samples in behavior and attitude scale of micro films in music education, including 0 invalid samples and 30 valid samples. The scoring is based on Likert 5-point scale. When score of the dimension is higher than mean, it means that the student's attitude is positive. When it is lower than mean, it means that the attitude is negative. The basic statistical analysis is conducted on data of pretest and posttest. Means of the dimensions in pretest and posttest show positive attitude. Basic statistics is shown in Table -1.

Table -1: Basic statistics of behavior and attitude of micro films in music education

Dimension	Mean of criterion of positive and negative attitudes	Pretest		Posttest		Mean difference of pretest and posttest (posttest-pretest)
		Mean	Standard deviation	Mean	Standard deviation	
Perceived usefulness	18	22.2	7.35	26.46	3.00	4.26
Perceived ease of use	12	12.16	3.24	16.76	2.29	4.6
Attitude toward use	33	36.96	7.01	48.83	4.41	11.87
Behavioral intention	12	14.2	2.6	17.5	1.83	3.3
Life application after course	12	13.1	2.79	18.06	1.77	4.96
Total use behavior and attitude	87	98.63	17.64	127.63	11.62	29

4.2 Perceived usefulness" difference before and after instruction

Result analysis of t test of pair samples of behavior and attitude scale of micro films in music education in pretest and posttest is shown in Table -2. According to result, t is -3.788, p=.001<.05 and it is significant. Thus, experimental group has significantly different "perceived usefulness" before and after the experiment.

Table -2: T test of pair samples of perceived usefulness

	Difference of pair samples							
	Mean	Standard deviation	Standard deviation of means	95% Confidence interval of difference		t	Free dom	Significance (two-tailed)
				Lower limit	Upper limit			
Perceived usefulness	-4.266	6.169	1.126	-6.507	-1.962	-3.788	29	.001

4.3 Difference of "Perceived ease of use" before and after instruction

According to result, t is -9.864, p=.000<.05 and it is significant as shown in Table -3. Thus, experimental group has significantly different "Perceived ease of use" before and after the experiment.

Table -3: T test of pair samples of Perceived ease of use

	Difference of pair samples							
	Mean	Standard deviation	Standard deviation of means	95% Confidence interval of difference		t	Free dom	Significance (two-tailed)
				Lower limit	Upper limit			
Perceived ease of use	-4.266	6.169	1.126	-6.507	-1.962	-3.788	29	.001

4.4 Difference of "Attitude toward use" before and after instruction

According to result, t is -11.884, p=.000<.05 and it is significant as shown in Table -4. Thus, experimental group has significantly different "Attitude toward use" before and after the experiment.

Table -4: T test of pair samples of Attitude toward use

	Difference of pair samples							
	Mean	Standard deviation	Standard deviation of means	95% Confidence interval of difference		t	Free dom	Significance (two-tailed)
				Lower limit	Upper limit			
Attitude toward use	-11.866	5.469	0.908	-13.908	-9.824	-11.884	29	.000

4.5 Difference of "Behavioral intention" before and after instruction

According to result, t is -8.399, p=.000<.05 and it is significant as shown in Table -5. Thus, experimental group has significantly different "Behavioral intention" before and after the experiment.

Table -5: T test of pair samples of Behavioral intention

	Difference of pair samples							
	Mean	Standard deviation	Standard deviation of means	95% Confidence interval of difference		t	Free dom	Significance (two-tailed)
				Lower limit	Upper limit			
Behavioral intention	-3.300	2.151	0.392	-4.103	-2.496	-8.399	29	.000

4.6 Difference of "Life application after course" before and after instruction

According to result, t is -11.547, p=.000<.05 and it is significant as shown in Table -6. Thus, experimental group has significantly different "Life application after course" before and after the experiment.

Table -6: T test of pair samples of Life application after course

Difference of pair samples								
	Mean	Standard deviation	Standard deviation of means	95% Confidence interval of difference		t	Free dom	Significance (two-tailed)
				Lower limit	Upper limit			
Life application after course	-4.966	2.355	0.430	-5.846	-4.086	-11.547	29	.000

4.7 Difference of "Total use behavior and attitude" before and after instruction

According to result, t is -11.547, p=.000<.05 and it is significant as shown in Table -7. Thus, experimental group has significantly different "Total use behavior and attitude" before and after the experiment.

Table -7: T test of pair samples of Total use behavior and attitude

Difference of pair samples								
	Mean	Standard deviation	Standard deviation of means	95% Confidence interval of difference		t	Free dom	Significance (two-tailed)
				Lower limit	Upper limit			
Total use behavior and attitude	-29.000	12.982	2.370	-33.847	-24.152	-12.235	29	.000

Based on the previous analytical result, after receiving micro films in music education, mean of experimental group students is higher than that before the instruction. There is significant difference in dimensions.

5. CONCLUSION

After experimental instruction, this study found that it is feasible to apply micro films in music education. After the instruction, dimensions of students' use behavior and attitude have positive difference. Therefore, the teachers should not simply teach by textbooks, but enhance their professional literacy and sensitivity to external information and include diverse activities in instructional plans to strengthen students' active thinking, cooperation and discover their multiple advantages. Behavior and attitude of students in the cities toward micro films in music instruction, music teachers' acceptance and intention toward the instruction, effect of increase of experimental time on students' performance and effect of micro films in music instruction on students' learning motivation and learning achievement can be further discussed. As to research method, qualitative research can be included to lead to more complete results.

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BIOGRAPHIES

Chen-Feng Wu received the Ph.D. degree from Tatung University, Taiwan. His research interests focus on Computer Networks, Wireless Networks and Electronic Commerce.

Pin-Chang Chen received the M.S. degree from Long Island University, USA. His research interests focus on Artificial Intelligence and System Analysis.