THE DEVELOPMENT OF MCTIM (MULTICULTURAL TEXTILE INTERACTIVE MODULE) USING DELPHI TECHNIQUE

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ABSTRACT

Multicultural education is prevalent in the development of the new generation while createing awareness of living in a multiracial nation such as Malaysia (Sharifah Norsana, 2012). This study focuses on the development of multicultural Textile Interactive Module (McTIM) for secondary teachers in art classes. In order to achieve the research objective, this article will discuss on how to design and develop McTIM using the Delphi Technique. Areas pertaining to the rationale of using the Delphi Technique, criteria for the selection of the expert panel, panel size and determining the number of rounds are described and discussed in the context of this study. For the present study, the researchers used the Delphi Technique as a medium to select suitable activities which should be incorporated in this pedagogical module for textiles syllabus in the visual art education subject. Findings from this study revealed that the expert panel from various fields provided positive feedback and reached a consensus. They also agree with the researchers to design and develop this module for secondary school teachers.

Keywords: The Delphi Technique, Multicultural education, Interactive Module

INTRODUCTION

This research intends to develop a module which will be referred to as 'Multicultural Textile Interactive Teaching Module (McTIM) in Visual Art Education (VAE) for secondary school. Substantially, this module is developed as a medium which may be utilized in the teaching and learning process for VAE teachers especially with regard to culture, multicultural students in Malaysia, suggested references, and students' accomplishments from various ethnic to make the learning process relevant and effective. This module may be considered as an important element for multicultural education considering it would incorporate suggested workings mentioned in Rasool and Curtis (2000); Gollnick and Chinn (2009).

BACKGROUND RESEARCH

Malaysia which makes up of various ethnic groups is also painted with numerous cultures and customs; thus, an educational policy and practices that address the different elements of the coexisting variety need careful planning for implementation. It was mentioned in Banks (2001) that multicultural education (MCE) is the notion of educational reform movement and process. It may be put that MCE is essential in the early stages of education and further developed progressively for students and may be utilized for instructional strategies in schools as suggested by Noor Faarienee (2014). It is therefore worthy to highlight that multiculatural education holds an important role in the educational setting, especially when students from various ethinicity and gender are involved. Not only that, it has been implied that multicultural education could enable students to increase their diversity elements through learning about other races or ethnics, cultures and socio-economic backgrounds (Edward and Kuhlman, 2007). However, multicultural education practices requires the teachers to use their knowledge and skills to their fullest potentials in order to transmit understanding and acceptance for students. Therefore, 'Multicultural Textile Interactive Teaching Module (McTIM) in Visual Art Education (VAE) for secondary school would be useful for two-way

learning for teachers and students to have a platform in increasing their knowledge and enhancing understanding of diverse cultures.

PROBLEM STATEMENT

In an earlier study by Abdul Razaq, Norhasni, and Anisa (2011), it was made apparent that the Ministry of Education (MOE) in Malaysia makes constant efforts in identifying current mechanisms to address diversity while ensuring quality education. Such efforts is necessary to cast out any elements of prejudice in the educational settings especially for a multi-ethnic country like Malaysia. Not only that, Malakolunthu (2011) opined that to achieve the objective implementation of effective multicultural education, careful considerations are required especially with regard to teachers' professional development, curriculum development frameworks, strategies, pedagogy, teaching materials and textbooks, and assessment process. For that matter, a culturally responsive pedagogy module of visual art has been developed by Siti Zuraida (2013) with the purpose to assist teachers and students gain knowledge while creating awareness towards the diverse elements in visual arts.

Therefore, to attain the good intentions of multicultural education, Lee (2012) magnified the important roles that teachers need to portray so they could inspire students to have the understanding, respect, and value the diverse cultures which coexist around them. Subsequently, teachers may be able to showcase their knowledge and skills during the teaching and learning process to initiate and create multicultural awareness among students within and outside the classrooms. However, such attempt would call for teachers to have the drive in exploring and learning about other cultures (Najeemah, 2008). Arts is considered as not only convenient but hold great educational expedient in any efforts of developing and implementing multicultural education. Both teachers and students will not only look into the aesthetic values of arts that they would learn and produce but more importantly, they would also learn to recognize while initiating discussions on issues concerning the creation of an artistic product (Kang, 2015). Essentially, this research has proven that culturally responsive pedagogy is timely and relevant for both teachers and students.

RESEARCH OBJECTIVES

The aim of this research is to design and develop a Multicultural Textile Interactive Module (McTIM) for visual art education at the secondary school level. This research focuses on the suggested activities which may be included in the classroom.

LITERATURE REVIEW

The education system in Malaysia has experienced multiple reviews over the years in efforts for educational betterment and progress while withholding the holistic ideals of the National Education Philosophy (NEP). Progressive educational policy and practices are considered as an accelerator that could uplift a country's standing not only politically but in various areas which include socio-economic standing. It is in good spirit that the Vision 2020 was founded by the then Malaysia Prime Minister in 1991 towards the nation's efforts of being recognized as a developed country. In one of its ideals, Vision 2020 aims to bring Malaysia to a greater height in terms of technology which is reflected in the reviews and development made to the national educational policies and practices. With technological advancement and educational progress, schools in Malaysia are experiencing constant development in technological facilities and resources. Research by Abu (2008) has identified that the use of advanced technological aids in teaching and learning would induce creativity and generate innovation among students while exploring during learning. It is also believed that with the use of new technologies in the classroom, activities may be more enjoyable and could iniate understanding with acceptance. This has been credited by several studies including that from Jamian (2012) which substantiated positive results from both teachers and students.

METHODOLOGY

Developmental Research Design by (Richey & Klein, 2007) has been used in the processes to develop Multicultural Textile Interactive Module (McTIM) in visual art education. This research will discuss the Needs Analysis performed to gather the necessary information for

Research Instrument

The researchers used a questionnaire in the Delphi Technique which is given to the panel experts to gather their suggestions about the items which should be included on this module. The Delphi technique is is used in this research because the experts should be able to provide their feedbacks without influence, bias or pressure from others because they would not know who are involved in the panel. Subsequenlty, this may be an advantage to gather further opinions and beneficial for better research in the future (Asnul Dahar Minghat, Ruhizan M. Yasin, Amirmudin Udin, 2012). For this research, seven Art and Design lecturers and four Visual Art Education teachers are inlvoled in gathering the required information.

Findings

Analysis of Delphi First Round

The analysis will discuss findings on the suitable activities that can be included in the classroom and those which should be included in the Multicultural Textiles Interactive Module (McTIM) for secondary schools. The respondents rates all the questions using the Likert Scale from strongly disagree to strongly agree. The data is analysed using the SPSS program. Data collected in Table 1.1 demonstrated the readings of median, maximum range and interquartile range for suitable activities which should be included in the classroom activities. There are six suggested activities as portrayed in the table.

Table 1.1: Statistic Descriptive for Part C suitable activities should be included in the classroom.

No.	Activity	%	Median	Max	Interquartile range	Consensus Level
1.	Knotted Pile	100	3	4	1	High
2.	Painting on fabric	100	3	4	1	High
3.	Tapestry	100	4	4	1	High
4.	Stenciling on product	100	4	4	1	High
5.	Weaving fabric scraps	100	4	4	1	High
6.	Long stitch embroidered	100	3	4	2	No Consensus

From the table, it is visible that Acitivity 1 and 2 received 100% of interquartile range suggesting that these activities must be given their places in the activities to be included for classroom activities in the McTIM module. Interestingly, Activity 3, 4 and 5 obtained high median maximum readings putting them in the 'must have' activities for the module. Five activities gained consensus with only Activity 6 not getting any concesus to be included in the module.

Summary of Delphi First Round

Table 1.2 exhibits the summary readings of the first round for the Delphi analysis. Results show that 83.3% of the activities received high consensus level from all the panel experts with 16.7% did not receive any consensus from the panel expert.

Table 1.2: Summary of Delphi Round One.

Component	High Consensus (IQR: 0-1.01)	Moderate Consensus (IQR: 1.01-1.99)	No Consensus (IQR: 2.00 & above)	Total
Activities	5	0	1	6
Total	83.3%	0%	16.7%	100%

Analysis of Delphi Second Round

The second round of data collection and analysis was performed to gauge any variations in the feedbacks received from the first round. The duration of gap between collection feedbacks from round one to round two with in a month. Table 1.3 displayed findings from the second round of the data collection. The median and maximum reading showed 3 to 4 range for all items. Interestingly, the second round displayed that all six activities received high consensus level compared to the first round in which one activity did not achieve any consensus from the panel of experts.

Table 1:3: Statistic Descriptive for Part C in Delphi second round. Suitable activities should be inserted in classroom.

No.	Activity	%	Median	Max	Interquartile range	Consensus Level
1.	Knotted Pile	100	3	4	1	High
2.	Painting on fabric	100	3	4	1	High
3.	Tapestry	100	3	4	1	High
4.	Stenciling on product	100	3	4	1	High
5.	Weaving fabric scraps	100	3	4	1	High
6.	Long stitch embroidered	100	3	4	1	High

Summary of Delphi First Round

Results in Table 1.4 showed that all six activities obtained 100 % of high consensus level from all the experts.

Table 1.4: Summary of Delphi Round Two.

Component	High Consensus (IQR: 0-1.01)	Moderate Consensus (IQR:1.01-1.99)	No Consensus (IQR:2.00 & above)	Total
Activities	6	0	0	6
Total	100%	0%	0%	100%

Wilcoxon Matched Paired

Wilcoxon matched-pairs signed-ranks test is the program that has been used by other researchers in order to get the validity and consensus level from experts (Zaharah, 2008); (Ahmad Sobri, 2010); (Norlidah, 2010); (Siti Zuraida, 2013) and (Hazlin Aisha, 2014). The final data from Delphi round one and round two was gathered in this program. From Table 1.5, the interquartile range for all the activities is 1. The data for Wilcoxon Matched Paired is from .000 to -1.730 for all suggested activities. There is no significant difference between the experts' answers from the first and second round of the Delphi data collection. The table also showed that all items received full consensus level and are suitable to be included in the McTIM module.

Table 1.5: Wilcoxon Matched Paired for Part C. Activities

No.	Activity	%	Median	Max	Interquartile range	Consensus Level	Z	No Significant different between round 1 and 2
1.	Knotted Pile	100	3	4	1	High	.000	Yes
2.	Painting on fabric	100	3	4	1	High	-1.134	Yes
3.	Tapestry	100	3	4	1	High	-1.730	Yes
4.	Stenciling on product	100	3	4	1	High	-1.134	Yes
5.	Weaving fabric scraps	100	3	4	1	High	-1.000	Yes
6.	Long stitch embroidered	100	3	4	1	High	-.378	Yes

CONCLUSION

The development of multicultural Textile Interactive Module (McTIM) for secondary teachers in art classes has shed some lights for the researchers to identify suitable content which could be included for the module. All of the respondents reflected positive acceptance towards the suggested content; textile history according race, material and tools according race, process of making textile according race, technique of making textile according race. They believe that the content and skills suggested are highly suitable for secondary school level. This is in reflection of what Banks (2001) has suggested that multicultural education should have the inclusion of content integration, equity pedagogy, knowledge construction, and knowledge transformation. Importantly, some of the knowledge and skills that students would be able to learn among others are the textile history and craftsmanship. Nevertheless, there are some concerns that need to be addressed and considered such as the time allocated for Visual Art Education classes. This concern has been a recurring topic among teachers and policy makers. Nevertheless, it has been suggested that effective classroom management skills are highly necessary for teachers to achieve the planned curriculum. This is indispensable because Banks (2001) further believe that effective classroom management in the multicultural setting is essential to create an empowering school and social culture while reducing prejudice. It is hoped that through multicultural art education both teachers and students have the platform to develop positive attitudes and openness towards diversity. Subsequently, they may develop the competencies to avoid cultural conflicts and to transmit values and knowledge relative to various cultural values.

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