artᵉ

Art and Expression

ART + COMMUNITY

EDUCATION

E
Editorial Board

THE DEVELOPMENT OF MULTICULTURAL TEXTILE INTERACTIVE MULTIMEDIA (MCTIM) BY USING ADDIE MODEL

a chapter by

AKMAL BINTI AHAMED KAMAL, SITI ZURAIDA BINTI MAARUF (DR.), NUR SHAKILA IZZATI BINTI RUSLI, RAIHA SHAHANAZ BINTI REDZUAN & NOOR FARHANI BINTI OTHMAN

Faculty of Education, Universiti Teknologi Mara (UiTM)

Abstract

The awareness in diversity and using art as a medium to infuse multicultural arts education in classroom has gained interests globally and it has yet to be implemented in Malaysian schools. This research attempts to develop a suitable Multicultural Pedagogical Module in teaching Visual Arts Education for upper secondary students. This study focuses on the design and development of a Multicultural Textile Interactive Module (McTIM) for visual art education at the secondary school level. The present research utilized the Design and Development method as suggested by Richey and Klein (2007) focusing on the processes of developing a module which is useful in teaching of Visual Arts Education at the upper secondary level. The three phases in this research are Phase one: Need Analysis, Phase two: Design and Development and Phase three: Implementation and Evaluation. However, in this study, researchers only reported on the design and development process. The research findings highlighted the development of the text module, interactive multimedia presentation, lesson plan and teaching aid for VAE teachers. The results from document analysis and a semi-structured interview conducted with visual art education teacher showed that the module has a high potential to become a new pedagogical approach that is responsive to multicultural education while enhancing communication skills between the teacher and students in a diverse classroom setting.

Keywords: *Visual arts education, Multicultural education, Design and development research (DDR)*

Introduction

Today, education continues to progress with the use of technology in teaching and learning sessions in the classroom. Towards education 5.0, technological elements should be emphasized and applied in the education system in Malaysia. New teaching aids and innovative methods are needed in our teaching and learning process because it can help children to explore new things and make lesson more engaging (Abu, 2008). This research is to build a module called the development of multicultural textile interactive teaching module (McTIM) in Visual Art Education (VAE) in secondary school. This module is also developed as a medium in teaching and learning for VAE teachers with the basis of culture, multicultural students in Malaysia, and students' achievement across different ethnicities to make the learning process more relevant and meaningful. This module is an essential component in multicultural education (Rasool & Curtis, 2000; Gollnick & Chinn, 2009). It is worthy of note that some issues might emerge in the process of developing this module. Based on previous research, there are some restrictions in understanding the multicultural education. On top of that, the lack of interactive multimedia in classroom may also affect the teaching and learning process. Teachers should know how impactful technology is in the classroom as it is largely used as a tool to support knowledge delivery (Barak, 2006). By using interactive multimedia as a teaching aid, it helps teachers and students to gain more knowledge effectively. The use of different multimedia elements like text, video, animation, sound and graphic can engage students to focus more on the learning process. In addition, teachers are able to control the type and

the amount of information they intend to deliver (Graham, 2006). This research aims to design and develop a Multicultural Textile Interactive Module (McTIM) for visual art education at the secondary school level. This research focuses on the design and development process of an interactive multimedia module using PowerPoint as a teaching platform.

away from the chair (Figure 1b). A series of six-hour lectures in introducing organic chemistry to pharmacy learners was planned with practical hours on how to draw chair conformations to represent a three-dimensional representation of closed carbon atoms ring or cyclic structures, as depicted in cyclohexane molecule (Figure 1). These lessons were provided during both face-to-face sessions, and virtual classes when the pandemic semester begun. Examples of the drawing will be shown, here. It is hypothesised that the students could understand the concept of the chair conformer, should their sculptural drawings of the cyclohexane, in a chair form, are accurate.

Research Methodology

This study adopted the ADDIE model as it best represents the sequential steps involved in the development of the Multicultural Textile Interactive Module. ADDIE model normally serves as a guideline for building effective training and instructional tools, including teaching and learning modules. According to McGriff (2000), most of the models in Instructional System Design (ISD) used the basic step in ADDIE Model elements to develop a new model.

In this research, Developmental Research Design by Richey and Klein (2007) was employed in the processes to develop multicultural textile interactive pedagogical module in visual art education. Developmental Design Research (DDR) is suitable to be applied in our education system, as a means of dealing with the existing setbacks and improving the system (Plomp & Nieven, 2007). DDR has three phases that the researcher needs to go through to complete the research. The first phase is need analysis, followed by the design and development phase and lastly is the evaluation phase. In this research,

the researcher only focuses on the second phase, which is design and development.

Findings of Module Development

All the suggestions from the surveys were used in the development of the module. The module was designed with all the data gathered. In order to assist teachers in their teaching and learning process, the researcher has made this module clear, straight forward, and easy to understand.

This module was designed in a complete package and came with a manual book of Multicultural Textile Interactive Multimedia, PowerPoint slide of Textile in Malaysia, Lesson Plan for VAE teachers to assist them in the teaching of textiles, and a teaching aid. The teaching aid is comprised mainly of flashcards with the different motifs being used in the textile arts.

In this section, the development of the Multicultural Textile Interactive Module is described and discussed. This module can help support the VAE teachers in their teaching and learning process:

a) The development of the Multicultural Textile Interactive Module

b) The development of Interactive multimedia using PowerPoint (PPT)

c) The development of daily Lesson Plan for Visual Art Education

The Development of Module

This module is to help Visual Art education teachers provide a comprehensive understanding of textiles in the classroom. The module compiles materials such as lecture notes, websites, anecdotes from practitioners and past research. In order to develop the content of the module, the researcher used the data gathered from the experts.

Figure 1: Development of McTIM

The Development of Interactive Multimedia PowerPoint Slide Presentation

To complete this phase, the researcher came up with an interactive multimedia using PowerPoint as the platform. In a multimedia application, the elements of multimedia are divided into two, whether it is static (objects that do not move) or dynamic (objects that move or change). In addition, there are five components or essential elements of multimedia namely text, graphic, audio, video and animation. These elements can be saved in their format and can be transferred to another program which can support the format.

Figure 2: Interactive Multimedia Using PowerPoint Presentation

The Development of Daily Lesson Plan

As for the lesson plan, the researcher adopted the Process-Oriented Teaching Model from Bates J., (2003). Other researchers who employed this model are (Siti Zuraida M., 2014) and (Noor Hasmida, 2015).

Figure 3: Flow of Lesson Plan for Teaching Multicultural Textile Interactive Module by Bates (2000)

Discussion

The development of the Multicultural Textile Interactive Module (McTIM) only began after all the contents identified had been approved by the experts. This module includes a manual book of multicultural textiles in Malaysia and focuses on the three major races which are Malay, Chinese A and Indian, interactive PowerPoint slide presentation and daily lesson plan for teaching textiles in the classroom. This module adopted the ADDIE model as the basis to develop this module. All the contents in this module were based on the survey from the 11 expert panels. The same data was also used in the development of the Multicultural Textile Interactive Module.

The development of the manual book of Multicultural Textile Interactive Module (McTIM) incorporated all the elements of teaching aids and equipment as real craft objects (OBL), video and audio, printed visuals, and PowerPoint slides. These are all the elements that can be offered in this phase (Siti Zuraida M., 2013).

The researcher also used PowerPoint presentation slide as one of the delivery methods in order to achieve the learning objectives. Microsoft PowerPoint is a reliable software program to be utilised in the classroom; it is because most teachers are already familiar with it especially those who are used to providing course material online. Hence, this is an ideal software for them to carry out the learning session in the classroom (Lari, 2014). Teachers indirectly can be a 'co-designer' to improve the materials shared and add new information in the PowerPoint slides (Siti Zuraida, 2013).

For the development of the daily lesson plan for McTIM, the researcher adopted Product Oriented Teaching Model (POTM) by Bates (2000). This model places emphasis on art production and activity in the classroom. Students can also enhance their communication skills with the reviews and comments given at the end of the class.

Summary

This study introduced the Multicultural Textile Interactive module in visual art education in secondary school that was developed based on the data gathered from phase one by using in-depth interview followed by second phase using Delphi technique where eleven experts were involved. This module also used a combination of theory and models to make sure the flow of the research run smoothly. Vygotsky theory and instructional models from the ADDIE model and Bates were employed. Multicultural Textile Interactive Module for secondary school is a successful invention with a complete package that contains a manual book for Multicultural Textile Interactive Module, Interactive PowerPoint slides presentation and daily lesson plan for Visual Art Education teachers. These items are developed for VAE teachers, and they will be of great help to them in the teaching and learning process. Based on the data collected, this research can be improvised for future purposes.

References

Abu, S. (2008). Menjadi Gru Tadika. Kuala Lumpur: PTS Professional Publishing Sdn. Bhd. A BOOK CHAPTER TEMPLATE 2022

Ahmad Sobri, S. (2010). Reka Bentul Kurikulum m-Pembelajaran Sekolah Menengah: Teknik Delphi. Regional Conference on Knowledge in ICT.

Akmal Binti Ahamed Kamal, S. Z. (2017). The Development Of Mctim (Multicultural Textile Interactive Module) Using Delphi Technique. Malaysian Journal of Creative Media, Design and Technology., VOL 1, NO3.

Bajunid, I. A. (2001). The transformation of Malaysia Society Through Technological Advantage: ICT and Education in Malaysia. Journal of Southeast Asian Education, 104-146.

Banks & Banks. (2010). Multicultural Education issues and perspectives 7th edition. New Jersey: John Wiley and Sons.

Banks, J. (1993). Multicultural Education: Historical Development, Dimensions and Practice. Review of Research in Education Vol. 19, 3-49.

Banks, J. (2001). Cultural Diversity and Education: Foundations, curriculum and teaching. Boston: Allyn and Bacon.

Barak, M. (2006). Instructional Principles for Fostering Learning with ICT: Teachers Perspectives as Learners and Instructors. Education and Information Technologies, 11(2), 121-135.

Bates, J. (2003). Becoming an Art Teacher. USA: Towson University.

Bates, J. K. (2000). Becoming An Art Teacher. California: Wadsworth, Cengage Learning.

Gollnick, D. &. (1990). Multicultural education in a pluralistic society (3rd ed.). New York: Macmillan.

Graham, D. &. (2006). Multimedia, a Course in the information Technology Programme. Multimedia Learning Environment According to the ADDIE Model and Students' Opinions of the Multimedia Learning Environment , 1-19.

Hamdan, A. R & Yasin, H. M. Penggunaan Alat Bantu Mengajar (ABM) Di Kalangan Guru-Guru Teknikal Di Sekolah Menengah Teknik Daerah Johor Bahru, Johor Fakulti Pendidikan, Universiti Teknologi Malaysia.

Ibrahim, Dr. A., Pembelajaran berpusatkan pelajar dan kaitannya dengan pembangunan diri dan peluang pekerjaan. Kolej Universiti Kejuruteraan dan Teknologi Malaysia (KUKTEM). Tesis Ph.D.

Jamaludin Harun dan Zaidatun Tasir (2003). Multimedia dalam pendidikan. Kuala Lumpur. : Percetakan Cergas (M) Sdn. Bhd.

Khairuddin Nisa (2011). Rekabentuk Instruksional Berdasarkan Model ADDIE : Analisis Kajian di Emporia State University

Lari, F. S. (2014). The Impact of Using PowerPoint Presentations on Students'. Procedia - Social and Behavioral Sciences 98, 1672-1677.

McGriff, S. (2000). Instructional System Design: Using ADDIE Model.

Najeemah, M. Y. (2008). Multicultural Education: Managing Diversity in Malaysia Schools . 1-8.

Noor Hasmida, M. (2015). The Development of Culturally Responsive Pedagogy in Traditional Crafts Ceramic for Secondary School. Shah Alam: Universiti Teknologi Mara.

Rasool, J. , & Curtis, C. (2000). Multicultural education in middles and secondary classrooms: Meeting the challenge of diversity and change. Toronto, Canada : Wadsworth.

Richey & Klein. (2007). Design and Development Research: method, strategies and issues. London: Erlbaum.

Richey, Klein & Neilson . (2004). Development research: Studies of instructional design and development. New Jersey: Lawrence Erlbaum Associates.

Richey, R. C. (1997). Research on Instructional Development. Educational Technology Research and Devlopment, 45(3).91-100.

Siti Zuraida, M. (2014). Pembangunan Modul Pedagogi Responsif Budaya Kraf Tradisional Pendidikan Seni Visual Sekolah Menengah. Kuala Lumpur: Universiti Malaya.

Siti Zuraida Maaruf & Saedah Siraj (2013) The State of Technology and the Arts - Interactive Multimedia in Enhancing Culturally Responsive Pedagogy. 13th International Educational Technology Conference. University Malaya, Kuala Lumpur, Malaysia. 13-15 May 2013. Elsevier Open Access Journal, Science Direct - Procedia Social and Behavioural Sciences •Volume: 103 •Pages:1171-1180 •ISSN: 1877-0428 •DOI: https://doi.org/10.1016/j.sbspro.2013.10.444

Tjeerd Plomp & Nienke Nieven . (2007). An Introduction to Educational Design Reseacrh. East China Normal University. Shanghai: Netherlands institute for curriculum development.

Pejabat Perpustakaan
Librarian Office

Universiti Teknologi MARA
Cawangan Perak
Kampus Seri Iskandar
32610 Bandar Baru Seri Iskandar,
Perak Darul Ridzuan, MALAYSIA
Tel: (+605) 374 2093/2453 Faks: (+605) 374 2299

**UNIVERSITI
TEKNOLOGI
MARA**

Surat kami : 700-KPK (PRP.UP.1/20/1)
Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim
Rektor
Universiti Teknologi MARA
Cawangan Perak

Tuan,

**PERMOHONAN KELULUSAN MEMUAT NAIK PENERBITAN UiTM CAWANGAN PERAK
MELALUI REPOSITORI INSTITUSI UiTM (IR)**

Perkara di atas adalah dirujuk.

2.   Adalah dimaklumkan bahawa pihak kami ingin memohon kelulusan tuan untuk mengimbas
(*digitize*) dan memuat naik semua jenis penerbitan di bawah UiTM Cawangan Perak melalui
Repositori Institusi UiTM, PTAR.

3. Tujuan permohonan ini adalah bagi membolehkan akses yang lebih meluas oleh pengguna
perpustakaan terhadap semua maklumat yang terkandung di dalam penerbitan melalui laman
Web PTAR UiTM Cawangan Perak.

Kelulusan daripada pihak tuan dalam perkara ini amat dihargai.

Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"

setuju.

27.1.2023

Saya yang menjalankan amanah,

PROF. MADYA DR. NUR HISHAM IBRAHIM
REKTOR
UNIVERSITI TEKNOLOGI MARA
CAWANGAN PERAK
KAMPUS SERI ISKANDAR

SITI BASRIYAH SHAIK BAHARUDIN
Timbalan Ketua Pustakawan

nar