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## ***E-REKAD: Enhancing students' understanding of visual art education in Malaysian schools***

**Siti Zuraida Maaruf<sup>1\*</sup>, Nor Hafiza Fadzir<sup>2</sup>, Nur Shakila Izzati Rusli<sup>3</sup>,  
Nur Nabihah Mohd Nizar<sup>4</sup>, Wang Ling<sup>5</sup>**

*\*Corresponding Author*

<sup>1</sup> Department of Art Education, Faculty of Education, Universiti Teknologi MARA, Puncak Alam, Selangor Darul Ehsan, Malaysia

<sup>2</sup> Department of Art Education, Fairview International School Subang Jaya, Selangor Darul Ehsan, Malaysia

<sup>3</sup> Department of TESL, Faculty of Education, Universiti Teknologi MARA, Puncak Alam, Selangor Darul Ehsan, Malaysia

<sup>4</sup> Department of Education Foundation and Humanities, Faculty of Education, Universiti Malaya, Kuala Lumpur, Malaysia

<sup>5</sup> Department of Art and Design, Chengdu Academy of Fine Arts, Xindu District, Chengdu, China

sitiz610@uitm.edu.my, norhafiza@fairview.edu.my, nshakilaizzati@uitm.edu.my, numabihah@um.edu.my, 422821454@qq.com  
Tel: +60176525400

### **Abstract**

This study addresses the contemporary approach of integrating digital technology into education, focusing on developing the Interior Design Digital Module (e-RekaD) as a teaching aid for Form Four Visual Arts Education. Following the ADDIE model, the research employed a descriptive quantitative design with qualitative data. The need analysis involved five experts and identified a significant demand for the module to enhance student understanding. Visual Art teachers showed enthusiasm for digital integration, anticipating improved pedagogical skills, especially in digital literacy. Overall, the study highlights the imperative role of digital modules in advancing Interior Design education within the framework of Education 4.0.

**Keywords:** Teaching Module, Scaffolding, Interior Design, Visual Arts Education

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### **1.0 Introduction**

According to Ahmad Suffian et al. (2019), the government gives Visual Arts education less recognition, which can result in fewer students pursuing this field. This lack of acknowledgment is reflected in secondary schools, where Visual Arts education is viewed as less important than other subjects. Consequently, students do not prioritize learning Visual Arts, reducing the number of students with artistic skills. There is a need to develop new learning materials emphasizing the importance of Visual Arts to address this issue. In Malaysia, traditional classroom teaching methods are still prevalent in secondary schools, hindering the teaching and learning process and students' artistic abilities. Ahmad Suffian et al. (2019) supports this view, stating that conventional teaching approaches can restrict students' creative potential and understanding of art.

According to Halili and Sulaiman (2018), conventional teaching methods are becoming less effective in the 21st century (PAK21) as students are more exposed to advanced learning techniques. However, Harozila et al. (2019) found that many visual arts teachers need more time to be ready and willing to use technology. Despite the potential benefits of digital modules, these teachers believe such

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materials can limit their students' artistic skills and understanding of art. Nevertheless, according to Maaruf S. Z et al. (2019), the individual interpretation of student learning allows teachers to create customized teaching materials and strategies. Digital modules can also facilitate student-centered learning, which appears more effective than traditional teacher-centered methods (Shofiyati et al., 2020). By using digital modules, students can learn new methods of acquiring information and gain a better visual understanding of the material. Furthermore, past research has suggested that implementing modules as teaching materials can promote independent learning among students (Shofiyati et al., 2020). This study aims to observe the content and implementation of the interior design module in the student learning experience and evaluate its usability among Form Four students in secondary schools. Thus, this paper concentrates on two main objectives:

- a. To investigate the teachers' opinions and suggestions regarding the current layout of the textbook for the Interior Design topic.
- b. To explore teachers' opinions and identify suitable topics and contents for the development of an Interior Design Digital Module (E-REKAD) to enhance teaching and learning of Visual Arts.

## 2.0 Literature Review

The Malaysian Education Blueprint (PPPM) 2013-2025 was implemented to reform the National Education Curriculum, from Secondary School Integrated Curriculum (KBSM) to the Standard-Based Curriculum for Secondary Schools (KSSM) in 2017. The Ministry of Education Malaysia (MOE) has introduced Transformational Education, which focuses on providing equal access to international education, ensuring high-performing leaders are placed in every school while using ICT to improve the quality of learning in Malaysia. This initiative includes visual arts subjects in secondary schools. Given the necessity of retaining and applying information for students' advancement in contemporary learning environments, it is imperative to incorporate new technologies in educational settings. Recent audio and visual technology developments have emerged as a novel approach to education, significantly impacting the learning process and the overall classroom environment (Shamsudin and Yunus, 2022). Malaysian educators in the Education 4.0 era must adapt to the evolution of digital education. They need to possess technological and digital competence, recognizing the pivotal role of technology in enhancing classroom teaching and learning effectiveness (Mei et al., 2022). However, the same study revealed that the teachers achieved a lower level of *Quite Good* in *Technological and Digital Competency*.

In addition, the use of technology in visual arts education in teaching and learning is still lacking. The different learning materials in visual arts can help students engage and participate, thereby increasing their interest in the subject. In a study done by Kalamatianou and Hatzigianni (2018), findings suggested that the use of specialized art software for exploring late 19<sup>th</sup> to early 20<sup>th</sup>-century paintings in the classroom resulted in positive impacts on creative engagement, aesthetic perception, and peer collaboration. In Saudi Arabia, students strongly agreed that the utilization of technology motivates them to explore new approaches to artistic tasks (Alawad, 2013).

## 3.0 Methodology

This study employed the case study research design which utilizes the Design and Development Method (Richey & Klein, 2007). This study is to develop an interior design digital module (E-REKAD) that aims to enhance the teaching and learning of visual arts in secondary school. The research consists of three phases namely Phase 1: Needs Analysis, Phase 2: Design and Development, and Phase 3: Implementation and Evaluation. However, this paper will only present the findings from Phase 1.

Sample (N)	Sampling Technique	Research Instrument	Data Analysis
5 Visual Art Teachers with more than five years of experience in teaching Form Four students at several secondary schools	Purposive Sampling	Semi-structured interviews	Thematic Analysis

3.1 Matrix of Sample, Instrument and Data Analysis

## 4.0 Findings

The results of the analysis were obtained from interviews conducted with experienced Visual Art teachers regarding their opinions on the current layout and contents of the Interior Design topic. All teachers agreed that the content of the module should include graphical elements to make it more engaging for students. Furthermore, the teachers preferred the use of digital applications and technology in the development of Interior Design module content.

### 4.1 Teachers' opinions regarding the current layout of textbooks for Interior Design topics

Respondents 2, 4, and 5 expressed their opinions that the layout of the textbooks is excessively simplistic and uninteresting. This inadequacy may lead to reduced engagement among students, leading to a lack of enthusiasm for learning interior design topics. As interior design is one of the most challenging subjects among visual arts teachers, incorporating visually engaging information in textbooks would greatly enhance the teaching and learning experience.

**Respondent 2 stated:**

*The layout is simple, and few students do not understand the topic of Interior Design due to insufficient information. A hard copy is also necessary, and there was not enough inclusion of digital info such as links or activities that can make students better understand this topic. Apart from that, the textbook has all kinds of new things and new words that may be difficult for the teacher to explain to the students. So, interesting modules and concise, descriptive info will help students learn interior design.*

**Respondent 4 stated:**

*Basically, the interior design description is very brief. What is in the textbook is what is taught. If you want more info, you must look for new information on the internet. Basically, you need to know the subtopics in interior decoration such as site plans, floor plans, and 3D. The layout is so simple that students would rather avoid reading.*

**Respondent 5 stated:**

*The topic of interior design is more related to renovation. In the space example, students are required to enlarge the bedroom and so on. The layout in the textbook could be more extensive, so I had to look for additional information on the internet.*

#### **4.2 Teachers' opinions regarding the contents of Interior Design from the textbook**

The respondents unanimously agreed on the significance of the interior design topic. However, they felt that it lacked adequate supplementary information. For visual arts teachers, finding additional sources of information can be a daunting task, given the time constraints within which they are required to complete the syllabus. To address this challenge, the development of comprehensive learning modules specifically tailored to the topic of interior design could be a viable solution to enhance the quality of teaching and learning experience.

**Respondent 1 stated:**

*If you look at the old KSSM textbook, the book is helpful. Each topic is complete, especially the topic of interior design. Each topic is complete with information. But for the KSSM syllabus, only the new syllabus is less erm, it is simple in terms of information and less cohesive. For example, the topic of level 4 has fewer details in the textbook.*

**Respondent 2 stated:**

*The contents of the interior design topic comply with the syllabus. It's just that the content for each subsequent subtopic lacks substance, making it hard for students to understand the topic of interior design. Furthermore, the textbook uses a lot of new words that can be foreign even to the teachers, which may be difficult for us to explain to the students. If possible, the module should focus on drawing plans and include furniture in the topic of interior decoration. One more thing, the time allocated for the topic of interior design is not sufficient for students to make a drawing of furniture.*

**Respondent 4 stated:**

*Truthfully, the content is very brief. What is in the textbook is what is taught. If you want more info, you must look for new information on the Internet. You must know the subtopics in interior decoration such as site plans, floor plans, and 3D. The layout is so simple that it hampers students' learning experience.*

#### **4.3 Teachers' gaps in teaching Interior Design topics to the students**

The interview findings revealed that the respondents faced challenges related to information inadequacy and time constraints when teaching interior design topics. Moreover, the materials currently in use were found to be lacking, highlighting the need to bridge this gap. Additionally, the respondents noted that the module's activities should be differentiated for low-achieving and high-achieving students. Consequently, it would be essential to design a comprehensive module that addresses these gaps and enables efficient and informative teaching and learning for all students.

**Respondent 2 stated:**

*Activity is an issue in interior design. Other than that, time and equipment constraints. Drawing a plan in interior decoration takes a long time, and students need to draw furniture according to the appropriate size and scale using a ruler. They also need a ruler to draw to the right scale. If possible, I want to save time by conducting activities that do not take a long time and follow the students' pace. The construction of the module should consider the initial sketches of interior decoration drawings, and new items can be added. Students can also learn the process of sketching.*

**Respondent 3 stated:**

*If they want to learn something, the teacher must demonstrate it to the students. An activity that interests students to learn. That's the catch, the use of technology. Because students are more interested in something that involves technology. A digital module is indeed an interesting means for students to learn.*

**Respondent 4 stated:**

*There are new words or information that are a little confusing, and I must look for information on the internet. This new information in the textbook can be further explained with effective modules. Time constraints are also a setback when teaching the topic, so the information must be clear and concise to save time.*

#### **4.4 Teachers' opinions on the development of an interior design module to enhance students' understanding.**

According to the respondents, developing a comprehensive module would significantly enhance students' understanding of the topic of interior design. By incorporating technology tools in the module, teachers can better deliver the technically involved subject matter. Given the complexity of interior design topics, the learning process is crucial in enhancing students' comprehension.

Respondent 1 stated:

*The topic of interior design requires a module because the questions are difficult and require extensive learning. One of the reasons is it involves the technical part, so students need an overview of the process to understand the topic of interior design easily. They have a problem understanding without reference to the description because they do everything individually. Not all students can master the work given separately, technical-wise. So, a module that promotes learner autonomy is much needed.*

Respondent 2 stated:

*I see students have different skills, so the modules should be according to individual skills. Come up with an exciting module with a lot of infographics. I think it is possible to incorporate more group projects that will not take a long time. If individual projects are quite time-consuming, unskilled students will be left behind. To heighten their understanding of the topic, the module may include the sketching process in the interior design. Also, an interesting and easy-to-understand plan drawing video process.*

#### 4.5 Teachers' suggestions of content to be included in the Interior Design module.

According to respondents 1 and 2, incorporating a more varied layout in the explanation of the interior design topic is likely to enhance student engagement. In addition, the respondents emphasized the importance of integrating technology as a supportive aid to facilitate student learning. Furthermore, the module's activities should be tailored to the different levels of students while incorporating applications and other digital tools, such as websites, to enhance their learning experience.

Respondent 1 stated:

*For me, the activity for the topic of interior design should focus on one space because students are slightly behind in recognizing the type of furniture and its size. If the project is large, students will not understand or be slow to understand. So, it is quite time-consuming to perform the task. Technology has been rapidly integrated into teaching and learning and everyone owns at least one device, so it is easy for them to learn on their own. Maybe in the subsequent modules, there can be interactive activities that require them to draw or arrange objects or anything that is related to interior decoration through games or digital applications.*

Respondent 2 stated:

*Drawing activities are common among students. So, the module needs to be more interactive to appeal to students. Therefore, I suggest composing modules that incorporate games or other digital applications. The modules should be tailored according to the different levels of students.*

## 5.0 Discussion

All respondents expressed their agreement on the development of a digital module for the Interior Design topic. The respondents identified suitable content, including visually appealing information and exercises such as digital learning content for high-achieving students and templates for lower-achieving students. The respondents also noted that time constraints present a significant gap when teaching complex Interior Design topics. Therefore, an Interior Design digital module served as a supportive teaching material to save time for both teachers and students, enhancing their understanding of the topic. The respondents emphasized the importance of a more detailed and visually engaging layout to attract students' interest. A design that is visually appealing and behaviorally interactive has a positive impact on learners' emotions and combining both elements can enhance learning performance (Shangguan et al., 2020).

The respondents also suggested integrating technology into activities to enhance student learning, which was found to be an important aspect of the module. Some respondents emphasized the technical nature of interior design and the importance of a learning process that promotes students' comprehension. Harozila Ramlia et al. (2019) found that the integration of technology in visual arts instruction improved students' understanding, which underscores the importance of incorporating technology in interior design education. This corroborates the findings from Sabron et al. (2020), which showed a notable correlation between smartphone usage in educational settings. Students predominantly utilize smartphones as a means of information retrieval, benefiting from the accessibility of these devices anytime and anywhere. Aside from enhancing learner autonomy and confidence, the learning tools and applications integrated into smartphones contribute positively to their academic performance, especially for low-achieving students.

Our findings suggest that incorporating a varied layout and appropriate content in textbooks can stimulate students' interest in interior design. Xing and Fadzil (2021) similarly highlighted the importance of appropriate content in enhancing teaching and learning processes. Additionally, the respondents identified textbooks' insufficiency in providing adequate information for the Interior Design topic, emphasizing the need for a more thorough review of existing textbooks' contents to arrange a better explanation for the students. The findings also highlight the need for further reviews of existing textbooks to enhance teaching and learning in various subjects (Xing & Fadzil, 2021).

## 6.0 Conclusion & Recommendations

The findings of the study indicate that all the respondents approved of the content of the interior design topic, but they highlighted the need for additional sources of information due to the limited information provided in existing textbooks. Therefore, this study suggests a

new direction for developing a module as a supplementary resource that can assist teachers in providing additional information and materials to students. Time constraint is also a major challenge when teaching interior design topics, which requires varied materials and activities to effectively engage students. Based on the findings, the module should include different activities tailored to the learning needs of low-achiever and high-achiever students to fill the gaps in their understanding of the subject. To improve the quality of teaching materials, it is recommended to follow the steps outlined in previous research and develop experimental textbooks that can serve as a guide for teachers and students in understanding the subject (Maaruf S. Z et al., 2022). One limitation of this study is that the findings may not be generalizable to a broader population, as the study used purposive sampling. However, this study supports the integration of technology tools and varied layouts in the development of interior design modules to enhance students' understanding and interest in the subject. By considering appropriate content and visuals, we can support teachers in creating effective learning experiences for all students, regardless of their level.

## 7.0 Paper Contribution to Related Study

This study serves to introduce a new teaching material to supplement the teaching and learning of Visual Art Education.

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