

Malaysian Architectural Heritage iBook-An Innovation Tool for Teaching and Learning

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Highlights: Utilizing technology in teaching nowadays is a must because of the trend of gadget fever by the current student in their daily life. Development of digital content in teaching and learning using iBook will be enhancing the effectiveness of teaching and learning in the university. By integrating the dynamic instructional design and technological pedagogical content, it will be resulting an iBook which is relevant, interactive and catchy.

Key words: *iBook, Digital Content Development, Dynamic Instructional Design, Interactive Teaching and Learning, Technological Pedagogical Content.*

Introduction

iBooks is an interactive e-book build by instructors or lecturer using iBooks Author for their students to enhance learning experience by utilizing flipped learning and personalize learning. The interactive widgets in iBooks which can be customized by users is the uniqueness of this Apple application. Using iBook with the iPad is the most suitable way to make it interactive and touchable. According to a research about wireless writing project using iBook for grades 6 and 7 students writing assignment conducted by Dr. Sharon Jeroski, researcher of Horizon Research & Evaluation in collaboration with Apple Canada found that iBook improved 22% of student writing achievement and teacher, parent and student are all extremely enthusiastic about the use of iBooks and their impact on student achievement, motivation, and attitude.

The iBook is one of the best material for teaching and learning nowadays because of the nature of the student which are most of their time using the electronic gadget such as tablet and mobile phone. A research about how long can students pay attention in class mentioned; "Contrary to common belief [references to this belief are cited], the data in this study suggest that students do not pay attention continuously for 10-20 minutes during a lecture. Instead, their attention alternates between being engaged and nonengaged in ever-shortening cycles throughout the lecture segment" (Bunce, D.M., Flens, E.A., and Neiles, K.Y.,2010). Therefore, teacher should use various method to engage student to their teaching by using a variety of instructional approaches including iBooks.

Creating an interactive iBook should involve designing suitable widget and material or content in order to make them relevant and engaging. So the teacher or lecturer must know the suitable approach for their target user and these need the integration between technological pedagogical content and dynamic instructional design.

Content

1. Description of the process and product development

The Malaysian Architectural Heritage iBook created as the continuity of UMK Digital Content Development Workshop last year. The participant following the instruction via iTunes U created by instructor Wei Sen Loi from Universiti Teknikal Malaysia, Melaka. This iBook is not yet being used by UMK student but it is predicted to help student engagement and achievement for Architecture & Heritage course. The process involve in the making of this iBook is shown in the figure 1.



Figure 1: Development Process of Malaysian Architectural Heritage iBook

This process follows the Dynamic Instructional Design Model (Level et al, 2011) which includes the following phases which are:

- a) Analyze the **learner characteristics**, task to be learned, etc. – In this phase, the instructor must identify the learner about: -
 - i. Study Behavior - student will use the iBook to study alone with or without instructor. In this case the iBook was designed for both with and without instructor.
 - ii. Background of the student - their origin from science or art. In this case, targeted students are more to art background.
 - iii. Subject Background – In this case, architectural heritage is more historical and characteristic of architectural heritage in Malaysia. So the iBook is designed by having a lot of pictures, videos and diagrams of spaces and their functions.
- b) Design **learning objectives**, choose an **instructional approach**. The learning outcome of this iBook is by completing this iBook, the student will be able to identify the characteristics of the architecture and heritage in Malaysia such as Malay Architecture, Chinese Architecture and Colonial Architecture.
- c) **Develop** instructional or iBook **materials**. This includes:
 - i. Digital storyboard for contents, media and activities. It is important to plan the contents of the iBook to make it relevant, simple and well integrated among contents, media and activities.
 - ii. Choose the best **template** for the overall iBook and start writing. For this iBook, the Photo Book template has been chosen because it is suitable for showing the pictures of architecture of heritage buildings.
 - iii. Choose the right **widget** for interactivity to extend to a deep level of knowledge understanding. For this iBook, the widgets used are as follows:
 - **Gallery** – Slide-able picture gallery used to show pictures of spaces, elements and overall heritage buildings.
 - **Media** – Contains introduction video of the book and video of the heritage building for the student to get the real picture of the heritage building.
 - **Review** – This review or short quiz has been inserted in every chapter to make sure the student can recall what they have read. The review has been designed in various forms such as multiple choices, match etc.
 - **Interactive Image** – This feature is designed to show the elements and spaces of heritage buildings, integrated with diagrams, building plans and building perspectives. It was also used to show the location of the house in the Malaysian map according to each state.
 - **Scrolling Sidebar** – This feature helps to explain more information in diagrams.
 - **Pop-Over** – An information pop-over is used to show information in particular points such as space in a picture, diagram, plan and etc.
- d) **Implement** and **deliver** or distribute the instructional materials – For the iBook, it is meant to be published in the iBooks Store which can be downloaded by users from 51 countries. It can also be used in iTunes U for blended classrooms.
- e) **Evaluate** to make sure the material achieved the desired goals. This will be the future action after the first batch of students uses it.

2. Why are they important to education?

According to Burt Lo and Joe Wood about 7 Reasons to Learn Apple iBooks Author Now in thejournal.com, they identified seven reasons why people especially lecturers should consider adding iBooks Author to their knowledge base: -

- a) **Curate learning** - iBooks Author provides a powerful tool for teachers to use when curating instructional materials. Unlike many web-based resources, these materials can be organized into a book-like format while still incorporating interactive features, such as hyperlinks, video clips, presentations, 3-D objects, and photo galleries. iBooks Author is designed to make quick use of materials you already have, including text documents, spreadsheets, and presentations.
- b) **Publish easily** - iBooks Author gives teachers and students a free and accessible tool for creating digital texts. In addition, schools and districts have expressed a great deal of interest in publishing their own materials for staff for both professional development and information updates.
- c) **Share for free** - Free and fee-based books can be shared directly with the world through the iBookstore.

- d) **Create interactive objects.** - iBooks Author provides a variety of interactive objects authors can embed into their digital texts. This allows books to become truly multimodal, providing content to readers in multiple formats.
- e) **Transition simply** - it can be slide smoothly via ipad and make learning more engaging and portable.
- f) **Update quickly** - Whether you choose to share files locally or through the iBookstore, e-books created with iBooks Author can be easily updated and made available for your readers through a quick download.
- g) **Learn anytime, anywhere** - Since books published with iBooks Author are self-contained files, teachers can develop resources that can be accessed anytime and from anywhere. Interactive graphics and videos are built right into the document and do not require an internet connection to operate. Additionally, as students read through the text they can highlight key sections, add notes, and create flashcards that will stay on their iPad, available for use with or without an internet connection.

In this case, this iBooks will become a helpful material to support in and outside class learning especially for Malaysian Architectural Heritage course. It can be class material not only for UMK student, but also for all student in Malaysia.

3. Advantages of innovation towards education and community.

This iBooks can be published in iBooks store and can be viewed by 51 countries all over the world. It is not only promoting our diverse Malaysian architectural heritage for Malaysian people, moreover promoting it to the world. Therefore, indirectly this iBooks will enhance Malaysia tourism and economy as well.

4. Commercial value in terms of marketability

In iBooks store, the iBooks developers can sell their iBooks based on agreement with Apple on the price in worldwide. So it is already easy to sell and because of this iBooks have unique value of Malaysian Architectural Heritage, it can be sold in reasonable price for extended version. But because this product is for educational purpose, it is free for everyone to purchase it.

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