Developing ESP Multimedia Courseware for Taiwan Tri-Mountain National Scenic Area

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摘要

在觀光局積極推動下，2012 年來台旅遊已突破 8 百萬人，其中國家風景區發展更是打造觀光景點的重要計畫。為有效行銷台灣，英文成為國際溝通的主要語言之一。本研究目的是開發一套以臺灣參山國家風景區為主題的觀光英語數位導覽教育軟體。此軟體設計符合 Mayer 的多媒體學習認知理論，且語言學習部分也符應 Chapelle 的電腦輔助語言學習的理論。 軟體內容包含該風景區熱門景點的中英文介紹，並整合「聽、說、讀、寫、譯」語文訓練, 及即時線上評量與學習回饋系統。評量系統中有五種語言測驗「聽力練習」、「字彙填空」、「句子重組」、「英翻中寫作」、「中翻英寫作」等,且每個景點皆可透過網際網路與官方網站連結, 提供學習者更多資訊。

關鍵字：多媒體、教育軟體、數位學習、專業英語、觀光旅遊

Abstract

In recent years, upgrading tourism industry has become an important issue to promote Taiwan positive image and enhance economic development. Due to globalization, English as an international language for global communication is a necessary element. The aim of this study is to develop multimedia courseware for learning tourism English for one of popular national scenic areas, Tri-Mountain. The courseware design was based on Mayer's multimedia learning cognitive theory and its language learning focused on Chapelle's suggested criteria for development of computer-assisted language learning (CALL). The content of material includes English and Chinese introductory texts about famous sits of the scenic area and combines with integrative English learning skills such as reading, listening, writing, speaking and translation. An online self-evaluation system with instant checking function is also developed. The evaluation system includes five different types of language tests such as listening test, cloze test, sentence reconstructing and bilingual translation writing for learners to practice on. In addition, the hyperlink of each tourist spots in the courseware to the official website can provide learners with more authentic materials. The courseware will be integrated into instruction for students of English as a foreign language (EFL) to investigate their satisfaction and attitude.

Keywords: Multimedia, courseware, E-learning, English for specific purposes, Tourism

I. INTRODUCTION

Taiwan has had much more opportunities to establish relationship with foreign countries since Taiwan is a member of World Trade Organization (WTO). In order to upgrade societal and country competition, the ministry of education of Taiwan advocates a policy, especially for technical and vocational educational programs to provide students with foreign language ability and advanced professional knowledge necessary to succeed in the global job market [1]. This rapidly-growing tendency makes English for specific purpose (ESP) a vital issue. ESP is renowned as a learner-centered and content-based approach to EFL teaching or learning.

ESP also focuses on the needs of learners who need to improve and acquire English proficiency for application in specific fields, such as business, medicine, technology [2]. In fact, there are some problems in the development of ESP courses. After a survey for 350 students in four technical universities to investigate their English proficiency, their needs when taking ESP courses, and their expectation of an ESP instructor, Lai "unpublished" [3] found that there is a lack of qualified teachers, curriculum design and authentic material.

Nowadays, tourism has become a growing segment of the service industry around the world. According to Taiwan Tourism Bureau survey, a total of eight million visitors came to visit Taiwan in 2013. Tourism has played an important role in increasing GDP (Gross Domestic Product) of a nation [4]. To promote Taiwan tourism industry, English, as the main tool for global communication is a requisition of essence in order to set up better communication with foreign visitors. Thus, it is important to develop ESP courseware for tourism in higher education through which students not only will get wide

understanding about local natural sites, but also improve their related English skills to promote Taiwan to people all over the world.

In addition, the integration of multimedia courseware into instruction could be an effectively tool for ESP learning [5, 6]. The development of ESP courseware is an interdisciplinary task including tourism English, information technology, and multimedia techniques. However, few researches have been focused on developing courseware to promote Taiwan National Scenic Areas.

The purpose of the study is to develop multimedia courseware for Taiwan Tri-Mountain National Scenic Area, one of the most popular tourist spots. The courseware will includes a variety of multimedia components such as English texts with their audio and Chinese translation, images, and an online evaluation system for learner to practice integrative English skills such as listening, speaking, reading, and writing.

II. METHODOLOD

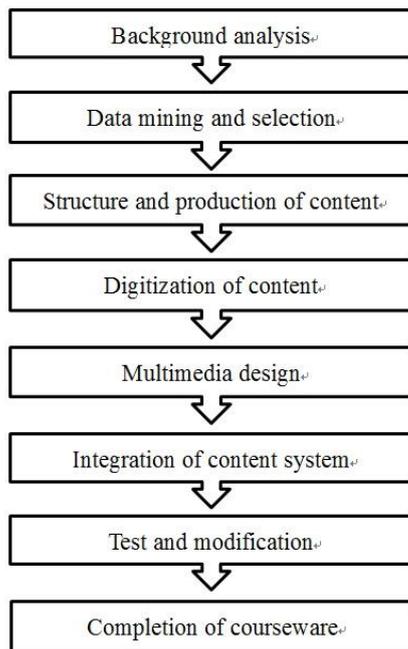In this study, the procedure of the courseware development is shown in Fig. 1 [9].

Figure 1. The procedure of the courseware development.

The software used in the courseware development includes Microsoft, Audacity and Photoshop, to incorporate all aspects of resources such as text, audio, pictures into a system programmed with Java Script. The development of the multimedia courseware material was based on Mayer's multimedia learning cognitive theory [7] and Chapelle's seven suggested criteria for development of multimedia CALL [8]. The bilingual content of the

courseware were excerpted from the official website Tri- Mountain National Scenic Area (http://www.trimt-nsa.gov.tw/welcome/index.html). The structure of the multimedia courseware is shown in Fig. 2.
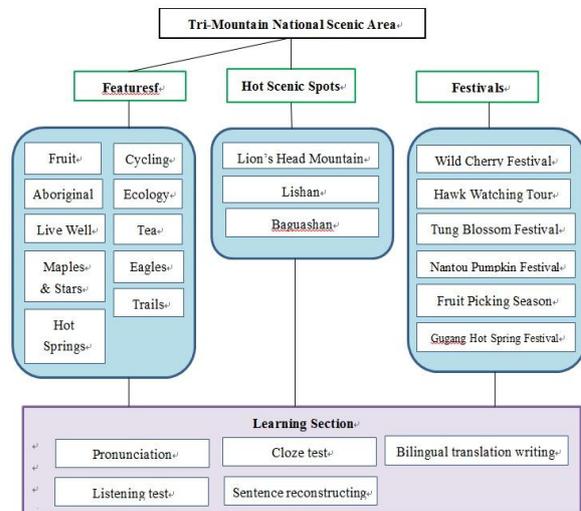

Figure 2. The development of multimedia courseware materials.

III. Results and Discussions

The main page of the courseware for Tri-Mountain National Scenic Area is shown in Fig. 3. The bilingual interface (English and Chinese) was designed to create a user-friendly learning environment for Chinese learners. By moving the three section buttons of the mouse, the button will appear bilingual interface. Teachers and learners can print whole text of courseware, by clicking a "Text Print" button on the button lower right of the screen. By clicking one of the three section buttons, learners can have the access into the topics of the selected section, shown in Fig. 4. By further clicking any topic button, learners will have the access into the learning unit which includes subject content and its language practice as shown in the Fig. 5. In addition to the target English content shown in the middle of the screen, some languages activities are shown on the left side of the screen.

Figure 3. Main page of multimedia courseware Tri-Mountain National Scenic Area.

Figure 4. The main page of the selection of Introduction to Famous Tourist features

Figure 5. The learning content and activities of selected website.

The operational mode of the language learning is explained below: When learners touch any paragraph of English content in the learning unit, the color of the sentence turns into blue, shown in Fig. 5. By clicking the left button of the mouse, the touched paragraph is spoken in English for learners practice reading, and listening skills. Such a design of the English sentence presented with its audio to Mayer's modality and multimedia principles [7]. Furthermore, the Chinese translation will be shown in a pop-up window near the paragraph by clicking the right button of the mouse which corresponds to Mayer's temporal and spatial contiguity principles [7]. This translation support allows learners a better text comprehension. According to what has been mentioned above, the subject content and its language activities provided by the courseware are correlated. This content-based and linguistic layout corresponds to Mayer's coherence principle [7].

In addition, by clicking the picture on the lower left of the screen, the hyperlink to the official website will be done to provide learners with opportunities for accessing to the supplementary materials or resources. The online evaluation system includes five types of language tests with different difficulties. When leaners select one of these tests, all questions in the test are randomly assigned by the courseware

program for learners to practice on. Additionally, the whole learning activities are combined with self-checking function which can instantly correct learner's errors as shown in Fig. 6 and Fig. 7. If learners do not know how to answer the question, by clicking the button of speaker at the end of the question, the sentence of the question will be spoken to help learners. The design of this function corresponds to Mayer's signaling principle in multimedia learning advanced principles [7].

Figure 6. The self-checking system for the cloze test. The incorrect answer is indicated with a line in red, while the correct ones in green. Reference answers are also displayed above the learners' answers.

Figure 7. The self-checking system for the sentence restructuring. The incorrect part of learners' answers is presented in red, and its reference answer is in green.

The blueprint of this multimedia courseware also meets Chapelle's seven suggested criteria for multimedia CALL [8]. The multimedia courseware includes with English audio with paragraph subtitles. Meanwhile, the color of the sentence will change and its English audio and Chinese translation will be provided when by clicking the mouse. These features of color, audio and translation are in accordance with Chapelle's first suggestion of making key linguistic characteristics salient through highlighting them in different color [8].

Based on learner' needs and learning pace, the multimedia courseware offers learners a variety of opportunities to repeatedly practice integrative

English skills with written English contexts and English audio. This linguistic input modifications corresponds to Chapelle's second suggestion [8] indicating that the multimedia material could provide modification for linguistic input in several ways, including repetition simplification through restatements, non-verbal cues, decreased speed, reference materials and change of input mode.

The multimedia courseware consists of five online language tests with instant self-check function so that learners can have more opportunities for a better comprehensible output. This feature corresponds to Chapelle's third suggested criteria [8]. Moreover, this evaluation system with instant feedback function allows learners to recheck, reflect, identify and correct their errors. This design features correspond to Chapelle's fourth and fifth suggestions, that to provide more opportunities for learners to notice their errors and correct their linguistic output [8]. Chapelle's sixth and seventh, suggested criteria regarding supporting modified interaction between the learner and the computer and acting as a participant in L2 tasks [8], can be achieved by interaction between the computer and learners done by mouse clicking, text hyperlinking and numerous learning activities in language and in subject content.

IV. Conclusion

In this present study, the courseware consisted of authentic texts with English audio and translation support, narration, integrative language practice, and online tests with instant self-checking. Thus, learners can have the freedom to explorer all the content-based or linguistic activities at their own pace and on their learning needs. This study based on Mayer's principles of multimedia cognitive theory and the language learning was based on Chapelle's suggested criteria for development of the multimedia CALL, the multimedia courseware material for Taiwan national Tri-Mountain scenic area, has been developed. The courseware will be integrated into classroom in order to investigate learner's learning effectiveness and their perception.

In order to probe the effectiveness of the courseware integration in enhancing students' content knowledge and linguistic fluency, the courseware will be implemented into classroom for two groups of Taiwanese EFL students major in applied foreign languages and in Tourism Management in a technical university in southern Taiwan. In addition, student satisfaction with and attitudes toward such courseware-implemented instruction will be investigated.

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