# Computer-assisted Learning of Chinese Language and Culture: about the National Palace Museum Digital Archives

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Abstract: This study proposes utilizing the extensive Chinese cultural resources available in the digital archives of the National Palace Museum, together with the concepts of indicators of Chinese language proficiency and graded vocabulary, as the basis for preparing cultural teaching materials which integrate the Chinese art in the National Palace Museum into Chinese language education. Investigations will be made into how to connect the Chinese art in the National Palace Museum with everyday activities. Combined with Taiwan's high quality digital technology in teaching, this will aid in developing digital Chinese language and cultural teaching materials.

**Keywords:** Digital learning; Chinese language teaching; digital teaching material; cultural teaching materials; Chinese art in the National Palace Museum

## 1. Research Background

In recent years, Chinese expatriates and scholars have been calling for the inclusion of the Chinese art in the National Palace Museum in Chinese language teaching, in the hopes that Chinese language learning could include cultural awareness and Chinese heritage, instead of being limited to language acquisition (Tsai, 2011).

This study proposes using the extensive Chinese cultural resources available in the digital archives of the National Palace Museum, together with the concepts of indicators of Chinese language proficiency and graded vocabulary (Tsai, 2009), as the basis for preparing cultural teaching materials with the incorporation of the Chinese art of the National Palace Museum into Chinese language education. This study will link the National Palace Museum to everyday activities, and integrate it with Taiwan's high quality digital teaching technology to develop digital teaching materials for Chinese language and cultural education, in addition to the application (app) design and operation of smart phones.

# 2. Research Purpose

The main purposes of this research are to:

- 1. Integrate data from the National Palace Museum digital archives, and establish classifications for Chinese language by daily activities and cultural topics.
- 2. Prepare traditional and digital teaching materials for Chinese material life and cultural courses for Levels A2 and B1.
- 3. Develop a National Palace Museum Chinese language and culture app course.

# 3. Methodology

In terms of *Classical Conditioning Theory* (Pavlov,1927/1960) and Jerome Bruner's *spiral curriculum for teaching and learning* (Bruner,1960). Accordingly, the connection between dominated materials and meaning would be developed as an approach to help learner's language learning; meanwhile, the theory of spiral curriculum is also being considered in material designing. The description of the learning materials are as follows:

## 3.1 Digital Chinese Language and Cultural Teaching Materials

The basic structure of the content for digital teaching materials is as below:

- 1. Beginner level (Level A2) conversations
- 2. Intermediate level (Level B1) conversations

In the text for the above conversations, there will be new words, sentence structures, and small exercises to follow. Among these conversations, another compilation called "speak Chinese, talk culture" contains content that is aimed at Chinese culture, to allow the learner to be able to familiarize his or herself with the Chinese society and culture.

## 3. National Palace Museum Happy Go!

The content will include comparisons between cultures, and how culture affects lifestyle. As the main aim of this section is to introduce the learners to relics in the National Palace Museum, the introduction content and level of language will be of a higher standard than the other texts in the teaching material.

#### 4. Practical idioms

For learners to quickly understand the idioms and apply them in everyday life, this section couples the selected themes with relevant idioms, and presents them with supplementary images of the scenario.

Figure 1 shows the paper Chinese language teaching materials.



Figure 1 Table of contents

## 3.2 Teaching tools-Apps

From the Mac OS X Human Interface Guidelines (Mac OS X Developer Library, 2010), it can be seen that the concept of attaching importance to a product as a whole necessitates three important principles: (1) Having a clear theme; (2) attracting attention; and (3) having only one theme. When designing an educational app, the focus is not in whether

there are sufficient functions to apply to daily activities, but in providing a good learning experience to the learner. To achieve the above requirements, we believe that the educational apps should develop from the perspective of learners and pay attention to three points, "Visual and operational focus", "The concept of spatial perception", "The use of custom design". Figure 2 shows the interface of APPs.

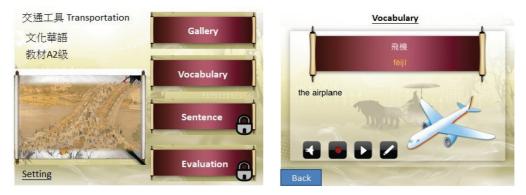


Figure 2 Interface of Apps

# 3.3 Learning platform: smart phone

In terms of the functions of smart-phone, CSL learners are able to implement learning Chinese whenever and wherever they are available. This study is specifically approach to human interface, which could help users easily to access learning by smart-phone.

#### 4. Conclusion

This study was aimed at developing Chinese language learning in means of Chinese culture. Therefore, the teaching materials of integrating Chinese culture derived from National Palace Museum with digital technology have been produced to benefit further CSL learning. The cultural resources in the National Palace Museum have been analyzed and reorganized, and a curriculum outline has been created. In addition, the research team extends further and reinterprets digital teaching materials to produce portable learning tool via Apps. This allows the content to appear in a simplified and accessible manner, being simultaneously rich with learning content. As the language teaching materials utilize everyday scenarios as the central focus to execute developmental design, when combined with App tools, it is believed that it will more deeply penetrate learners' lives.

For further stage, this study will implement experimental study in CSL classrooms to investigate whether the material of National Palace app is available and helpful for CSL learners.

## Acknowledgements

We acknowledges the financial support from the National Science Council of Taiwan, Republic of China.(NSC 99-2631-S-003 -009 – and NSC: 100-2631-S-003 -002 -)

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