

十一、研究計畫中英文摘要：請就本計畫要點作一概述，並依本計畫性質自訂關鍵詞。

(二) 計畫英文摘要。(五百字以內)

Tang Poetry is the treasure of Chinese classic literature and the focus of Chinese instruction. However, two drawbacks exist in conventional Tang Poetry instruction. First, traditional instruction using explanation and recitation may achieve the cognitive and technical objectives. But the affective objective may not be fulfilled. Second, restricted by the immature ability to express their feelings, elementary-school children's intention can not be easily understood by the teachers. Therefore, it is a critical problem to provide an appropriate learning technique for teachers to understand what students think.

This project proposes a human-computer interface, Interactive Photo Tagging, and applies this technique to context-aware Tang poetry instruction. On the one hand, the situation and content mentioned in the poems are provided using context-aware technology and multiple instruction activities. On the other hand, the Interactive Photo Tagging method is designed to help understand learners' feelings about the poems. Considering children's abilities to express and resource requirements in outdoor instruction, PDAs are adopted as learning tools, so that learners can take photos, record, send data, search and communicate. Using Interactive Photo Tagging, the system can analyze the photos and tags uploaded by learners, find their intended meanings, and feedback to learners for reconfirmation. This process can repeat until the intention is clarified.

To evaluate the performance of the proposed approach, the tasks of this project include system implementation and instruction applications. The expected results of this one-year project are listed as follows:

- Design and implementation of the Interactive Photo Tagging method
- Construction of a Tang Poetry database, ontology and Learning Management System server
- Deployment of context-aware Tang Poetry learning devices and environments
- Design of outdoor instruction activities
- The evaluation result of the proposed methodology applied to the teaching material design for elementary-school Tang Poetry instruction

The main contribution of this project lies in the design and implementation of an Interactive Photo Tagging method, by which learners can easily use photos and tags to express their feelings. Furthermore, the intention information is a good feedback for teachers to promote the learning performance. In sum, the goal of promoting the design and development of learning technology and tools is fulfilled.

Keywords: e-Learning, Context-awareness, Tang poetry instruction, Photo tagging, Intention finding