

中文摘要

本研究目的以情境學習理論結合問題導向教學法，建置E化情境學習系統，透過情境模擬的方式加深護理學生的觀察力與判斷力，提升學習成效。研究系統設計主分兩部份(1)學習平台開發：以網路為基礎，建置學習與管理教材介面，學習介面安排臨床真實病人發生症狀的狀況，建立情境流程，中途穿插討論議題讓學習者思考。管理教材介面，提供新增和修改臨床問題的功能，建立學習教材，提供評量建立的功能，挑選不同症狀的臨床問題讓學生區分學習(2)學習評量指標系統之研發：整合學習者學習評量指標，分析學習者學習過程，回饋老師了解學習者的學習表現。為了驗證E化情境學習系統能提升學生的觀察力和判斷力設計前、後測實驗：學習時間比較，後測學習臨床問題時間上有縮短的趨勢。正確率比較，利用相同症狀不同個案讓學生學習，透過前後測比較正確率也有提升。問題導向情境教學確實能加強觀察力與判斷力。根據學習平台後測實驗結果分析，學生的學習成效有所提升，但是仍有誤判的情形，因此建置擴增實境系統，透過擴增實帶來的特色，結合情境學習理論與問題導向教學法，改善學習平台不足。由於擴增實境圖卡辨識率差，必須先改善圖卡辨識率。實

驗結果：(1)圖卡辨識率比較，以灰階影像比對和二值化影像比對進行比較，辨識率上從 11%提升至 89%。

關鍵字：數位學習;瞻妄;情境模擬;問題導向教學;擴增實境



英文摘要

The purpose of this study was to construct an E-situated learning system using problem-based situated learning methods, in order to increase learning efficiency. The design of the system can be divided into two parts: (1) the development of the learning platform, devising materials management and interactive learning interfaces, helping teachers create multi-media teaching materials that target different clinical problems. (2) Development of the learning assessment indicator system, which includes consolidating learning indicators, analyzing the learner's route of learning, and providing teachers the learning results as a feedback. In order to verify that the electronic situated learning system is able to help increase a student's observational and judgmental strengths, pre- and post-tests were conducted. The results indicated that (1) the post-tests learning time was reduce, and (2) by providing students with different cases with the same manifestations, the rate of correctness increased in the post-tests. From the analysis of the experimental results, it was found that problem-based situated learning is able to strengthen the students' observational and judgmental capabilities. Base on analysis of the post-test results, the learning efficiency of students has increased, but it still miscarriage of justice. Construct an augmented reality system, using the character of augmented reality and problem-based situated learning methods to improve the insufficient of learning platform. According to the weak of recognition rate, improve the recognition rate of pattern. The results indicated that (1) Gray image matching algorithm

compare with binarization image matching algorithm, the recognition rate of pattern from 11% to 89%.

Key word: E-learning; Delirium; situation simulation; problem-based learning; augmented reality.

