

問題解決教學策略應用於非同步遠距教學系統之研究

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摘要

本研究旨在建構一個以問題解決教學策略為基礎之非同步遠距網路學習系統，期提供一種讓學習者可透過網路進行有效自我學習的可行方案。系統發展及測試時間為期兩年，第一年專注於開發高職電機電子群微處理機課程線上教學系統，以及發展專家與使用者意見評估表，測試對象為彰化師大九十學年度修習微處理課程的大三學生共計 20 人。本研究第二年以前階段研發之課程與系統平台為工具進行實際教學，以探究高職電機電子群學生微處理機課程在網路學習之可行性和實施成效，第二階段的研究係以國立苗栗農工電機科三年級學生共計 80 人為實驗研究對象。經由策略選擇課程及系統架設、網路教學實驗，本研究提出可有效促進高職學生微處理機課程學習之遠距教學系統模式，藉供各相關層級學校參考運用。

關鍵字：問題解決；問題解決態度；微處理機實習；

非同步遠距教學；單晶片微電腦

A Study of Problem Solving Strategies Applied on Asynchronous Distance Learning System

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Abstract

The purpose of this study was to develop a problem solving based Microprocessor Asynchronous Interactive Distance Learning System (AIDLS) on the Internet. During the first year of the research, most efforts were focused on developing a computerized instruction system on the internet and cognitive style scale. The participants of the design were 20 college students enrolled in National Changhua University of Education were selected to participate the instructional simulation system. For the second year, most efforts were focused on developing achievement scale on the microprocessor curriculum, and carry out the experimentation of the instruction system. Then, investigate the relationships among problem solving, student background. Finally, an effective internet instructional model for vocational high school students was constructed. The participants for the 2nd stage study were 83 senior students of National Miao-Li Agriculture and Industrial vocational High School.

Key words: Problem solving; Microprocessor course;
Attitude toward problem-solving;
Asynchronous distance learning