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**建立「問題解決教學策略在多媒體互動式教學光碟」之發展模式  
及教學成效評量研究**

**The Study of Constructing the Development Model for the Teaching  
Disk of Applying Problem-Solving and Interactive-Multimedia  
Strategies and Its Teaching Experiment Research**

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摘要

本研究旨在建構問題解決教學策略在多媒體互動式教學光碟之發展模式，並以所發展之教學光碟進行實驗研究，以為將來發展問題解決教學策略，及建置多媒體互動式教材時之重要參考依據。本研究以某技術學院會計科三年級學生為實驗對象，隨機分配一組為實驗組，另一組為控制組，由同一位教師進行「資料庫課程」之教學實驗。實驗所須之「問題解決及互動式」教學光碟由研究小組自行研發，同時並發展出「問題解決教學策略在多媒體互動式教學光碟」之建構模式。實驗組採自行發展的「問題解決及互動式」教學光碟，控制組則採一般傳統講述式教學策略進行實驗教學。以「問題解決能力量表」、和「資料庫課程學習成就評量表」等為研究工具，自編之研究工具經過信效度考驗，實驗過程搜集的資料，透過描述統計(包括次數、百分比、平均數和標準差)、t 考驗及單因子共變數分析等，進行統計考驗。最後，綜合研究結果及發現，作出結論及建議，以為技專校院資

料庫課程改進教學及提昇學習成效之參考。

### Abstract

The purposes of the research were (a) to construct the development model for the teaching disk of applying problem solving and interactive teaching strategies, and (b) to explore if any difference exists in recognition learning effect and problem solving ability between traditional teaching strategy and 「problem solving & interactive」 teaching strategy in database courses in the institute of technology, to serve as important reference of selecting proper teaching strategies and designing proper teaching activities of implementation of database courses in the institute of technology, in response to different teaching goals. Through theoretical analysis of domestic and overseas related journals on teaching activity design and teaching strategy, several units are selected, to separately design teaching activities for the traditional teaching strategy and 「problem solving & interactive」 teaching strategy, and engage in comparative experimental research of teaching strategies. The self-developed instruments used in this study were identified on reliability and validity through statistical analysis. The descriptive statistics such as frequency, mean, standard deviation, and analysis of covariate were used to analyze the data gathering from this study. As last, with general review on the research finding and conclusions, recommendations were provided, to serve as the important reference for the first-line teachers of implementing database course in practice.

關鍵字：問題解決；互動式教學光碟；多媒體；資料庫課程；技專校院

Key words: Problem Solving; Interactive Teaching Strategy;  
Multimedia; Database Course; Institute of Technology