以教科書編排架構及線上搜尋為基礎之概念關係自動化建構策略

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摘 要

在電腦輔助教學這方面的研究越來越多，其中以概念圖 （Concept Map）為研究核心的方法逐漸被重視。概念圖可用 來表達概念間的學習順序關係 ，協助老師找出學生學習的障 礙與盲點，進而提出補救的措施，以提高學習的成效。 目前建構概念圖的方式，一種是手動的，由專家自行建 構概念圖 ，不但費時也容易受到個人主觀意識的影響；另一 種是自動的 ，透過測驗題目跟概念的關係，再利用測驗的結 果來建構概念圖 。這需要使用大量累積的測驗數據，才能建 構出適合的概念圖。 本論文嘗試利用教科書所提供的目錄、索引和題庫等資 訊， 配合搜尋引擎強大的搜尋能力來自動建立概念關係圖 。 我們的概念關係圖包含兩種關係： 概念繼承關係代表概念學 習的先後順序，而概念包含關係代表概念學習的完整性。 我 們以資料庫系統這門課程來當作實驗， 結果顯示此系統可協 助教師快速建構概念關係圖。

關鍵詞 : 概念圖，概念繼承關係，學習順序

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