

國中理化科實習教師物理教學能力的內涵與其評鑑之研究
The Nature and Assessment of Teaching Competency in Apprentice Science
Teachers

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中文摘要

本研究擬經由對於實習教師的輔導，從而分析其在教學歷程的表現及探討其對於教師教學能力評鑑量表的感受，藉以作為未來擬訂實習教師評鑑工具的參考。研究問題如下：(一)實習教師課室教學的實際表現與其意義為何？(二)實習教師對於教學能力評量表的感受與反省為何？

本研究選取一位實習教師作為教室觀察與晤談的主要對象。另外，也對其餘兩位實習教師收集資料，俾做數據的檢驗與對照，並藉以了解實習教師教學能力成長的面貌與實習教師對於教學能力評鑑工具的感受與反省，本研究獲得以下的結論：

一、個案教師因能儘量提供學生從事實驗教學活動的機會，對於實驗教學活動本質與功能，較其餘二位實習教師有深刻的體驗，且個案教師能夠經由實施合作學習的教學活動，逐漸體驗諸如：建構主義、學科教學知識的內涵。綜合而言，個案教師的教學知能呈現建構式的成長。

二、三位實習教師對於一些有別於傳統或是較為新穎的科學教學取向，策略之項目，諸如：科學本質之介紹、探究式的教學、提供較合宜的評量、滿足學生的起始程度與興趣等，皆自認為較少做到、難以做到或做得不好。

本研究的結果對於新制的師資培育，應能提供具體可行有效的實習與視導模式，並建立可觀察、可測量的評鑑方法，藉供複檢的參考，以達到提昇科學教師教學能力的目標。

關鍵字：教師檢定；實習教師；科學教學；師資培育

Abstract

The purposes of this study focused on the: (1) classroom practices of beginning science teachers, and (2) design of instruments for gathering data on apprentice teachers' perceptions of science teaching and their concerns about planning and implementing instruction.

An apprentice teacher, who graduated from the department of physics at a university located in the central part of Taiwan in 1995, was invited to participate in this study. Data related to instructional skills and changes in instructional skills were collected on this novice science teacher and subsequently analyzed. Two additional beginning science teachers were selected to allow comparisons for verification of the results from the first teacher and to develop a thorough understanding of what beginning teachers actually think and do in different contexts and classroom cultures.

The results of this study indicated that the beginning teachers tended to learn how to teach in actual classroom settings. Learning to teach during the first year can be interpreted as a constructivist process. Understanding the nature of teaching and learning was enriched through practical experiences.

Beginning teachers tended to transmit content knowledge to students. Only in a very few cases were the beginning teachers observed providing junior high students with appropriate examples and activities.

Their understanding of the nature of inquiry was weak. They also noted it was a good idea to use an alternative or authentic assessment to evaluate students' achievement. The results of this study support greater program emphasis on practical issues and the use of interviews to document beginning teachers' understandings. More practice in the preparation and organization of instructional activities is specifically needed in preservice teacher education programs.

Key words : Certification; Apprentice teachers; Science instruction; Teacher education