

計畫編號：NSC96-2522-S018-001；研究期間：200708-200807

## 我們必須做的---邁向卓越數理師資培育(I)

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### 中文摘要

有優秀的老師，國家才可能有未來，尤其在科學和科技發達的時代。因此，如何培育出優秀數理教師是極為重要的課題。基於長期的文獻探討，並根據本國師資培育的特性與需求，本計畫旨在培養具有卓越數理教學知能的職前和在職兩種重要特色人才的優秀或專家教師。為達到這樣的目標，本整合型計畫擬分為兩個子計畫：第一子計畫為「中學數理師資培育—碩士班」計畫，其目的在培養優秀的職前中學數理科教師，在5年的學程內，協助其發展能讓學生優質學習，更能輔導弱勢學生學習數學和科學的知能；第二子計畫為「中學數理教師在職進修特教資優教學碩士學位班」計畫，其目的在培養已具備教師資格的數理教師，進階學習特別是帶領數理資優生和菁英生的專精能力。本研究預計分三年執行，具體的目標為：針對第一子計畫第1年在探討課程內涵和規劃，並擬報教育部核定，第2,3年進行課程內涵之設計、試行、及相關研究。針對第二子計畫，規劃相關課程及配套

措施，報部審查通過後，即進行試驗性推動。研究結果，對於新師資模式的建立與實徵的意涵，應可做為我國師資培育的參考。

關鍵字：師資培育；職前數理教師；在職數理教師；數理資優教育

### 英文摘要

If we have outstanding teachers, then we will have bright future. This is true especially in this science and technology era. Therefore, preparing qualified mathematics and science teachers become an important issue in teacher education. The purpose of this study has two objectives: to prepare both qualified pre-service and in-service mathematics and science teachers. To achieve this goal, we plan to establish two teacher education programs for mathematics and science teachers. One is pre-service teacher preparation program and the other is in-service teacher education program. The pre-service program is to prepare pre-service teachers become qualified mathematics and science teachers within 5 years program including 4 year undergraduate and one year graduate. The in-service program is a master program which emphasize on to develop teachers with ability and knowledge to teach gifted students in mathematics and science. This study will be implemented three years. The first year objective is to establish the program including curriculum, theoretical framework, and syllabus. The objective of second year is to implement pilot study of the programs. The third year objectives include evaluating effectiveness of the programs and introducing the programs to other institutes of the countries.

Keywords : Teacher Education; Mathematics and Science Teachers; Pre-Service Teacher; in-Service Teacher; Gifted Education