

## AMERICAN EDUCATIONAL RESEARCH ASSOCIATION

### *STUDYING TEACHER EDUCATION*

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#### THE IMPACT OF TEACHER EDUCATION: WHAT DO WE KNOW?

*Studying Teacher Education* synthesizes and assesses extant research on teacher education. The data on prospective teachers are less comprehensive than the data on practicing teachers. A major challenge is developing an accurate national picture of teacher candidates in many different types of undergraduate, graduate, and non-degree certification programs within the complex higher education system in 50 different states with different certification requirements. What do we know about the education of elementary and secondary school teachers and the links between their education and teaching? .

#### **What are the demographics of teacher education?**

Research indicates:

- Most new teachers are prepared as undergraduates in public colleges and universities, despite tremendous growth in alternative pathways into teaching in recent years.
- More teachers than ever before major in academic subjects, such as English or biology, rather than in education, a response to changes over the last two decades to state and institutional subject-area requirements for teachers.
- College graduates who have completed secondary education teacher education programs have Scholastic Aptitude Test/ACT test scores comparable to other college graduates.

#### **What aspects of teacher education programs are known to produce successful teachers?**

- Evidence suggests that collaborative arrangements between university programs and local school districts— known as professional development schools—have a positive impact on teacher and pupil learning. Research is needed to understand more precisely the conditions under which these schools enhance desired outcomes.
- Although research on the impact of different types of teacher education programs does not provide clear evidence of the superiority of any particular program type (e.g., 4-year vs. 5-year, traditional vs. alternative), it does

suggest that program components, such as clear and consistent vision of teaching and learning, are related to teacher quality and student achievement.

- Research points out that, under the right conditions, strategies used in teacher education programs, such as case studies and teaching portfolios, can result in changes for the better in students' knowledge and beliefs, in the ability to identify important instructional issues, and in their proficiency to teach.
- Evidence indicates that initially certain coursework and school and community fieldwork in teacher education programs may positively affect candidates' attitudes, knowledge, beliefs, and confidence about teaching culturally diverse learners.
- In mathematics education, evidence favors certification in the field as one indicator of effective teaching and successful student achievement.
- Studies of secondary-school mathematics show a correlation between prospective teachers' college study of mathematics and the mathematics learning of their high school pupils. The specific mathematics courses that prospective teachers should actually take need further examination. Research is needed in other subject areas and for other grade levels on the relationship between course requirements and expert teaching.