

1. Record Nr.	UNINA9910826471603321
Titolo	Precollege science and mathematics teachers : monitoring supply, demand, and quality // Dorothy M. Gilford and Ellen Tenenbaum, editors
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1990
ISBN	1-280-21255-1 9786610212552 0-309-54332-0 0-585-14307-2
Edizione	[1st ed.]
Descrizione fisica	1 online resource (266 p.)
Altri autori (Persone)	JusterF. Thomas <1926-> (Francis Thomas) GilfordDorothy M TenenbaumEllen
Disciplina	331.12/915071/073
Soggetti	Mathematics teachers - Supply and demand - United States Science teachers - Supply and demand - United States Mathematics teachers - Training of Science teachers - Training of
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Panel on Statistics on Supply and Demand for Precollege Science and Mathematics Teachers, F. Thomas Juster, chair; Committee on National Statistics, Commission on Behavioral and Social Sciences and Education, National Research Council"--T.p.
Nota di bibliografia	Includes bibliographical references (p. 183-209).
Nota di contenuto	Precollege Science and Mathematics Teachers -- Copyright -- Acknowledgments -- Contents -- Summary -- DATA RECOMMENDATIONS -- Resources for Data -- Demand Data -- Supply Data -- Quality Data -- General Data Recommendations -- RESEARCH ISSUES IDENTIFIED BY THE PANEL -- Resources for Research -- Research on Demand -- Research on Supply -- Research on Quality -- Research on Student Outcomes -- RESEARCH FACILITATION -- INFORMATION EXCHANGE AMONG DISTRICTS, STATES, AND THE NCES -- IMPLEMENTING THE RECOMMENDATIONS -- 1 Introduction -- THE MEANING OF SHORTAGE -- FACTORS AFFECTING DEMAND -- FACTORS AFFECTING SUPPLY -- QUALITY ISSUES IN SUPPLY AND DEMAND -- THE

PANEL'S WORK AND ORGANIZATION OF THE REPORT -- 2 Determining Teacher Demand -- STUDENT ENROLLMENT -- Enrollment Projections Based on Student Enrollment Data -- Geographic Differences in Projected K-12 Enrollment -- Local-Area Projections -- Population Projections-A Proxy for Enrollment Projections -- Using Census Population Projections to Estimate K-12 Enrollment Demand -- The Changing Demographic Profile of the School-Age Population -- Research Areas Related to Student Enrollment -- PUPIL-TEACHER RATIOS -- Components of Teacher Demand and Related Data -- Research on Determinants of Pupil-Teacher Ratios -- TEACHER ATTRITION RATES -- SUMMARY -- 3 Determining Supply: Individual and District Activities -- THE COMPONENTS OF SUPPLY -- Continuing Teachers -- New Entrants -- WHAT INFLUENCES AN INDIVIDUAL TO TEACH? -- College Students' Occupational Preparation Decisions -- The Decision to Enter Teaching -- Where to Teach -- How Long to Stay in Teaching -- Whether to Return to Teaching -- Whether to Move to a Different State -- When to Retire -- Conclusions -- HOW DOES A DISTRICT MATCH SUPPLY WITH DEMAND? -- Determining Needs -- Uncertainty About Student Enrollments. Uncertainty about Budget for the Next School Year -- Internal Transfer Queues -- Delays in Reporting Resignations -- Attrition During the School Year -- Soliciting Applicants -- Screening Applicants -- Making Offers -- Timing -- Specificity -- Salary -- Who is Hired -- Conclusions -- SUMMARY -- 4 Monitoring the Supply Pool of Science and Mathematics Teachers -- MONITORING POINTS ALONG THE SUPPLY PIPELINE -- College Students Planning to Teach -- Certification -- New Hires -- The Reserve Pool -- Retention and Attrition Rates -- Teacher Mobility and Interstate Migration -- A SPECIAL CASE: THE SUPPLY OF MINORITY TEACHERS -- SUMMARY -- 5 Statistics Related to the Quality of Science and Mathematics Teaching -- SCHOOL SYSTEM POLICIES AND PRACTICES -- Recruitment and Hiring Practices -- Misassignment of Teachers -- Providing for Inservice and Continuing Education -- Other Practices that Affect Teaching Quality -- MEASURING TEACHER QUALIFICATIONS -- Certification as the Basic Proxy for Teacher Quality -- Course Preparation and Transcript Data -- Elementary Teachers -- Secondary Science and Mathematics Teachers -- Professional Standards as a Quality Dimension -- Testing for Subject-Matter Knowledge -- The Holmes and Carnegie Recommended Standards -- The Presidential Awards for Science and Mathematics Teachers -- TEACHER QUALIFICATIONS AND STUDENT OUTCOMES -- Evidence -- Implications for Data and Research -- OTHER SCHOOL AND HOME FACTORS THAT AFFECT OUTCOMES -- Curriculum Structure -- Quality of Textbooks -- Classroom Time Used for Science and Mathematics -- Other Instructional Factors -- Home Environment -- SUMMARY -- 6 Data Needs and Research Opportunities -- DATA RECOMMENDATIONS -- Funding for Data Collection -- Data Related to Demand -- Data Related to Supply -- 1. College Students Planning to Teach -- 2. Certification. 3. New Hires and Incentives to Teach -- 4. The Reserve Pool -- 5. Attrition Rates and Incentives to Leave Teaching -- Data Related to Quality -- General Data Recommendations -- RESEARCH ISSUES IDENTIFIED BY THE PANEL -- Resources for Research -- Demand -- Supply -- Quality -- Student Outcomes -- RESEARCH FACILITATION -- Graduate Student Research -- Data Bases for Personal Computers -- State Data Bases -- Limitations of Univariate Indicators -- FACILITATION OF INFORMATION EXCHANGE AMONG DISTRICTS, STATES, AND THE NCES -- References -- Appendix A Panel Activities -- CONFERENCE OF PERSONNEL DIRECTORS -- MINI CASE STUDIES --

IN-DEPTH CASE STUDIES -- Appendix B National Data Sets Relating to Demand, Supply, and Quality of Precollege Science and Mathematics Teachers -- THE SCHOOLS AND STAFFING SURVEY -- HIGH SCHOOL AND BEYOND -- THE NATIONAL LONGITUDINAL STUDY -- NATIONAL EDUCATION LONGITUDINAL STUDY OF 1988 -- SURVEYS OF RECENT COLLEGE GRADUATES -- THE NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS -- NAEP Teacher Questionnaire -- THE AMERICAN FRESHMAN -- NATIONAL SURVEYS OF SCIENCE AND MATHEMATICS EDUCATION -- STATUS OF THE AMERICAN PUBLIC SCHOOL TEACHER -- Appendix C Availability of State Data on Public School Professional Personnel -- Appendix D Acronyms -- Appendix E Biographical Sketches.
