Evaluating the Pathways to Teaching Careers Program

December 2001

THE URBAN INSTITUTE

Absence Unexcused:

Ending Teacher Shortages in High-Need Areas

Beatriz Chu Clewell and Ana María Villegas

States and local school districts are scrambling to ensure a steady supply of high-quality teachers.

The projected need for 2 million new teachers within the next eight years has spawned a number of efforts to increase the teaching pool.[1] With K-12 enrollments expected to mushroom well into the new century,[2] and the current crop of teachers either retiring[3] or leaving the teaching profession for other jobs,[4] states and local school districts are scrambling to ensure a steady supply of high-quality teachers. For many of these school districts—especially those in urban areas, where it hurts the most—the teacher shortage has already arrived. And these shortages are intensified in selected fields, such as bilingual education and special education, and in subjects such as mathematics and science.

Exacerbating the problem is the growing racial/ethnic imbalance between the student population and the teaching force. While the K-12 population has become increasingly diverse over the last two decades—students of color comprise over one-third of school enrollments[5]—the teaching force in public schools has remained one-tenth minority.[6] This imbalance could have serious social and academic repercussions for the most rapidly growing segment of the student population, because teachers of color can act as role models and cultural brokers to mediate differences between home and school that may obstruct learning.[7] There is also growing evidence that educational benefits may accrue to black and Latino students with same-race teachers.[8]

Some states and local districts have enacted policies to stem the exodus of older, more experienced teachers by offering them incentives to delay retirement. Other policies are designed to increase retention rates by raising teachers' salaries and other benefits and improving working conditions. A third approach involves stepping up recruitment from nontraditional pools of teachers.[9] The Wallace-Reader's Digest Fund's Pathways to Teaching Careers Program exemplifies this approach. Pathways worked with colleges and universities to develop effective strategies for recruiting and preparing teachers to complete all requirements for teacher certification—including obtaining bachelor's or master's degrees—leading to full-time teaching jobs. Partnerships between the universities and local school districts ensured that the new teachers were being prepared for assignments the schools really needed. In turn, the districts agreed to help place the graduates in high-need schools.[10]

Has the Pathways Program been effective? The evaluation findings lead us to conclude the following:

- Pathways has surpassed its numeric recruitment goals, showing that a substantial pool of qualified nontraditional candidates exists and is ready to enter a demanding preparation program.
- The completion rate for Pathways participants has been higher than the national rate for students in traditional teacher education programs.
- Once they complete the program, Pathways graduates teach in targeted school districts or urban/rural districts at very high rates.
- Pathways graduates are perceived by their supervisors, their principals, and a trained, independent assessor to be more effective as teachers than the typical beginning teacher in their schools.
- Pathways graduates are more likely to remain in teaching for at least three years than the typical beginning teacher.

A Description of the Pathways to Teaching Careers Program

The goal of this $50 million national initiative by the Wallace Funds was to increase the number of well-prepared, fully certified teachers—with characteristics identified by participating school districts—working in high-need school districts. A majority of the school districts chose teachers from racial/ethnic minority backgrounds as a focus for recruitment efforts. Although the initiative comprised four program strands, each targeting a different population, this report focuses on the evaluation of two of these strands that together make up the most comprehensive components of the initiative: the paraprofessionals and noncertified teachers strand and the Peace Corps Fellows strand.

The paraprofessionals and noncertified teachers strand is the most comprehensive of the four. It consists of 26 programs aimed at identifying and recruiting paraprofessionals and noncertified teachers working in public schools and offering them scholarships and other support services to obtain bachelor's or master's degrees and/or meet other requirements for full state certification. In return, participants agree to continue teaching in the public schools for a specified period of time after completing the program.

The Peace Corps Fellows strand includes 14 projects, all of which are coordinated by the Peace Corps Fellows USA Program. The aim of this strand is to identify and support potential teacher candidates from among returning Peace Corps volunteers. The projects place selected Fellows in full-time, salaried positions in urban and rural school districts and provide a two-year graduate-level program leading to teaching certification and a master's degree.

The Pathways Evaluation

The Pathways to Teaching Careers Program was evaluated over the course of six and a half years, beginning in 1994. Although the evaluation was divided into components—

summative, process, and formative—this report focuses on the summative component. Results of the formative and process evaluations have been reported elsewhere.[11] The summative evaluation was designed to collect data over a six-year period to answer the following questions:

1. Did the Pathways Program meet its overall recruitment goals?
2. Have Pathways participants remained in the program through completion and certification? Once they completed the program, did they work in targeted districts?
3. Are Pathways graduates good teachers?
4. Do Pathways graduates remain in teaching longer than the typical novice teacher?

To answer these questions, we collected data mainly through surveys of participants, program staff, teaching supervisors, and principals. Performance assessment data were also collected by evaluation staff. To this end, five surveys were administered each year.[12] In years four and five we collected data on Pathways graduates who had completed the program three or more years earlier to determine their retention in teaching over a three-year period. Data were stored in a complex relational database that could be converted to SAS for analysis. Details regarding the methods used in this evaluation, including descriptions of the surveys, response rates, and analysis of survey data, are given in our full report, "Evaluation of the Pathways to Teaching Careers Program."[13]

Program Outcomes

Here we present data to answer the four questions posed by the summative evaluation. We organized the findings by participant type (e.g., emergency-certified/substitute teachers, paraprofessionals, and Peace Corps Fellows) because we feel that such a breakdown is useful in interpreting the effects of the program on the three nontraditional groups served by Pathways.

1. Did the Pathways Program meet its overall recruitment goals?

Yes. The Pathways Program's numerical recruitment goal was 2,200 individuals. By the end of the 1999–2000 academic year, the program had recruited and served 2,593 participants, exceeding its goal by 393 people (18 percent).

A related recruitment goal in most districts was to enroll a diverse group of participants in order to increase the diversity of the teaching pool. Table 1 compares the demographic characteristics of Pathways participants with those of the pool of newly prepared teachers.

The table shows that the program increased the number of potential minority teachers by almost 15 percent, while increasing the pool of newly prepared teachers overall by 4.4 percent. The program was not as successful in increasing the number of male teachers, a secondary focus of recruitment efforts.

The three subgroups served by the Pathways Program differ among themselves. Table 2, which gives a demographic profile of each group, shows that the emergency-certified/substitute teacher and paraprofessional groups are much more similar to one

TABLE 1

Contribution of Pathways Participants to the Diversity of the Teacher Pool: Demographic Characteristics of Pathways Participants and Newly Prepared Teachers

Demographic Characteristics	*Pathways Participants*	*Newly Prepared Teachers*	*Teacher Pool Increase (%)*
Sex	(*N* = 1,933)	(*N* =59,098)	
Male	580	15,956	3.7
Female	1,353	43,142	3.2
Minority Status	(*N* = 2,475)[a]	(*N* = 59,098)	
Minority	1,559	10,638	14.7
Nonminority	743	48,460	1.6
Age	(*N* = 1,933)	(*N* = 59,098)	
Mean Age	35	28	N/A
Total	**(*N* = 2,593)**	**(*N* = 59,098)**	**4.4**

Source: Data on Pathways Participants from the Scholar/Fellow Survey (*N* = 1,933) and Participant Progress Form (*N* = 2,475); data on newly prepared teachers from Broughman and Rollefson (2000).

[a] Seven percent (173) of the 2,475 participants who responded to the Participant Progress Form (PPF) declined to identify their race/ethnicity and are therefore missing from the total *N*.

TABLE 2

Demographic Profile of Pathways Participants by Status

	Emergency-Certified/ Substitute Teachers (%) (N = *840)*	*Paraprofessional/ Teacher Aide (%)* (N = *633)*	*Peace Corps Fellows (%)* (N = *460)*
Mean Age, 1996	35	38	31
Sex			
Female	74	82	50
Male	26	19	50
Race/Ethnicity			
White	12	18	81
African American	61	61	3
Latino/a	15	13	3
Marital Status			
Single	40	29	73
Married	43	51	22
Divorced	12	14	3
Mean Number of Children	1	2	0

Source: Data on age, marital status, and number of children from the Scholar/Fellow Survey; racial/ethnic data, from the Participant Progress Form.

another than to the Peace Corps Fellows group. In fact, Peace Corps Fellows resemble the national profile of the traditional beginning teacher more than their Pathways counterparts do.

2. Have Pathways participants remained in the program through certification? Once they completed the program, did they work in targeted districts?

The answer to both questions is yes. Pathways participants' rate of completion of teacher certification requirements was, at 75 percent (figure 1), higher than the national completion rate for traditional teacher education students, 60 percent.[14]

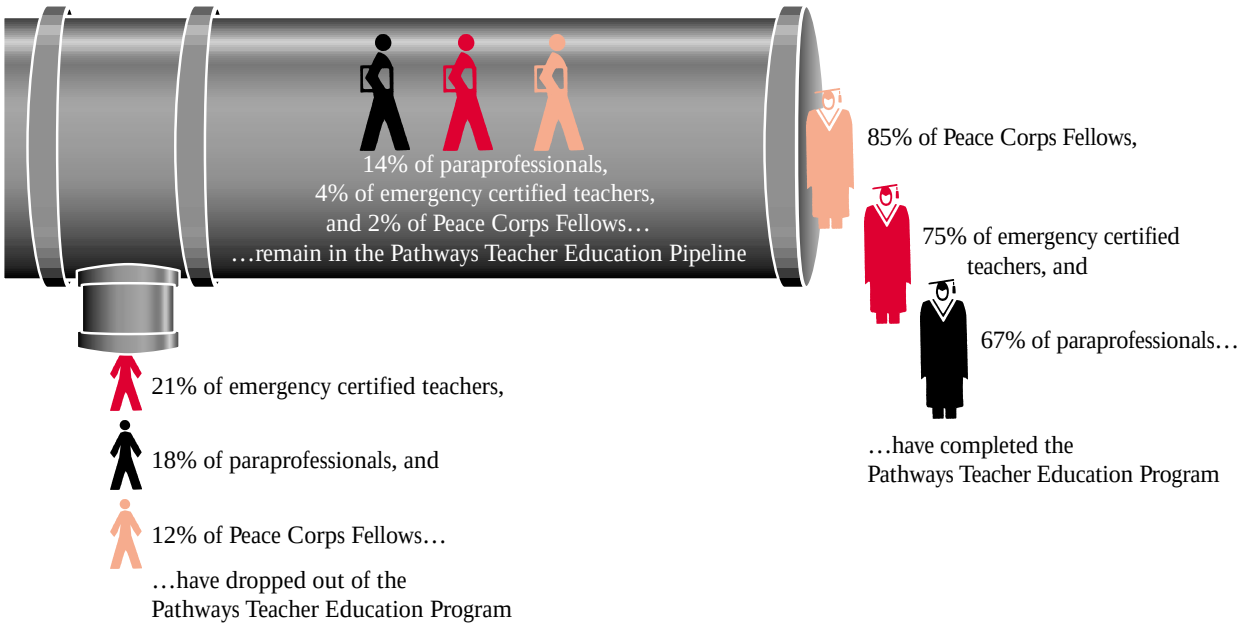
Once they completed the Pathways Program, 84 percent of graduates worked in teaching jobs in targeted school districts (figure 2). Of those working in nontargeted districts, 81 percent worked in urban or rural districts. Ninety-one percent of paraprofessionals taught in targeted districts, while 82 percent of Peace Corps Fellows and 75 percent of emergency-certified/substitute teachers did so.

3. Are Pathways graduates good teachers?

Data on teaching effectiveness across three instruments indicate that Pathways graduates were perceived to be effective teachers by three independent assessors working at three different stages: field experience supervisors, who rated graduates after the student teaching experience; principals, who rated them two years after completion of the program; and an independent evaluator, who used a performance assessment system (Praxis III) to rate a sample of graduates at the end of the first year of teaching. These data are generally consistent: Pathways teachers received higher ratings from principals and

FIGURE 1

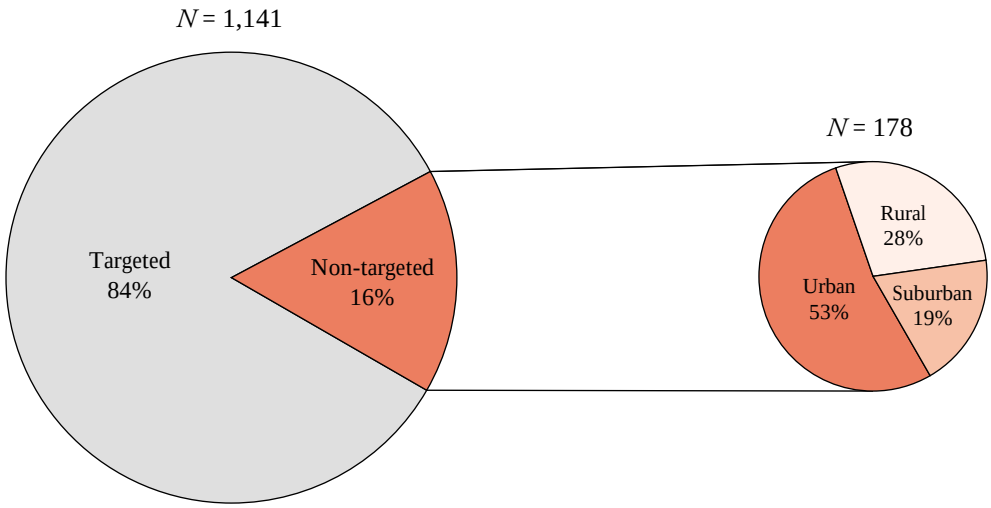
Progress of Pathways Participants through the Teacher Education Pipeline, by Status



Source: Participant Progress Form and Participant Progress Form Follow-Up.

FIGURE 2

Pathways Teachers Working in Targeted and Nontargeted Districts[a]



Source: Participant Progress Form and Participant Progress Form Follow-Up.
[a] These data, collected from Pathways graduates upon program completion, reflect the lag in time between program completion at the end of the academic year and placement in schools in the fall of that year. At the time these data were collected, many of the respondents in Year 6 did not know where they would be teaching in the fall.

from the assessor using PRAXIS III than did their typical counterparts (table 3). These differences are statistically significant at the .0001 level.

4. Do Pathways graduates remain in teaching longer than the typical novice teacher?

A follow-up survey administered to Pathways graduates who had completed the program three or more years before showed that 81 percent had remained in teaching for at least three years after completing the program, although 8 percent of these (or 6 percent of all respondents) had left teaching after three years. This rate of retention in teaching is higher than the national three-year retention rate of 71 percent for newly prepared teachers.[15] Eighty-eight percent of those who had graduated at least three years ago, including those in teaching, were still employed in education at the time of the survey. Figure 3 shows Pathways graduates' employment three years or more after they had completed the program.

Figure 4 compares Pathways completers who have remained in teaching after three years and those who left teaching after at least three years. Paraprofessionals were the most likely of the three groups to have remained in teaching for three years and to have continued in teaching after the three-year period. White graduates were the most likely of all racial/ethnic groups to have left teaching after three years and the least likely to have continued in teaching after three years.

While the majority of Pathways graduates who remained in teaching after three years work in urban areas, paraprofessionals and emergency-certified/substitute teachers were much more likely than Peace Corps Fellows to be teaching in urban schools, even taking into account Fellows in rural schools, a focus of the Peace Corps Fellows strand. Minority graduates were more likely to teach in urban areas than their white counterparts, while white graduates were more likely to teach in suburban and rural areas (tables 4 and 5).

TABLE 3

Principals' Ratings in Main Teaching Areas, by Status, in Comparison with Typical Novice Teachers, Years 5–6

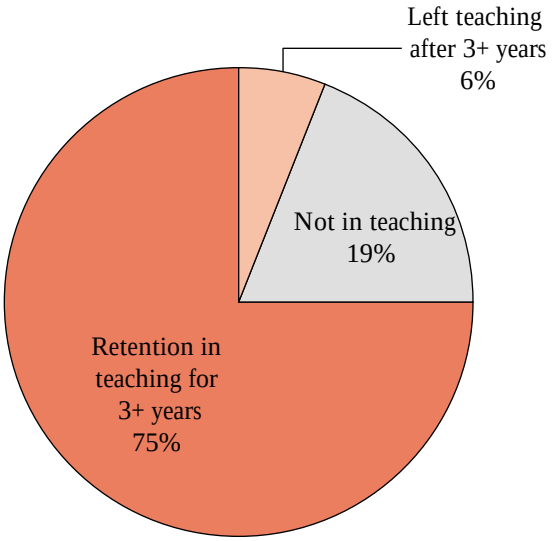
	Emergency-Certified/ Substitute (N = 159)		*Paraprofessional/ Teacher Aide (N = 123)*		*Peace Corps Fellows*[a] *(N = 53)*		*Total (N = 335)*	
Rating Categories	*Typical Novice*	*Pathways*	*Typical Novice*	*Pathways*	*Typical Novice*	*Pathways*	*Typical Novice*	*Pathways*
Organizing content knowledge for student learning	3.2	4.0	3.3	3.8	3.2	4.3	3.2	3.9
Creating an environment for student learning	3.4	4.2	3.5	4.0	3.4	4.4	3.4	4.1
Teaching for student learning	3.5	3.9	3.4	3.8	3.2	4.2	3.3	3.9
Professionalism	3.4	4.0	3.5	4.0	3.3	4.3	3.5	4.0
Overall assessment of teacher effectiveness	3.3	4.0	3.4	3.9	3.3	4.3	3.3	4.0

Source: Follow-Up Survey of Pathways Graduates/Completers. Scale: 1 = lowest 5 = highest

[a] *N* is too small to compute significance levels.

FIGURE 3

Pathways Graduates' Employment Three Years or More after the Program



N = 812

Source: Follow-Up Survey of Pathways Graduates/Completers.

Policy Recommendations

What policy implications can be drawn from these conclusions?

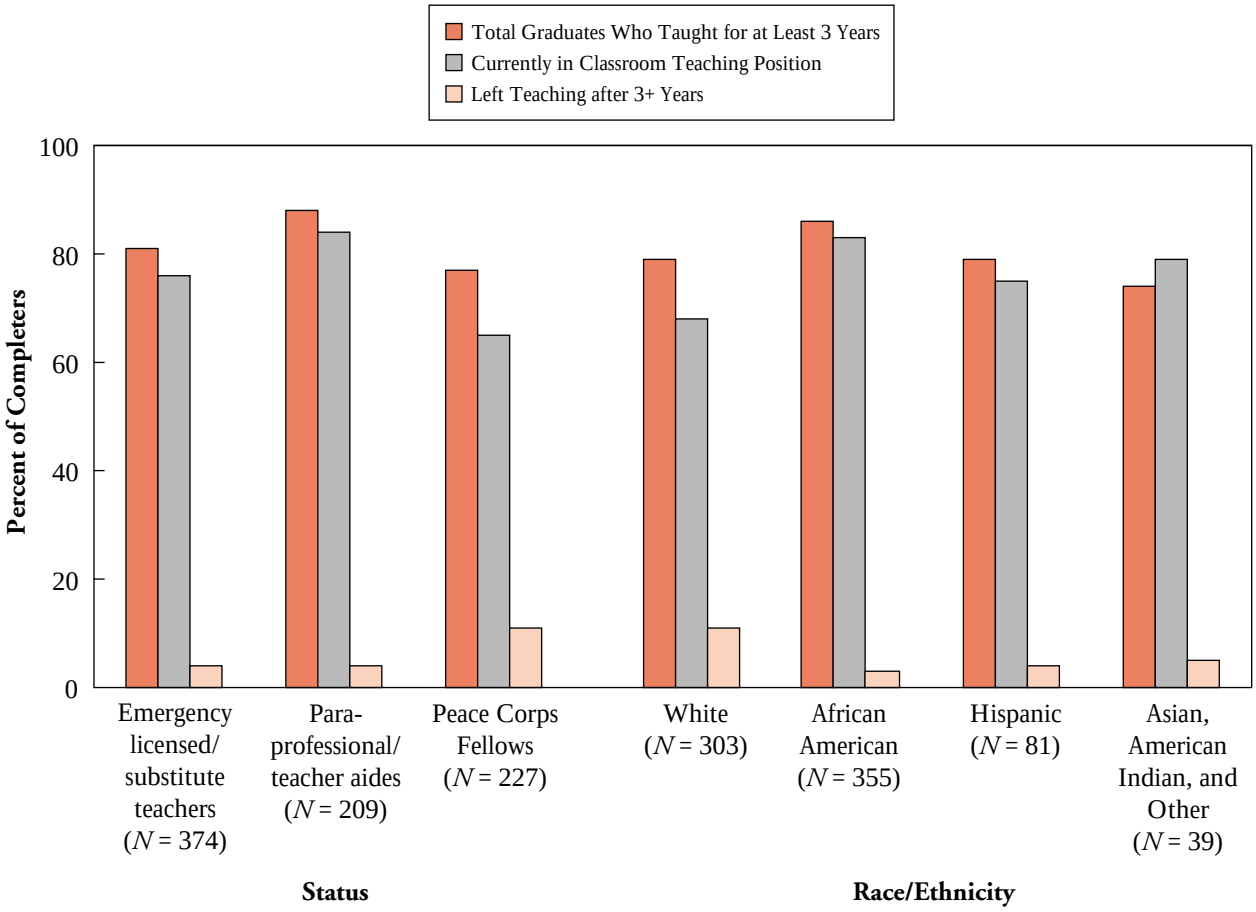
- *Recruiting new teachers from nontraditional pools is an effective way of increasing the national supply of teachers.* The Pathways experience has shown that there is a large pool of nontraditional individuals who have the desire and ability to become effective teachers for both urban and rural high-need districts. Federal, state, and local policies should support programs that recruit from nontraditional pools as a way of increasing both the number of teachers for high-need areas and the diversity of the teaching pool.

- *Paraprofessionals are a rich source of potential teachers.* Paraprofessionals, if selected carefully and given appropriate support, are as likely as members of other nontraditional groups to complete a teacher-education program and become effective educators. Two additional benefits of recruiting paraprofessionals are that they are more likely to teach and to remain in teaching in high-need districts and that they are more likely to be members of racial/ethnic minority groups. Federal, state, and local initiatives to increase the teaching force should make a serious effort to include paraprofessionals. Paraprofessionals' greater likelihood of remaining in teaching in high-need areas more than offsets the higher cost of preparing them for certification.

- *The Pathways model, which provides a program of preparation and support specifically tailored to the nontraditional groups being served, is an effective and affordable way to increase the teaching force's size and diversity.*[16] The Pathways model, thoroughly described in *Ahead of the Class: A Handbook for Preparing New Teachers from New Sources* (Clewell and Villegas 2001a), can be considered an alter-

FIGURE 4

Comparison of Pathways Completers Who Are Still in Teaching after at Least Three Years, and Those Who Left Teaching After at Least Three Years, by Status and Race/Ethnicity



Source: Follow-Up Survey of Pathways Graduates/Completers.

TABLE 4

Setting of Pathways Three-Year Graduates Employed in a Full-Time Job in Teaching, by Status[a]

Setting (N = 570)	*Emergency-Certified/ Substitute*		*Paraprofessional/ Teacher Aide*		*Peace Corps*		*Total*	
	Percent	N	*Percent*	N	*Percent*	N	*Percent*	N
Urban	82	216	88	145	60	86	78	447
Suburban	12	32	10	16	24	35	15	84
Rural	5	14	—	—	15	21	7	39

Source: Follow-Up Survey of Pathways Graduates/Completers.

[a] Cells with *N* counts of 5 or less have been suppressed to preserve confidentiality.

TABLE 5

Setting of Pathways Three-Year Graduates Employed in a Full-Time Job in Teaching, by Race/Ethnicity[a]

Setting (N = 640)	*White*		*African American*		*Hispanic*		*Asian, American Indian, and Other*		*Total*	
	Percent	N	*Percent*	N	*Percent*	N	*Percent*	N	*Percent*	N
Urban	65	154	88	264	89	62	85	28	79	508
Suburban	22	53	9	28	11	8	—	—	14	92
Rural	12	29	3	9	—	—	—	—	6	40

Source: Follow-Up Survey of Pathways Graduates/Completers.
[a] Cells with *N* counts of 5 or less have been suppressed to preserve confidentiality.

nate route to teacher preparation and certification rather than an alternative certification program. Because evaluation findings have documented its effectiveness, the program merits wide replication on national, state, and local levels.

- *Recruiting more candidates from racial/ethnic minorities into teaching could help stabilize the teaching force in urban school districts.* If selected carefully, enrolled in teacher education programs that work in partnerships with high-need school districts, and given appropriate preparation, candidates from racial/ethnic minorities are likely to choose to teach in those settings and to stay in their positions longer than the average new teachers. Federal, state, and local initiatives designed to improve the conditions of urban schools should give attention to recruiting and preparing more such minority teachers.

Endnotes

1. Hussar (1999).
2. U. S. Department of Commerce (1996).
3. Hussar (1999).
4. Education Commission of the States (2000).
5. U.S. Department of Commerce (1996).
6. Snyder, Hoffman, and Geddes (1998).
7. Irvine (1988).
8. Dee (2000); Clewell, Puma, and McKay (2001).
9. For a thorough review of recruitment programs and policies, see Clewell et al. (2000).
10. Clewell and Villegas (2001a).
11. The formative component provided timely feedback to individual programs as well as the Fund to guide the design of future teacher recruitment and preparation activities. The results of the process component have been published in a separate document, *Ahead of the Class: A Handbook for Preparing New Teachers from New Sources.*
12. Response rates ranged from 63 percent to 95 percent.
13. Clewell and Villegas (2001b).
14. National Commission on Teaching and America's Future (1996).
15. Ingersoll (2000).
16. A study of the cost of implementing the Pathways model at a public institution estimates a cost in the range of $7,380 to $21,713 per student for noncertified/substitute teachers/Peace Corps Fellows, and $14,814 to $22,855 for paraprofessionals (see *Ahead of the Class* for details).

References

Broughman, S.P., and M.R. Rollefson. 2000. *Teacher Supply in the United States: Sources of Newly Hired Teachers in Public and Private Schools, 1987–88 to 1993–94.* NCES 2000-309. Washington, D.C.: U.S. Department of Education, National Center for Education Statistics.

Clewell, B.C., K.L. Darke, T. Davis-Googe, L.B. Forcier, and S.A. Manes. 2000. *Literature Review on Teacher Recruitment Programs.* Washington, D.C.: U.S. Department of Education.

Clewell, B.C., M. Puma, and S.A. McKay. 2001. *Does It Matter if My Teacher Looks Like Me? The Impact of Teacher Race and Ethnicity on Student Academic Achievement.* Report to the Ford Foundation. New York, N.Y.: Ford Foundation.

Clewell, B.C., and A.M. Villegas. 2001a. *Ahead of the Class: A Handbook for Preparing New Teachers from New Sources.* Washington, D.C.: Urban Institute.

———. 2001b. *Evaluation of the DeWitt Wallace-Reader's Digest Fund's Pathways to Teaching Careers Program.* Report to the Wallace Reader's Digest Fund. New York, N.Y.: Wallace Reader's Digest Fund.

Dee, T.S. 2000. *Teachers, Race, and Student Achievement in a Randomized Experiment.* Cambridge, Mass.: National Bureau of Economic Research.

Education Commission of the States. 2000. *In Pursuit of Quality Teaching: Five Key Strategies for Policymakers.* Denver, Colo.: Education Commission of the States.

Hussar, W.J. 1999. *Predicting the Need for Newly Hired Teachers in the United States to 2008–09.* (NCES 99-026). Washington, D.C.: U.S. Department of Education, National Center for Education Statistics.

Ingersoll, R.M. 2000. *Turnover among Mathematics and Science Teachers in the U.S.* Paper prepared for the National Commission on Mathematics and Science Teaching for the 21st Century.

Irvine, J.J. 1988. "An Analysis of the Problem of the Disappearing Black Educator." *Elementary School Journal* 88 (5): 503–14.

National Commission on Teaching and America's Future. 1996. *What Matters Most: Teaching for America's Future*. New York: author.

Snyder, T. D., C. M. Hoffman, and C. M. Geddes. 1998. *Digest of Education Statistics, 1997.* NCES 98-015. Washington, D.C.: U.S. Department of Education, National Center for Education Statistics.

U.S. Department of Commerce. 1996. *Current Population Reports: Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1995 to 2050.* Washington, D.C.: U.S. Department of Commerce.

Villegas, A.M., and T. Lucas. In press. *Preparing Culturally Responsive Teachers: A Coherent Approach.* Albany, N.Y.: State University of New York Press.

About the Authors

Beatriz Chu Clewell is a principal research associate at the Urban Institute, where she directs the Evaluation Studies and Equity Research Program in the Education Policy Center. She has conducted a number of evaluations of teacher recruitment programs, including that of the Pathways to Teaching Careers Program, for which data on 42 programs and close to 3,000 participants over a six-year period were collected. Dr. Clewell has also published several reports and articles on teacher recruitment and teacher quality, including a special issue of *Education and Urban Society* on diversifying the teaching force in urban school systems (Ana María Villegas, coauthor). Before joining the Urban Institute, she was a senior research scientist at the Educational Testing Service's Education Policy Research Division.

Ana María Villegas is a professor of education at Montclair State University, where she teaches courses on urban education and quantitative research methods. Prior to joining the school, she was a senior research scientist with the Education Policy Research Division of the Educational Testing Service. Dr. Villegas has extensive experience with evaluation research, particularly as it pertains to programs of teacher preparation. In addition to codirecting the Pathways evaluation, she has directed a national investigation of in-service programs for teachers of language minority students. She also codirected several other evaluation studies of programs designed to increase the number of well-prepared teachers, especially candidates of color. Dr. Villegas has published widely on topics such as assessing teacher performance in a diverse society, preparing teachers for a changing student population, and culturally responsive teaching.

THE URBAN INSTITUTE
2100 M. Street, N.W.
Washington, D.C. 20037

Nonprofit Org.
U.S. Postage
PAID
Permit No. 8098
Mt. Airy, MD

Address Service Requested

For more information, call Public Affairs: (202) 261-5709 or visit our Web site, http://www.urban.org. To order additional copies of this publication, call (202) 261-5687 or visit our online bookstore, http://www.uipress.org

THE URBAN INSTITUTE
2100 M. Street, N.W.
Washington, D.C. 20037

Copyright © 2001

Phone: (202) 833-7200
Fax: (202) 728-0232
E-mail: pubs@ui.urban.org

This is a summary of the findings of a six-year evaluation of the Pathways to Teaching Careers Program, which was funded by the Wallace-Reader's Digest Funds. Beatriz Chu Clewell and Ana María Villegas are co-principal investigators of the evaluation, which documents and reports the major outcomes of the program. The evaluation was funded and commissioned by the Wallace Funds.

From 1993 to 2000, the Urban Institute collected data on the progress of over 2,500 participants in 40 Pathways programs across the United States. Case study data on all 40 programs were also collected during this period. This brief reports the findings of the summative component of the evaluation, which was based largely on the results of several surveys administered to all programs, participants, and others involved in the Pathways Program. The summative component looks at the program's success in meeting its overall recruitment goals; retaining participants in the program through completion and teacher certification; placing program graduates in targeted, high-need districts; producing effective teachers; and producing teachers who remain in the teaching profession.

For more information on the evaluation, see *Ahead of the Class: A Handbook for Preparing New Teachers from New Sources* (Clewell and Villegas, 2001; available from the Urban Institute) and *Evaluation of the DeWitt Wallace-Reader's Digest Fund's Pathways to Teaching Careers Program*.

Copyright © December 2001. The Urban Institute. All rights reserved. Except for short quotes, no part of this book may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, or by information storage or retrieval system, without written permission from the Urban Institute.

The Urban Institute is a nonprofit, nonpartisan policy research and educational organization that examines the social, economic, and governance problems facing the nation. The views expressed are those of the authors and should not be attributed to the Urban Institute, its trustees, or its funders.

The authors would like to thank all of the Pathways Program administrators and staff as well as participants whose time and knowledge have contributed to this evaluation.