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To:

Name: Bethany Little

Organization: White House

Fax: (202) 456-5581
7028

From:

Name: Shirley Lathford

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Pages: 20 (including this one)

Council of the Great City Schools

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News...News...**News...News...****Council of the Great City Schools**

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EMBARGOED FOR RELEASE
January 19, 2000 (10 a.m., EST)CONTACT: Henry Duvall
(202) 393-2427**Urban Schools Face Critical Teacher Shortage*****Demand Greatest for Math, Science and Special Education Teachers***

WASHINGTON, Jan. 19 -- Demand for classroom teachers in the nation's urban schools has reached critical proportions, primarily in special education, mathematics and science, with shortages projected to continue through the next five years, according to a report released today.

A study titled *The Urban Teacher Challenge -- Teacher Demand and Supply in the Great City Schools* reveals that virtually all the nation's big-city school districts reported in a survey that they are in immediate need for math (95 percent), science (98 percent) and special education teachers (98 percent). And not far behind, demand is also high for teachers in the areas of bilingual education (73 percent), English-as-a-Second Language (68 percent) and educational technology (68 percent).

The study of 40 large urban school districts was conducted by Recruiting New Teachers (RNT), a non-profit organization working to build the nation's teacher workforce; the Council of the Great City Schools, a coalition of the nation's 57 largest urban public school systems; and the Council of the Great City Colleges of Education, which comprises schools of education serving those cities.

The three groups in 1994 joined forces to become the Urban Teacher Collaborative, aiming to improve the quality, diversity and cultural sensitivity of America's urban teacher workforce. This is the collaborative's second *Urban Teacher Challenge* study since 1996, with the latest report indicating even higher demands for teachers.

High demand can also be found for minority teachers. Nearly three-quarters, or 73 percent, of responding urban school districts in the survey indicated that they have an immediate need for teachers of color. Minorities make up approximately 69 percent of student enrollment compared with only 36 percent of the teaching force, the study notes.

"More than ever today, we need Americans to step up to the challenge of teaching all of our children," says Council Executive Director Michael Casserly, "Helping our children learn in the inner cities can present immeasurable rewards and satisfaction."

(more)

Urban Schools Face Critical Teacher Shortage

Page 2

Urban school systems have developed and exercised a variety of creative and innovative ways to recruit and retain teachers, including offering on-the-spot contracts to hire teachers and providing induction and support programs to keep talented new teachers in the classroom, the study shows. Nearly all of the urban school districts surveyed recruit at historically African-American and Hispanic colleges.

Urban districts also employ stopgap measures, such as hiring non-certified teachers and using long-term substitutes, to relieve classroom shortages,

On the supply side of the demand-supply equation, *The Urban Teachers Challenge* reveals problems at the nation's colleges of education -- the chief source for qualified teaching candidates. Teacher education students "are still flocking to over-subscribed programs," the report stresses. These are instructional areas, such as elementary education, social studies/history and early childhood, that have the most appeal to students pursuing teaching careers -- despite severe shortages in other disciplines.


The Council of the Great City Colleges of Education surveyed 45 colleges and found that students at more than half of them responding had low interest in pursuing a teaching career in mathematics (55.6 percent) and foreign languages (53.3 percent), while nearly half, or 44.4 percent, had low interest in becoming science teachers.

According to Council Chair Phil Rusche, dean of the School of Education at the University of California, Northridge, urban colleges of education have taken action to realign their programs to attract students to high-demand areas in urban education. "Now the time has come to scale up these programs in a comprehensive way," he says.

The 26-page report gives city school district-by-district data on teacher demand and recruitment strategies. The districts are Atlanta, Baltimore, Birmingham, Broward County (Fort Lauderdale), Charlotte, Chicago, Cleveland, Columbus, Denver, Des Moines, Detroit, Fort Worth, Fresno, Houston, Indianapolis, Jefferson County (Louisville), Los Angeles, Memphis, Miami-Dade, Milwaukee, Minneapolis, Nashville, New Orleans, New York City, Newark, Oakland, Omaha, Philadelphia, Pittsburgh, Portland, Richmond, Rochester, Sacramento, Saint Paul, Salt Lake City, San Antonio, San Diego, San Francisco, Toledo and Tucson.



THE URBAN TEACHER CHALLENGE



TEACHER DEMAND AND SUPPLY IN THE GREAT CITY SCHOOLS

Nancy R. Hoyt
1175 Main Street
Hingham, MA 02043

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Subject: _____

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MEMORANDUM

TO: Nancy Hoit

FROM: Dr. James P. Comer

DATE: January 13, 2000

RE: Likely Supporters for our Yale Child Study Center School Development Program Education Extension Service Model

1. Ms. Hillary Clinton – I proposed the idea to her in the White House in August of 1997. She liked the idea and suggested that I speak with Secretary of Education Riley.
2. Secretary Riley and Senior Staff – I spoke to Secretary Riley and Senior Staff in the fall of 1997. We submitted a proposal which was eventually approved.
3. Assistant Secretary of Education (Office of Education and Research) liked the idea and gave final approval. We received initial funds in 1998. The grant is structured so that we will receive 4.5 million dollars over a 5-year period with the expectation that other departments of government, foundations, corporations and private individuals will be involved.
4. Other persons knowledgeable about our work and likely to be supportive:
 - a) Ms. Tipper Gore – First personal contact in April of 1994 when she visited one of our project schools in New Haven with our Congresswoman Rosa DeLauro. Later we received honors at the same time from the American Psychiatric Association, and in 1997 from the Judge Baker Children's Center at Harvard University.
 - b) Congressman Richard Gephardt – First became familiar with our work because one of his constituents read my book, implemented the approach without training and got good outcomes; and called this to the attention of the Congressman. Congressman Gephardt visited our Program in New Haven and subsequently I spoke at a conference on families that he sponsored in Missouri. At his request I made a presentation to a section of the Democratic Caucus at a retreat in Virginia two years ago and to a Democratic Caucus Study Group in Washington, D.C. last year. I will make a presentation to the Caucus on February 6, 2000.

MEMORANDUM

January 13, 2000

Page 2

- c) Congresswoman Rosa DeLauro – She represents the New Haven area and has visited schools and people using our Program on several occasions. She has called me to discuss education issues before she made presentations to the
- d) Congress and the media. Her Education Aide attended our Summer Institute in 1999.
- e) Congressman Elijah Cummings – Consulted me regarding his interest in improving education in the Baltimore area. His Legislative Aide attended our 1999 Summer Institute. I spoke at a conference on education in Baltimore sponsored by the Congressman in September, 1999. He has expressed an interest in supporting our work in any way possible.
- f) Senator Joseph Lieberman – He is familiar with and supportive of our work. I was among a group of advisors to him regarding education issues last Spring.
- g) Senator Christopher Dodd – He is familiar with and supportive of our work.
- h) Congressman Sheila Jackson-Lee, whom I believe is now Chair of the Children's Caucus in the Congress. She is a Yale graduate and is familiar with and supportive of our work.
- i) Congresswoman Juanita Millender-McDonald from California – I served on the National Board of Professional Teaching Standards with her. She is a former teacher and very supportive of our work.
- j) All of the members of the Black Caucus in Congress know of our work, some much better than others. Charlie Rangel is a personal friend.
- k) Congressman Major Owens is very familiar with our work.
- l) Tim Shriver (Eunice Kennedy's son) worked in our Program for a year and is very supportive. He is an in-law of Andrew Cuomo, Secretary of HUD.
- m) Donna Shalala – She is very familiar with and supportive of our work.
- n) Janet Reno – She is very familiar with and supportive of our work. I served on a Juvenile Justice Commission with her about 20 years ago.
- o) Governor James Hunt, North Carolina – He was the Chair of the National Board of Professional Teaching Standards and the Commission on Teaching in America's Future, on which I served. He is familiar with the fact that some of the most successful schools in North Carolina are using our model and has long been supportive of our work.

JPC:kb-s



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(more)

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THE URBAN TEACHER COLLABORATIVE

The Urban Teacher Collaborative was founded in 2001 to improve the quality, diversity, and ethical sensitivity of the nation's urban teacher workforce.

Recruiting New Teachers, Inc.

A national nonprofit organization founded in 1985 to raise esteem for the teaching profession, expand the pool of prospective teachers, and improve the nation's teacher recruitment, development, and diversity policies and practices. RNT's programs and services include: conducting public outreach and awareness efforts to raise esteem for the teaching profession; offering counsel and information to prospective teachers; convening national conferences focusing on teacher recruitment, development, and diversity; providing technical assistance to states and school districts; conducting research on various aspects of teacher recruitment and development; publishing guides, monographs, and reports; and serving as an information clearinghouse on teacher recruitment and development issues.

The Council of the Great City Schools is the only organization in the nation exclusively representing the needs of urban public schools.

Composed of 57 large city school districts, its mission is to promote the cause of urban schools and to advocate for inner-city students through legislation, research, and media relations. The organization also provides a network for school districts sharing common problems to exchange information, and to collectively address new challenges as they emerge in order to deliver the best possible education for the nation's youth.

The Council of the Great City

Colleges of Education is an association of urban higher education institutions dedicated to developing and maintaining a system of mutually beneficial support for schools, colleges and departments of education, urban school systems, and other interested organizations to improve teaching and learning in urban settings. Currently 67 Great City Colleges of Education belong to the association.

The *Urban Teacher Challenge* report can be found on the Urban Teacher Collaborative website, www.etc-collab.org and on Recruiting New Teachers, Inc.'s website, www.rnt.org. For additional copies, please contact Recruiting New Teachers, Inc., 887 Belmont Avenue, Suite 107, Belmont, MA 02478. Phone: 617-339-6000. Fax: 617-339-6005. Email: rnt@rnt.org. Brief excerpts from this report may be reproduced without restriction, provided that acknowledgment is given to the Urban Teacher Collaborative.

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THE URBAN TEACHER COLLABORATIVE

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INTRODUCTION

Although teacher shortages affect schools and districts across the country to varying degrees, urban districts are facing unique challenges, owing to rapidly growing student enrollments, accelerating rates of teacher retirement, class size reduction initiatives, and demanding working conditions. Urban schools nationwide educate between 40% and 50% of the students who are not proficient in English, about 50% of minority students, and 40% of the country's low-income students. Schools in urban areas also contend with the lowest levels of student achievement, the highest dropout rates, and a disproportionate percentage of students with special needs.¹ Urban schools are also more likely to fill vacancies with teachers who have less-than-full credentials and require additional on-the-job training.² These realities further exacerbate teacher turnover in our urban schools.

To get a picture of teacher supply and preparation challenges in the nation's largest urban centers, the three partner organizations of the Urban Teacher Collaborative—Recruiting New Teachers, Inc. (RNT), the Council of the Great City Schools (CGCS), and the Council of the Great City Colleges of Education (CGCCE)—conducted surveys of the Great City Schools and Colleges of Education in 1998-99. The Great City Schools serve 6.5 million students, of whom 40% are African-American, 30% are Hispanic, 21% are white, 6.4% are Asian/Pacific Islander, and .6% are Alaskan/Native American. Just over 60% of students (60.5%) in the Great City Schools are eligible for free/reduced price lunch, 21% are English language learners, and 11.4% are students with individualized education programs.³

Great City School districts supplied information about their immediate and anticipated demand for teachers, recruitment strategies, and efforts to encourage diversity in the teacher workforce. Great City Colleges of Education provided information about their teacher preparation programs, subject areas of greatest interest to students, supports available to teacher preparation students, programs for nontraditional prospective teachers, and incentives and accommodations to attract applicants for high-need teaching areas.

The surveys returned by the districts and colleges of education updated information originally reported in *The Urban Teacher Challenge* in 1996. That report, which provided a snapshot of teacher demand and preparation in Great City School districts and Great City Colleges of Education, asserted, "Without improved teacher recruitment and development practices, this nation will fail to build the qualified, diverse, and culturally sensitive teacher workforce that today's and tomorrow's classrooms demand." This is still true almost four years later. Not only must large urban districts find and hire some 700,000 new teachers in the coming decade, they must also ensure that each new recruit is well qualified.

Teacher quality is emerging as one of the foremost concerns of school and university educators, parents, professional organizations, foundations, state education officials, business leaders, and legislators across the country. According to RNT's 1998 national poll, *The Essential Profession*, roughly nine out of ten Americans believe that the best way to raise student achievement is to provide a qualified teacher for every classroom. In fact, the public believes that improving the quality of teachers is the most important issue facing public schools today, next to school safety.

The 1998-99 surveys were designed to determine whether and in what ways large urban districts and colleges of education are addressing teacher recruitment and development challenges. RNT and the CGCS mailed surveys to all the human resource administrators in member Great City School districts. Of the (then) 54 Great City School districts, 40 (74%) responded to the survey. At the same time, surveys were also sent to the deans of the Great City Colleges of Education. Of the (then) 54 Great City Colleges of Education, 45 responded to the survey, for an 83% response rate. Telephone calls were made to boost the return rate for both surveys and to clarify responses. This *Urban Teacher Challenge* report contains the latest findings.

¹ Lippman, L., Burns, S., and McArthur, E. (1996). *Urban Schools: The Challenge of Location and Poverty*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

² National Commission on Teaching and America's Future. (1997). *Doing What Matters Most: Investing in Quality Teaching*. New York, NY: National Commission on Teaching and America's Future.

³ Council of the Great City Schools, 1999.

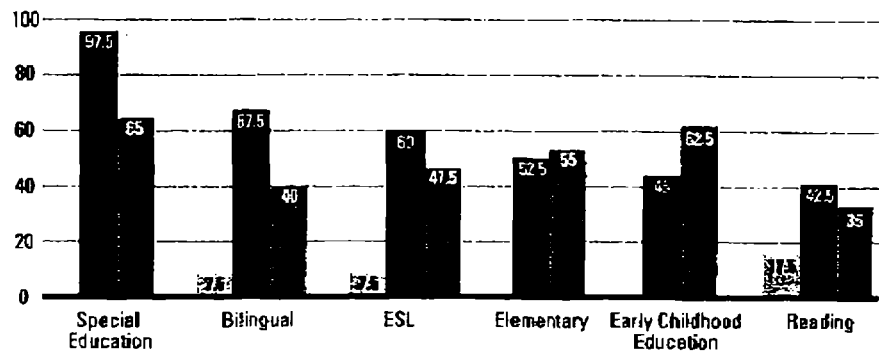
GREAT CITY SCHOOL DISTRICT SURVEY RESULTS

The district survey focused on demand for teachers, recruitment strategies, and targeted recruitment pools. Please note that for certain questions, respondents could check off any combination of answers; therefore, percentages may add up to more than 100.

Demand for Teachers

The survey asked districts to respond to questions about immediate and anticipated demand for teachers—the latter defined as demand expected over the next five years—in specific teaching areas and grade levels. [See table specifying district-by-district demand in Appendix 1.] Fewer than half (45%) of responding districts have an immediate demand for early childhood teachers, but nearly two-thirds (62.5%) anticipate demand in that area over the next five years. Slightly more than half of the districts (52.5%) have an immediate demand for elementary teachers and slightly more (55%) anticipate demand. In addition, just over eighty percent (82.5%) reported an immediate demand for male teachers at the elementary level.

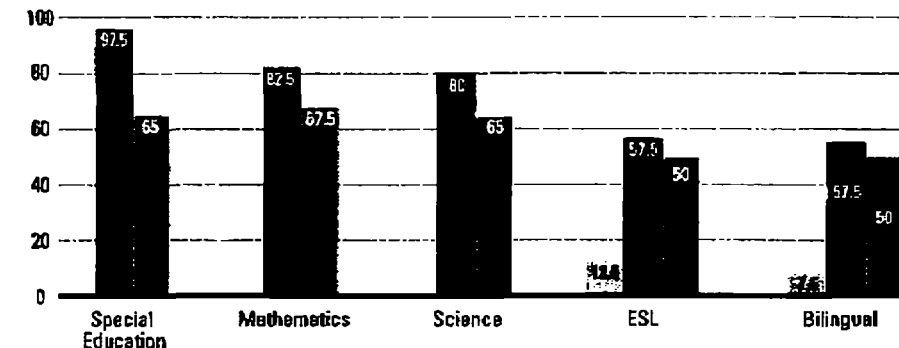
Demand for K-6 Teachers
 * No Demand ■ Immediate Demand ■ Anticipated Demand



* Multiple responses allowed.

At the elementary level, special educators are in immediate demand in 97.5% of responding districts. Bilingual educators are also in immediate demand (67.5%), as are English as a Second Language (ESL) teachers (60%). These are also the subject areas in which anticipated demand is greatest. Fewer than half of the districts (42.5%) reported an immediate demand for reading teachers.

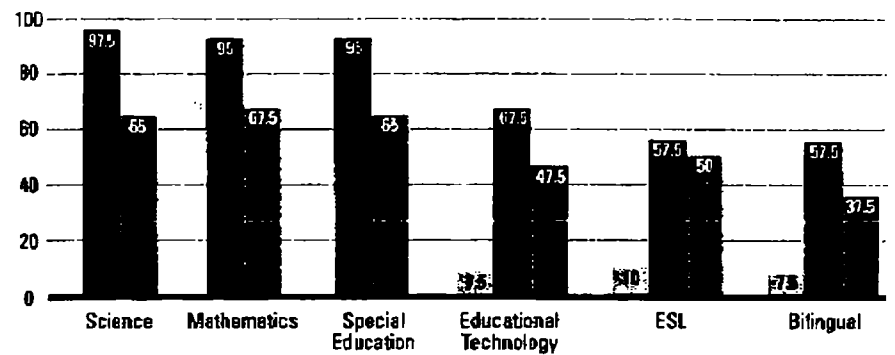
Demand for Middle School Teachers
 * No Demand ■ Immediate Demand ■ Anticipated Demand



* Multiple responses allowed.

Districts described a similar demand for special education teachers at the middle school level—97.5% immediate demand and 65% anticipated demand. In addition, 82.5% of responding districts have an immediate demand for middle school mathematics teachers and 67.5% have an anticipated demand. Middle school science teachers are also needed: 80% of responding districts indicated an immediate demand, 65% an anticipated demand. More than half (57.5%) of Great City middle schools need both ESL and bilingual teachers.

Demand for High School Teachers
 ■ No Demand ■ Immediate Demand ■ Anticipated Demand

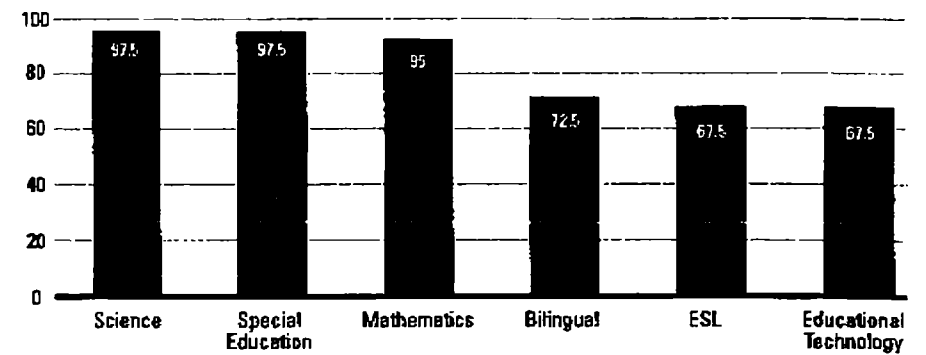


* Multiple responses allowed.

Shortages in specific subject areas at the high school level in Great City School districts are equally pressing. Ninety-seven percent of responding districts reported an immediate demand and 65% an anticipated demand for high school science teachers. Ninety-five percent (95%) of responding districts cited an immediate demand for both mathematics and special education teachers at the high school level, 67.5% described an immediate demand for educational technology specialists, and 57.5% of responding districts noted an immediate demand for both ESL and bilingual teachers. Only 15% indicated an immediate demand for high school social studies/history teachers.

When the data about teacher demand are aggregated across grade levels, special education and science prove to be the fields in which teachers are in the most demand (97.5% of responding districts note immediate demand for both), followed closely by 95% of responding districts with an immediate demand for mathematics teachers. In addition, 72.5% of respondents reported an immediate demand for bilingual teachers, while 67.5% cited an immediate demand for both ESL and educational technology teachers.

Teacher Demand Aggregated Across Grade Levels
 ■ Immediate Demand



* Multiple responses allowed.

Demand for Teachers of Color

Nearly three-quarters of responding Great City School districts indicated that they have an immediate need for teachers of color (72.5%), and 55% of responding districts anticipate demand for teachers of color. In fact, just two districts (Birmingham, with 64% teachers of color, and New Orleans, with 78%) noted they have no demand at all for teachers of color. In addition, 70% of districts responded that they have special recruitment efforts under way to attract prospective minority teachers, and 95% of responding districts currently recruit at historically black and/or Hispanic colleges or universities.

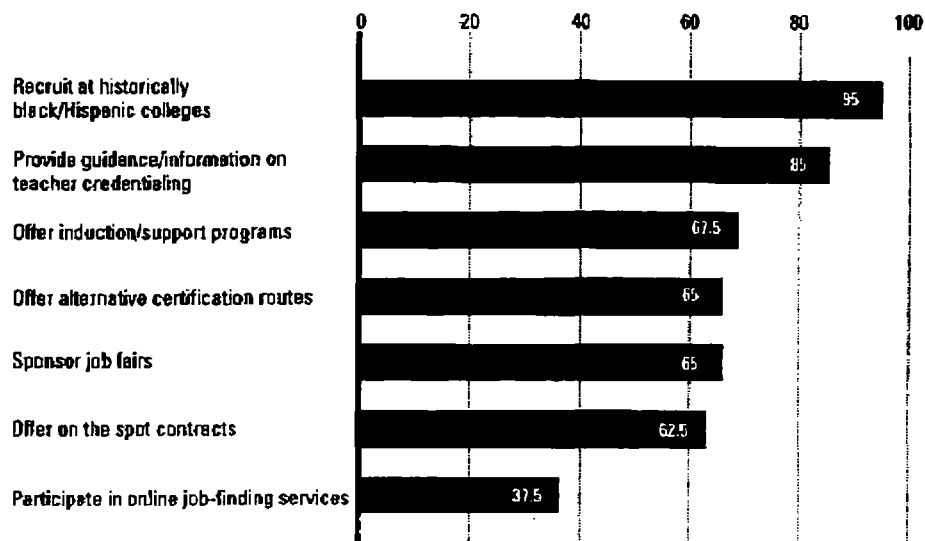
District Recruitment and Retention Strategies

The survey asked districts whether targeted recruitment efforts are under way, and, if so, what specific teacher recruitment strategies and procedures are employed. [See table of district-by-district recruitment strategies in Appendix 2.] Great City School districts are using a full range of recruitment strategies to attract teachers to their schools. Some common strategies are: offering alternative certification routes (65%), sponsoring job fairs (65%), and offering on-the-spot contracts (62.5%). Many districts also

employ technology in their efforts to recruit teachers to their districts. For example, 37.5% of the districts participate in online counseling and/or job-finding services for teacher candidates in which districts can post job openings, requirements, and contact information, and encourage candidates to post résumés. Twenty-five percent of responding districts offer monetary bonuses for talented and/or high-need subject area candidates, while 17.5% offer to waive certain job/licensure requirements and 15% offer school placement guarantees. In addition, 85% of responding districts provide guidance and information about teacher credentialing.

Districts are also beginning to use incentives to retain and develop teachers. Most importantly, more than two-thirds (67.5%) offer induction/support programs for beginning teachers.⁴ Twenty-five percent of responding districts offer tuition assistance for graduate course work. Nearly the same percentage (22.5%) offer incentives for National Board certification, and 7.5% offer bonuses for high student achievement.

District Recruitment and Retention Strategies



* Multiple responses allowed.

⁴ For more information about urban teacher induction programs and practices, see Fidler, E. and Hasekorn, D. (1999). *Learning the Ropes: Urban Teacher Induction Programs and Practices in the United States*. Belmont, MA: Recruiting New Teachers, Inc.

Developing Pathways into Teaching

An increasing number of districts are trying to address teacher shortages by “expanding the pipeline,” i.e., offering nontraditional routes into the profession to individuals from diverse backgrounds and fields. The survey asked districts whether and how they encourage individuals interested in teaching to enter the profession through alternative means. Responses were as follows:

- Almost a third (32.5%) of responding districts have an immediate demand for paraeducators/teacher aides who are pursuing teaching careers and 42.5% anticipate demand in the near future. Somewhat less than half of responding districts (42.5%) have special recruitment efforts under way and 25% have special incentives or support for this group.
- Over eighty percent (82.5%) of responding districts allow a noncredentialed teacher to teach. For example, 60% of responding districts allow individuals to teach under an emergency permit;⁵ and the same percentage allow long-term substitutes to teach. Slightly over a third of responding Great City School districts (35%) have internship programs or permits in place, while 37.5% of districts offer certification waivers.⁶ Fewer than one in five districts (17.5%) employ teachers via special programs (such as Teach for America).
- More than three-quarters (77.5%) of responding districts noted that they work in collaboration with a college or university to offer programs for nontraditional teacher candidates to meet state licensure requirements; 27.5% collaborate with the local teachers’ union toward this end.
- Substitute teachers are also in demand. Nearly three-quarters (72.5%) of responding districts have an immediate demand and 50% an anticipated demand. In addition, 47.5% have special recruitment efforts under way and 27.5% offer special incentives or support for substitutes. In 60% of responding districts, a bachelor’s degree is the minimum requirement for substitutes, and 47.5% require a substitute permit or license. Several districts also require substitutes to complete specified course work or semester hours, the number of which varies according to the district.

⁵ Of the 24 responding districts that listed emergency permits as an option, more than half specified the duration of a permit as one year.

⁶ Of 15 responding districts that allow certification waivers, six specified the duration of a waiver as one year, five specified other amounts of time, and four did not specify duration.

GREAT CITY COLLEGE OF EDUCATION SURVEY RESULTS

More than three-quarters of the colleges and universities that responded are public institutions (35 of the 45 respondents) and four are historically black colleges or universities. Most offer a master's degree in education (82.2%) and a bachelor's degree in education (75.6%). Two-thirds of responding institutions noted that their postbaccalaureate programs are limited to licensure/certification only. Typically, responding institutions offer elementary education programs at the graduate level (77.8%), and 62.2% do so at the undergraduate level. Eighty-seven percent (86.7%) offer teacher preparation programs in special education at the graduate level, but only 51.1% offer it at the undergraduate level. English as a Second Language is a more prevalent option at the graduate level (53.3%) than at the undergraduate level (28.9%).

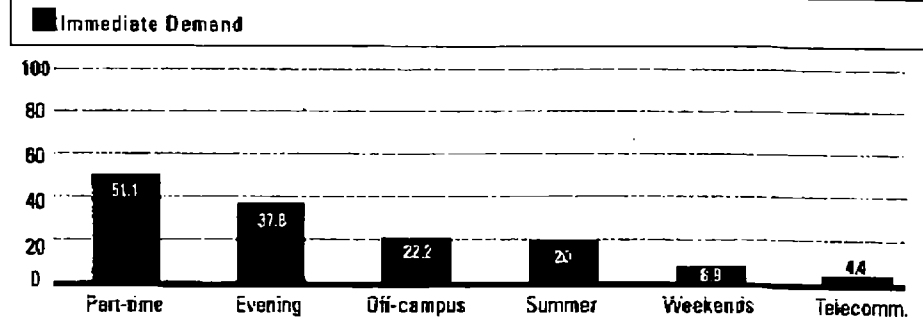
Attracting a Broader Pool of Students

A fair number of colleges offer programs specifically for working adults seeking to become classroom teachers. Slightly less than half (46.7%) offer alternative licensure programs, while a smaller number (28.9%) offer apprenticeship/internship programs. About the same percentage (24.4%) sponsor paraeducator-to-teacher programs.

In recognition of the many "out of class" demands that students entering teacher preparation programs now have, many schools, colleges, and departments of education offer flexible course scheduling. The survey asked respondents what percentage of teacher preparation program requirements can be completed via part-time, evening, weekend, summer, off-campus, and/or telecommunications classes. A slight majority (51.1%) of respondents indicated that "all course requirements" were offered part-time, while a lesser number allow all course work (with the exception of student teaching) to be completed in the evening (37.8%), at off-campus locations (22.2%), and during the summer (20.0%). Very few offer all course requirements on the weekends or via telecommunications.

⁷ Some programs offer options for students with special needs that are not available to the student body as a whole.

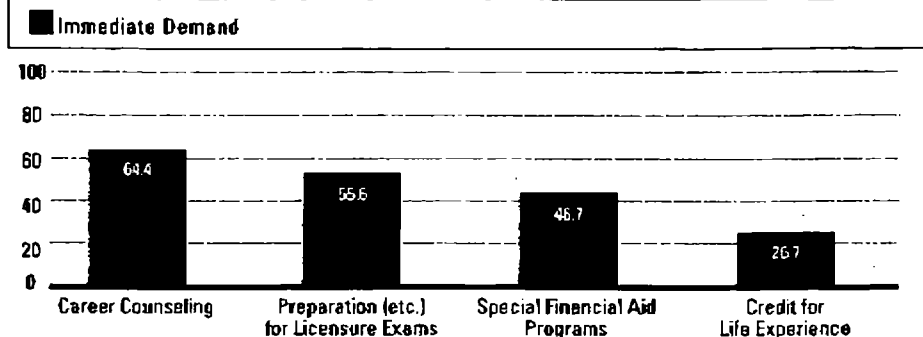
Scheduling Options: All Course Requirements



* Multiple responses allowed.

Many programs offer incentives to attract candidates to specific high-need teaching areas: targeted career counseling (64.4%); preparation, support, and academic assistance for state and national licensure exams (55.6%); and special financial aid programs (46.7%). Twenty-seven percent of responding Great City Colleges of Education (26.7%) offer credit for work or life experience in lieu of selected course work. Eighty-four percent (84.4%) of responding institutions have special placement programs or other incentives to interest graduates in urban teaching positions. In fact, nearly three-fourths (73.3%) of Council members place specific curricular emphasis on teaching in urban schools. Only 15.6% of respondents said they offer no incentives to attract candidates to high-need teaching areas.

Incentives Offered to Attract Candidates to High-Need Teaching Areas



* Multiple responses allowed.

Recruiting Minority Students

The survey asked the Great City Colleges whether and how they recruit minority students into teacher preparation programs. Eighty-seven percent (86.7%) of respondents indicated that they actively recruit ethnic and racial minorities, and 55.6% also offer special support services or incentives for prospective minority teachers. In addition, a full 80% seek out students from bilingual/bicultural backgrounds, and 42.2% offer special services or incentives for these students.

Subject Areas of Greatest Interest to Students

Certain teacher preparation subject areas attract more students than others. Interest is strongest in elementary education/multi-subject (86.7%), social studies/history (68.9%), early childhood (62.2%), and special education (62.2%). Meanwhile, more than half of responding colleges selected the category "low interest" for mathematics (55.6%) and foreign languages (53.3%), and 44.4% selected "low interest" for science programs.

SUMMARY OF KEY FINDINGS

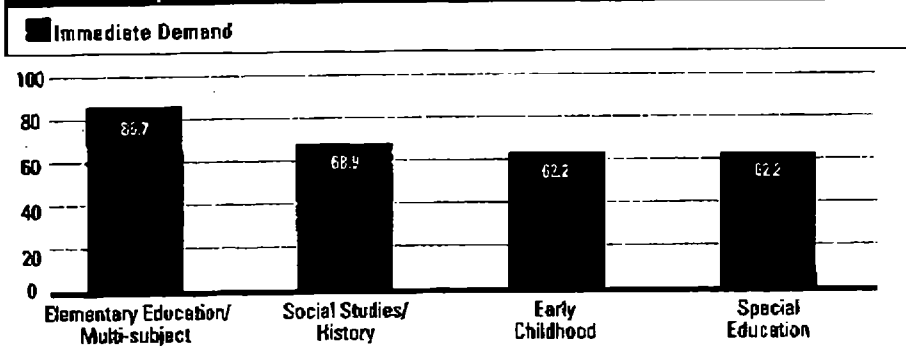
Results from the 1998-99 *Urban Teacher Challenge* surveys provide a snapshot of teacher demand and supply in the responding Great City School districts and Great City Colleges of Education. While the data represent only a microcosm of teacher demand across the country, these findings provide a close look at the pressing recruitment challenges facing America's largest urban schools.

The Great City School districts have a striking need for teachers—almost 100% of districts expressed an immediate demand for teachers in certain subject fields. Specifically, 97.5% of responding Great City Schools indicated an immediate demand for special educators and for science teachers, and 95% indicated immediate demand for mathematics teachers. These are the same fields that were in high demand in 1996, when the first *Urban Teacher Challenge* report was published. Bilingual teachers, ESL teachers, and educational technology specialists are also in immediate demand, while just half of the responding districts have an immediate need for elementary teachers. In general, districts anticipate shortages to continue during the next five years.

Districts address current shortages through a variety of means. Most are employing a range of recruitment strategies, including alternative licensure routes, job fairs, on-the-spot contracts, online job-finding services, and monetary incentives. Eighty-three percent (82.5%) of responding districts allow a noncredentialed teacher to teach. Sixty percent of responding districts allow individuals to teach under emergency permits, 60% use long-term substitutes, 37.5% hire teachers with certification waivers, and 35% of districts recognize internship programs or permits. The demand for substitute teachers is acute.

Great City School districts are also quite aggressive in trying to boost teacher retention rates; more than two-thirds (67.5%) offer induction/support programs.

Teacher Preparation Subject Areas of Greatest Interest to Students



* Multiple responses allowed.

Nearly three-quarters of Great City School districts have an immediate need for teachers of color and over half anticipate demand over the next five years. In responding Great City School districts, minority individuals represent 36% of teachers, whereas students of color comprise 69% of enrollment. Special recruitment efforts are under way to attract prospective minority teachers in 70% of the districts. A vast majority (95%) of responding districts in 1998-99 indicated that they recruit at historically black and/or Hispanic colleges or universities.

On the supply side, nearly three-quarters of responding Great City Colleges of Education emphasize teaching in urban schools as part of the curriculum, and 84% offer special placement programs or other incentives to interest graduates in urban teaching positions. The subject areas of greatest interest to teacher education students are elementary education and social studies/history. Early childhood and special education attract students at 62.2% of Great City Colleges of Education; interest is far weaker for mathematics, foreign languages, and science education. Responding institutions offer more education programs at the graduate level than at the undergraduate level. Thirty responding colleges and universities (66.7%) noted that their postbaccalaureate offerings are limited to licensure/certification only. Almost half (46.7%) of responding Great City Colleges of Education offer alternative licensure programs and 28.9% sponsor apprenticeship/internship programs; 24.4% of responding colleges offer paraeducator-to-teacher programs.

Flexible scheduling options are available to accommodate the personal and professional needs of teacher education students in just over half of the responding institutions. Colleges and universities also offer incentives to attract candidates to high-need teaching areas: more than half offer targeted career counseling and preparation, and support and academic assistance for state and national licensure exams. Almost half (46.7%) offer special financial aid programs.

CONCLUSIONS

In sum, there is no doubt that the nation's Great City School districts are experiencing real teacher shortages in specific subject fields, across grade levels, and in the ranks of minority teachers. Shortages are most severe in special education, science, and mathematics. Given the data on immediate and anticipated demand, Great City School districts are unlikely to see an end to teacher shortages any time soon.

Districts are employing a variety of strategies, including a host of new incentives, to attract teacher candidates, particularly from groups underrepresented in the profession. At the same time, however, the percentage of districts using long-term substitutes as well as teachers on certification waivers has also risen dramatically, because even with more aggressive recruitment measures in place, districts have had to adopt emergency measures in order to staff their classrooms.

One positive development that has emerged is the growing percentage of Great City School districts that have introduced induction programs to support, assist, and retain new teachers (67.5% currently, an increase since the 1995-96 *Urban Teacher Challenge* survey). Evidently, districts recognize that one way to reduce the teacher shortage is to take steps to reduce the number of teachers vacating classrooms in the first place.

Great City Colleges of Education also are expanding efforts to address the urban teacher shortage. Nearly three-quarters emphasize urban teaching within the curriculum. Even more have special placement programs or other incentives to interest graduates in urban teaching positions. Eighty-seven percent actively recruit ethnic and racial minorities and a comparable number seek out students from bilingual/bicultural backgrounds. Colleges continue to offer alternative teacher licensure programs, flexible scheduling options, plus financial aid and other kinds of support and assistance to attract career changers and other nontraditional students as well as candidates for high-need teaching areas.

Nevertheless, at the same time, teacher education students are still flocking to oversubscribed programs, making it anyone's guess where well-prepared teachers for all the high-demand areas will be found.

APPENDIX 1: TEACHERS IN IMMEDIATE DEMAND (BY DISTRICT)

E = Immediate demand at the elementary (K-6) level
 M = Immediate demand at the middle school level
 H = Immediate demand at the high school level
 X = Immediate demand, grade level not specified in question

District	Special Education	Mathematics	Science	English as a Second Language	Bilingual	Elementary Education	Early Childhood Education	Teachers of Color	Substitute Teachers
Atlanta	E,M,H	E,M,H	E,M,H	E,M,H	E,M,H	X	X		X
Baltimore	E,M,H	M,H	M,H	E		X			X
Birmingham	E,M,H	M,H	M,H						X
Broward County (Fort Lauderdale)	E,M,H	M,H	M,H	E			X	X	X
Charlotte	E,M,H	M,H	M,H	M,H	M,H	X	X	X	X
Chicago	E,M,H	H	H	EM	EM	X	X	X	X
Cleveland	E,M,H	M,H	M,H		E,M,H	X	X	X	X
Columbus	E,M,H	M,H	M,H	EM,H	EM,H			X	X
Denver							X	X	
Des Moines	E,M,H	M,H	M,H	EM,H	EM,H	X			
Detroit	E,M,H	M,H	M,H		E,M,H	X		X	X
Fort Worth	E,M,H	M,H	M,H	EM	E	X	X		
Fresno	E,M,H	M,H	M,H	E,M,H	E,M,H				X
Houston	E,M,H	M,H	M,H		E	X	X		
Indianapolis	E,M,H	M,H	M,H	E,M,H				X	X
Jefferson County (Louisville)	E,M,H	M,H	M,H					X	X
Los Angeles	E,M,H	E,M,H	E,M,H	E,M,H	E,M,H	X	X	X	X
Memphis	E,M,H	M,H	M,H	E,M,H	E,M,H	X	X	X	X
Miami-Dade	E,M,H	M,H	M,H	E,M,H			X	X	
Milwaukee	E,M,H	M,H	M,H		M,H	X		X	X
Minneapolis	E,M,H	E,M,H	E,M,H		E,M,H				

District	Special Education	Mathematics	Science	English as a Second Language	Bilingual	Elementary Education	Early Childhood Education	Teachers of Color	Substitute Teachers
Nashville	E,M,H	M,H	E,M,H	E,M,H	E,M,H	X	X	X	X
New Orleans	E,M,H	M,H	E,M,H	E,M,H	E,M,H	X	X		
New York City	E,M,H	M,H	M,H	E,M,H	E,M,H	X	X	X	X
Newark	E,M,H	H	H	EM,H	EM,H	X		X	X
Oakland	E,M,H	E,M,H	E,M,H	E,M,H	E,M,H	X		X	X
Omaha	E,M,H	M,H	M,H	EM,H			X	X	X
Philadelphia	E,M,H	E,M,H	E,M,H	E,M,H	X	X	X	X	X
Pittsburgh	E,M,H		H		EM,H			X	X
Portland	E,M,H	H	H	E,M,H	E,M,H			X	X
Richmond	E,M,H	M,H	M,H			X	X	X	X
Rochester	E,M,H	M,H	M,H	E,M,H	E,M,H				X
Sacramento	E,M,H	M,H	M,H		E			X	
Saint Paul	E,M,H	M,H	M,H	E,M,H	E,M,H		X	X	X
Salt Lake City	E,M,H	M,H	H	EM,H				X	X
San Antonio	EM	M,H	M,H	H	E			X	X
San Diego	E,M,H	H	H		E			X	
San Francisco	E,M,H	M,H	M,H	E,M,H	E	X	X	X	
Toledo	E,M,H	H	M,H			X			X
Tucson	E,M,H	M,H	H	H	E,M,H			X	X

APPENDIX 2: RECRUITMENT STRATEGIES (BY DISTRICT)

District	Special recruitment efforts at colleges and universities	Recruit at historically black/Hispanic colleges	International recruitment efforts	Incentives (e.g., housing assistance, relocation benefits, etc.)	Waive certain job/licensure requirements	School placement guarantees	Offer on-the-spot contracts	Offer induction/support programs	Offer alternative certification routes	Offer monetary bonus for talented/high-need subject area candidates	Offer bonus for high student achievement	Offer loan forgiveness program	Tuition assistance for graduate course work	Incentives for NBPTS certification	City or county residency requirement	Provide guidance and information about teacher credentialing	Sponsor job fairs to attract new teachers to school district	Provide teacher employment information via telephone hotline	Participate in online counseling and/or job-finding Web 2.0 services
Atlanta	X	X	X					X								X	X	X	X
Baltimore	X	X		X			X	X	X			X	X			X	X	X	
Birmingham	X	X	X						X			X				X	X		
Broward County (Ft. Lauderdale)	X	X					X	X				X	X			X		X	X
Charlotte	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X
Chicago	X	X						X	X			X	X		X	X	X	X	X
Cleveland	X	X					X												
Columbus	X	X	X				X						X			X			
Denver	X	X	X	X			X	X	X							X	X	X	X
Des Moines	X	X						X								X	X	X	
Detroit		X								X							X		
Fort Worth	X	X	X				X		X	X	X	X	X			X	X	X	
Fresno	X	X	X		X		X	X								X	X	X	X
Houston	X	X	X	X				X	X	X	X	X				X	X		X
Indianapolis	X	X					X	X	X							X	X	X	
Jefferson County (Louisville)	X	X					X	X	X					X		X			
Los Angeles	X	X	X			X	X	X	X	X				X		X	X	X	X
Memphis	X	X							X							X	X		
Miami-Dade	X	X					X	X					X			X			X
Milwaukee	X	X					X	X	X						X	X	X		
Minneapolis	X	X					X	X	X	X				X		X	X		

APPENDIX 2: RECRUITMENT STRATEGIES (BY DISTRICT)

continued

District	Strategy	Special recruitment efforts at colleges and universities	Recruit at historically black/Hispanic colleges	International recruitment efforts	Incentives (e.g., housing assistance, relocation benefits, etc.)	Waive certain job/licensure requirements	School placement guarantees	Offer on-the-spot contracts	Offer induction/support programs	Offer alternative certification routes	Offer monetary bonus for talented/high-need subject area candidates	Offer bonus for high student achievement	Offer loan forgiveness program	Tuition assistance for graduate course work	Incentives for NBPTS certification	City or county residency requirement	Provide guidance and information about teacher credentialing	Sponsor job fairs to attract new teachers to school district	Provide teacher employment information via telephone hotline	Participate in online counseling job/posting-finding
Nashville		X	X					X	X								X			
New Orleans		X	X			X		X	X	X				X	X		X			
New York City		X	X	X		X	X		X	X			X	X			X	X	X	
Newark		X	X							X	X						X			
Oakland		X	X	X				X		X							X	X	X	X
Omaha		X	X					X	X								X	X	X	X
Philadelphia		X	X				X	X	X	X						X	X	X		X
Pittsburgh		X	X														X			
Portland		X															X	X	X	X
Richmond		X	X		X					X	X						X	X		
Rochester		X	X				X	X	X				X				X			X
Sacramento		X	X	X		X		X	X	X							X	X	X	X
Saint Paul		X	X	X	X		X	X	X	X	X		X	X	X		X		X	X
Salt Lake City		X	X															X	X	
San Antonio		X	X					X	X	X	X		X		X			X		
San Diego		X	X		X			X	X	X					X		X		X	
San Francisco		X	X			X		X	X	X							X	X	X	
Toledo		X	X						X	X				X	X		X		X	
Tucson		X				X													X	

APPENDIX 3: FACTS ABOUT THE GREAT CITY SCHOOL DISTRICTS AND COLLEGES OF EDUCATION

Responding Great City Colleges of Education provided demographic information about their teacher education students, and responding Great City School districts provided demographic information about their students and teachers. (Note: The figures below are estimates.)

Responding Great City School Districts

- The total number of students in 39 responding districts was 5,505,484, with individual district enrollments ranging from 25,207 in Salt Lake City to 1,100,000 in New York City.
- The total number of teachers employed by 39 responding Great City School districts was 325,203, ranging from 1,270 in Salt Lake City to 75,170 in New York City.
- Students of color comprise approximately 69% of the enrollments of the 35 districts that provided this information. Minority individuals represented 36% of teachers in 35 responding districts.
- The total number of new teachers hired by 39 responding districts for the 1997-98 school year was 33,691.
- Thirty-one districts responded to the question about novice teachers, reporting that 12,788 of new hires for 1997-98 were novices.
- In 29 responding districts, 35% of teachers had 20 or more years of experience.
- One-quarter of the teachers in 34 responding districts are male.
- Bilingual teachers comprised 10% of the teaching force in 30 responding districts.
- Twenty-eight districts provided information about late hires, reporting a mean of approximately 19%, and a range from 55% in Fort Lauderdale to only .2% in Birmingham.

Responding Great City Colleges of Education

- The total number of teacher education students attending 45 responding colleges and universities was approximately 71,280.
- Half of the students in 40 responding education programs are over the age of 25.
- Students of color represented approximately 25% of the student bodies of 44 responding programs.
- Bilingual students comprised 15% of enrollees at 33 responding colleges and universities.
- Approximately 71% of the education students were female (43 colleges and universities responding).

RESPONDING GREAT CITY SCHOOL DISTRICTS AND COLLEGES OF EDUCATION

Responding Great City School Districts:

Atlanta, Baltimore, Birmingham, Broward County, Charlotte-Mecklenburg, Chicago, Cleveland, Columbus, Denver, Des Moines, Detroit, Fort Worth, Fresno, Houston, Indianapolis, Jefferson County, Los Angeles, Memphis, Metropolitan Nashville, Miami-Dade, Milwaukee, Minneapolis, New Orleans, New York City, Newark, Oakland, Omaha, Philadelphia, Pittsburgh, Portland, Richmond, Rochester, Sacramento City, Saint Paul District #25, Salt Lake City, San Antonio, San Diego, San Francisco, Toledo, Tucson.

Responding Great City Colleges of Education:

Boston College, Brooklyn College, CUNY, California State-Dominguez Hills, California State-Fresno, California State-Hayward, California State-Los Angeles, California State-Northridge, California State-Sacramento, Cleveland State University, DePaul University, Florida International University, Howard University, Kean University, Marquette University, Montclair State University, New York University, Norfolk State University, Old Dominion University, Portland State University, Rhode Island College, San Diego State University, San Francisco State University, Temple University, Tennessee State University, Towson University, University of Colorado at Denver, University of Dayton, University of Houston-Central, University of Louisville, University of Maryland-College Park, University of Miami, University of Minnesota, University of Missouri-St. Louis, University of Nebraska at Omaha, University of North Texas, University of Oklahoma, University of Pittsburgh, University of Rhode Island, University of Rochester, University of Toledo, University of Washington, Vanderbilt University, Virginia Commonwealth University, Wayne State University, Wright State University.



FAX

U.S. SENATOR PATTY MURRAY

To: John Schmus 456-7028

DATE: 4/15/99

FROM: Alexis L. Schuler

STAR findings

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Project STAR

THE TENNESSEE STUDENT/TEACHER ACHIEVEMENT RATIO STUDY

Background & 1999 Update

WHAT IS STAR?:

- A large-scale, four-year, longitudinal, experimental study of reduced class size, that is considered "one of the most important educational investigations ever carried out and illustrates the kind and magnitude of research needed in the field of education to strengthen schools." [Frederick Mosteller, Professor Emeritus of Mathematical Statistics at Harvard University (Summer/Fall 1995). *The Future of Children: Critical Issues for Children and Youths*, 5(2), p. 113-127.]
- Sound research which "leaves no doubt that small classes have an advantage over larger classes in reading and math in the early primary grades." [Finn, J. D., & Achilles C. M. (1990, Fall). Answers and questions about class size: A statewide experiment. *American Educational Research Journal*, 27(3), 557-577.]
- Robert Slavin, John Hopkins University, an AERA reactor, praised Project STAR's design and integrity and called it a "watershed event" in research.

HOW WERE STAR FUNDS OBTAINED AND USED?:

- Helen Pate-Bain presented Tennessee Legislators with the positive results from her class-size study that had been conducted within one Metropolitan Davidson County school. Pate-Bain obtained a \$1.2 million dollar legislative appropriation to complete STAR. Out of \$12 million, \$9,679,879 were used for teacher and teacher aide salaries.

HOW WAS THE STAR STUDY DESIGNED?:

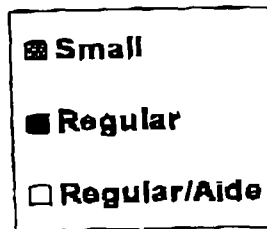
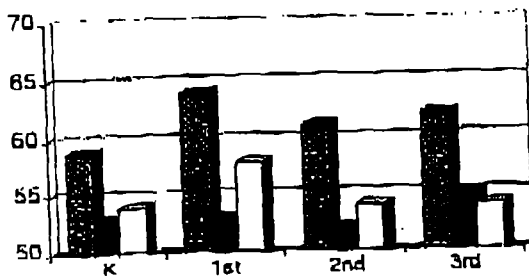
- All Tennessee schools were invited to participate.
- Each school had to have at least one of each of the three class types: small (13 to 17 students), regular (22-26 students), and regular with a full-time teacher aide (22-26 students) for the within school design.
- The study included 79 schools in 42 systems which resulted in over 6,000 students per grade level.
- Schools from inner-city, rural, urban, and suburban locations were included in the experiment.
- All students and teachers were randomly assigned to their class type.

WHAT WERE THE MAIN FINDINGS FROM STAR?:

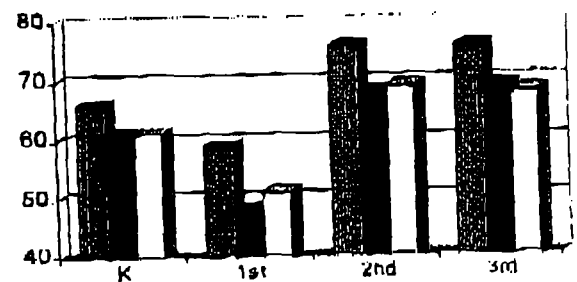
- At each grade level (K-3), and across all school locations, the small classes made the highest scores on the norm-referenced Stanford Achievement Test (SAT) and the criterion-referenced Basic Skills First Test (BSF). These results were both statistically and educationally significant.

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STAR Reading Percentile Ranks, Kindergarten - Grade 3, 1985-1989



STAR Math Percentile Ranks, Kindergarten - Grade 3, 1985-1989



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WHAT WERE OTHER IMPORTANT FINDINGS FROM STAR?

- The Greatest Gains on the SAT were made in Inner-City Small classes.
- The Highest Scores on the SAT and BSI were made in Rural Small classes.
- The Classes that scored in the top 10% on the SAT Total Reading are identified as follows:
 - 18 of the top 33 classes were small in Kindergarten.
 - 22 of the top 34 classes were small in First Grade.
 - 23 of the top 34 classes were small in Second Grade.
 - 25 of the top 32 classes were small in Third Grade.
- Inner-City (Predominantly Minority) students in small classes always outscored inner-city students in regular and regular/aide classes. This suggests that small classes are very beneficial to minority students. Non-Free Lunch Minorities in suburban small classes performed as well as Non-Free Lunch Whites.
- The effective teacher research (Bain, Word, Lintz, 19??) revealed certain teaching practices, characteristics, and communication skills that when combined with small classes produce more effective learning:
 - Creative Writing, Hands on Experiences, Learning Centers, Use of Manipulatives
 - Good Listener, Immediate Feedback, Monitoring, Preplanned Instruction, Well Organized
 - Assertive Discipline, High Expectations, Peer Tutoring, Reteaching
 - Effective Communication with Parents, Love of Children
 - Enthusiasm, Flexibility, Patience, Sense of Humor
 - Ability to establish effective communication with the home.
 - Ability to involve the family in the education of their children.
 - Ability to teach parents how to teach their children.
 - Ability to make home visits.

WHAT POLICY IMPLICATIONS RESULTED FROM STAR?:

- Tennessee's school finance plan, the Basic Education Plan, includes incentives for school systems to reduce class sizes to 20 or fewer students in the early primary grades (K-3).
- Approximately 30 states across the U.S. and several foreign countries have used the STAR findings to initiate steps toward smaller classes.

WHAT IS THE CURRENT STATUS OF PROJECT STAR? :

The Tennessee Legislature and private foundations have funded HEROS, Inc. to conduct follow-up studies through the end of the STAR students' high school graduation and beyond. The full-scale study of the effect of small primary classes (K-3) on long-term social outcomes includes research related to higher education, juvenile detention and adult prison rates, and welfare and employment security. This research is still in progress. Preliminary findings show:

- ###% small-class, ##% regular-class, & ###% regular/aide-class students completed high school honors English courses.
- ###% small-class, ##% regular-class, & ###% regular/aide-class students completed a foreign language course during high school.
- ###% small-class, #1% regular-class, & ###% regular/aide-class students completed advanced mathematics course during high school.
- #11 was the overall high school Grade Point Average (GPA) for small-class students; the regular-class students' GPA was ##, and the regular-aide class students had a GPA of ##.
- ###% small class, ###% regular-class, and ###% regular/aide-class students graduated from high school.
- ###% of small-class students received an honors diploma; ###% of regular-class students and ###% of regular/aide-class students also received an honors diploma.
- ###% of small-class students received a regular/vocational high school diploma; ##% of regular-class students and ###% of regular/aide-class students also received a regular/vocational diploma.

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- ###% of small-class students received a special education diploma; ##% of regular-class students and ##% of regular/aide-class students also received special education diplomas.
- ###% of small-class students received an attendance diploma; ##% of regular-class students and ##% of regular/aide-class students also received an attendance diploma.
- ##% of small-class students completed either the ACT Assessment or Scholastic Aptitude Test (SAT) college entrance exams; ##% of regular-class students and ##% of regular/aide-class students also completed either the ACT or SAT.
- IF KRUEGER WANTS OTHER ACT/SAT INFO, IT CAN GO HERE.

HEROS, Inc. announced release of the first public version of the Project STAR small class-size research database. The database is accessible via the World Wide Web at www.telalink.net/~heros. This web site also features up-to-the-minute information on the official Project STAR longitudinal research results.

**For more information on Project STAR, please contact: Jayne Boyd-Zaharias, Director,
Health & Education Research Operative Services (HEROS), Inc.,
PO Box 1271, Lebanon, TN 37088-1271
Phone: (615) 449-7904, FAX: (615) 449-7904, e-mail: heros@telalink.net**

Helen Patø-Bain, Chairperson: (334) 640-7012

HEROS, Inc. is a 501 (c) (3) nonprofit organization.

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TEL:

Apr 12 '99

8:46 No.001 P.02

Draft: Executive Summary. 6/9/98**The Effect of Attending a Small Class in the Early Grades on College Attendance Class****Alan B. Krueger and Diane M. Whitmore¹
Princeton University****Background**

Project STAR was an experiment in which 11,600 students and their teachers in grades K-3 were randomly assigned to a small class (13-17 students), regular-size class (22-25 students), or regular-size class with a teacher aide within 80 Tennessee public schools. The experiment began with kindergarten students in the 1985-86 school year. After four years, all students were returned to regular-size classes. Project STAR students who moved along on pace would have graduated from high school in the Spring of 1998. To determine the impact of having attended a smaller class in elementary school on students' long-term educational outcomes, we asked ACT, Inc. and the College Board/Educational Testing Service to link information on high school seniors in the class of 1998 who took the ACT or SAT exam to records that we provided on the 11,600 students from Project STAR, regardless of where the Project STAR students resided in 1998. The resulting database contains information on whether Project STAR students in the class of 1998 wrote either the ACT or SAT exam, their test score, and information from the background questionnaire students fill out when they take the ACT or SAT exam. This is the first database that permits a long-term examination of the behavior and post-high school aspirations of Project STAR participants. This Executive Summary describes our initial findings for a sample of more than 9,000 Project STAR students who were high school seniors in 1998.

Specific Findings

* The main results are illustrated in Figure 1. This figure reports the percent of students who took either the ACT or the SAT exam by the type of class they were assigned to attend their initial year in Project STAR. The figures are reported for all students combined, for white and black students separately, and for students who received free or reduced-price lunch in at least one year in grades K-3. For the entire sample, Figure 1 indicates that 43.7% of students who were assigned to a small class took either the ACT or SAT exam, whereas 40.0% of those assigned to a regular-size class took one of the exams, and 39.9% of those assigned to a regular-size class with an aide took one of the exams. The 3.6 percentage point higher test-taking rate for the students assigned to small classes relative to those assigned to regular-size classes was statistically significant at the .05 level; that is, this difference is unlikely to have occurred by chance.

¹Alan Krueger is the Eminent Professor of Economics and Public Affairs at Princeton University and a Research Associate of the National Bureau of Economic Research. Diane Whitmore is a graduate student in the Economics Department at Princeton University.

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* Figure 1 also indicates that attending a small class was particularly effective in raising the proportion of black students who wrote one of the college entrance exams. Only 31.7% of black students in regular-size classes wrote the ACT or SAT exam, whereas 40.2% of black students in small classes wrote the college entrance exam. To gain some perspective on the magnitude of this effect, note that black-white gap in taking a college entrance exam was 13.3 percentage points for students in regular-size classes, and 6.1 percentage points for students in small classes. Thus, attending a small class reduced the black-white gap in the college-entrance-test-taking rate by 50 percent.

* Earlier research on Project STAR has found that minority students and students on free lunch exhibited the greatest gains in test scores as a consequence of attending a small class. The findings in Figure 1 complement a result that has been found consistently throughout Project STAR: minority students benefited most from attending a small class, and small classes were able to considerably narrow, although not eliminate, the gap in educational performance between black and white students.

* Table 1 provides further evidence on the effect of class size on the percent of students who took the college entrance exam. The first three columns of Table 1 contain the data used to construct Figure 1. To ensure that our results are not due to extraneous factors, we estimated a series of logistic regressions in which we controlled for the students' race, sex, free or reduced-price lunch status, and the specific elementary school he or she attended. Our findings were unchanged when we controlled for these variables, so we emphasize the simpler raw tabulations. Nonetheless, the fourth column of the table reports a statistical test of the null hypothesis that initial class-type assignment is unrelated to the likelihood the student writes either the ACT or SAT exam. With the exception of white students, these tests indicate that it is very unlikely that the observed differences in test-taking rates across the three types of classes would have occurred by chance.

* Tennessee is a state in which a majority of college-bound students take the ACT exam. Tables 2 and 3 provide separate tabulations of the test-taking rates for the ACT and for the SAT; some 60% of STAR students wrote the ACT exam while fewer than 5% wrote the SAT exam. The disaggregated results in Tables 2 and 3 indicate that, compared to students assigned to regular-size classes, students assigned to small classes were more likely to take the ACT exam, and were more likely to take the SAT exam.

* Class size may not have to shrink to 15 students for smaller classes to raise the likelihood that students take the ACT or SAT exams. We find that students who were initially assigned to a class with 21-25 students their first year in Project STAR were more likely to take the ACT or SAT exam than students who were assigned to classes with 26-30 students. And students who were assigned classes with 16-20 students were more likely to take the ACT or SAT exam than students who were assigned to classes with 21-25 students.

* We do not know how many students who took the ACT or SAT exam have actually enrolled in college, or how many years of higher education they will ultimately complete. But based on an analysis of the High School Class of 1972 Database, we found that high school seniors who took the ACT or SAT exam completed an

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average of 1.63 more years of schooling than students who did not take one of the college entrance exams, after controlling for the race and gender of the students.

• Lastly, we examined the test scores students achieved on the ACT and SAT exams. For students who took the SAT but not the ACT exam, we converted their SAT score to an ACT equivalent score using a concordance developed by researchers at the College Board. For any student who wrote the ACT exam we used their ACT score, even if he or she also took the SAT exam. The average ACT test scores were virtually identical for students who were assigned to small and regular-size classes. For the full sample of 3,813 test takers, the average student in small and regular-size classes both earned a 19.3 composite ACT score. Moreover, assignment to a small class did not appear to alter the average test score for any of the subgroups that we examined (i.e., black, white and free or reduced-price lunch students). Past studies have found that average test scores tend to decline when more students take the college entrance exam, because the marginal test takers are weaker students than the average student. In the STAR experiment, however, students assigned to small classes were more likely to take the ACT or SAT exam, but the average score of those in small classes did not decline. One possibility is that there are two offsetting effects: (1) scores increased for those who would have otherwise written the exam; (2) the additional students who took the college entrance exam because they attended a small class were weaker students, on average.

Conclusion

Attendance in a small class in grades K-3 appears to have raised the likelihood that students take either the ACT or SAT college-entrance exam. Since most colleges in the U.S. require students to take either the ACT or SAT exam to be admitted, these findings suggest that lowering class size in the elementary school grades raises the prospect that students will attend college. The beneficial effect of smaller classes on college aspirations appears to be particularly strong for minority students, and students on free or reduced-price lunch. Indeed, attendance in small classes appears to have cut the black-white gap in the probability of taking a college-entrance exam by more than half. Moreover, attending a small class appears to raise the probability that students write the ACT or SAT exam without lowering the overall average score of students who take the exam.

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Appendix: Description of the Sample

With the assistance of HERO's, Inc., we provided the ACT and SAT organizations computer files which contained several variables from the STAR database, including demographic data, class assignment, and primary school test scores. The ACT and SAT data were merged to these records on Project STAR students on the basis of the students' names, dates of birth and Social Security numbers. If a STAR record was missing information on one of these three identifiers, the remaining identifiers were used to complete the merger. The data were merged together by searching over ACT and SAT records for the entire U.S., so any student who had moved away from Tennessee should still be included in the sample. About 9 percent of the STAR students who were identified by the search algorithm took the ACT or SAT exam outside of Tennessee. Once the data were merged together, the students' names, dates of birth, and Social Security numbers were concealed to preserve confidentiality.

Several checks indicated that the data were linked properly. For example, the correlation between the students' ACT score percentile rank and their 9th grade Tennessee Comprehensive Assessment Program (TCAP) Test percentile rank was .80, which is even higher than the correlation between the students 3rd grade Stanford Achievement Test Score percentile and their 7th grade TCAP percentile (.74). Additionally, the sex of the students based on their STAR records matched their sex in the ACT records in 98.7% of cases. These checks suggest that STAR students were correctly linked to their ACT and SAT records.

The ACT and SAT databases are organized by graduating high school classes. Only members of the High School Class of 1998 were included in the ACT and SAT records that formed the basis of the search. As a consequence, STAR students who repeated a grade or for some other reason were not high school seniors in 1998 could not be matched to their ACT and SAT records, even if they had taken one of the exams. Because of this feature of the data, we restrict our sample to the subset of 9,397 students who were on grade-level based on information that we have on students who wrote the TCAP exam through the eighth grade. As a further check, however, we re-calculated Figure 1 for the entire sample of 11,600 students in our database (which includes students who fall behind and were not high school seniors in 1998), and find qualitatively similar results as in Figure 1. Thus, our results are robust to the inclusion of students who have fallen behind grade level.

DRAFT

Project STAR

THE TENNESSEE STUDENT/TEACHER ACHIEVEMENT RATIO STUDY

Background & 1999 Update

WHAT IS STAR?:

- A large-scale, four-year, longitudinal, experimental study of reduced class size, that is considered "one of the most important educational investigations ever carried out and illustrates the kind and magnitude of research needed in the field of education to strengthen schools." [Frederick Mosteller, Professor Emeritus of Mathematical Statistics at Harvard University (Summer/Fall 1995). *The Future of Children: Critical Issues for Children and Youths*, 5(2), p. 113-127.]
- Sound research which "leaves no doubt that small classes have an advantage over larger classes in reading and math in the early primary grades." [Finn, J. D., & Achilles C. M. (1990, Fall). Answers and questions about class size: A statewide experiment. *American Educational Research Journal*, 27(3), 557-577.]
- Robert Slavin, John Hopkins University, an AERA reactor, praised Project STAR's design and integrity and called it a "watershed event" in research.

HOW WERE STAR FUNDS OBTAINED AND USED?:

- Helen Pate-Bain presented Tennessee Legislators with the positive results from her class-size study that had been conducted within one Metropolitan Davidson County school. Pate-Bain obtained a \$12 million dollar legislative appropriation to complete STAR. Out of \$12 million, \$9,679,879 were used for teacher and teacher aide salaries.

HOW WAS THE STAR STUDY DESIGNED?:

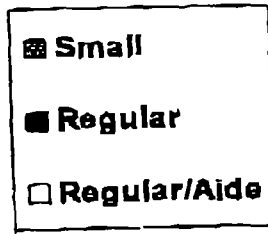
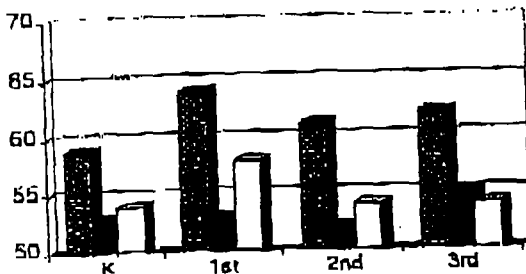
- All Tennessee schools were invited to participate.
- Each school had to have at least one of each of the three class types: small (13 to 17 students), regular (22-26 students), and regular with a full-time teacher aide (22-26 students) for the within school design.
- The study included 79 schools in 42 systems which resulted in over 6,000 students per grade level.
- Schools from inner-city, rural, urban, and suburban locations were included in the experiment.
- All students and teachers were randomly assigned to their class type.

WHAT WERE THE MAIN FINDINGS FROM STAR?:

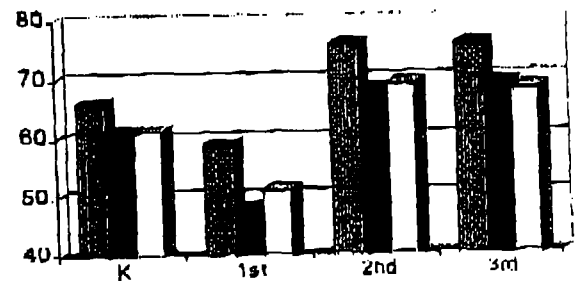
- At each grade level (K-3), and across all school locations, the small classes made the highest scores on the norm-referenced Stanford Achievement Test (SAT) and the criterion-referenced Basic Skills First Test (BSF). These results were both statistically and educationally significant.

} hi
score

STAR Reading Percentile Ranks, Kindergarten - Grade 3, 1985-1989



STAR Math Percentile Ranks, Kindergarten - Grade 3, 1985-1989



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WHAT WERE OTHER IMPORTANT FINDINGS FROM STAR?

- The Greatest Gains on the SAT were made in Inner-City Small classes.
- The Highest Scores on the SAT and BSI were made in Rural Small classes.
- The Classes that scored in the top 10% on the SAT Total Reading are identified as follows:
 - 18 of the top 33 classes were small in Kindergarten.
 - 22 of the top 34 classes were small in First Grade.
 - 23 of the top 34 classes were small in Second Grade.
 - 25 of the top 32 classes were small in Third Grade.
- Inner-City (Predominantly Minority) students in small classes always outscored inner-city students in regular and regular/aide classes. This suggests that small classes are very beneficial to minority students. Non-Free Lunch Minorities in suburban small classes performed as well as Non-Free Lunch Whites.
- The effective teacher research (Bain, Word, Lintz, 19??) revealed certain teaching practices, characteristics, and communication skills that when combined with small classes produce more effective learning:
 - Creative Writing, Hands on Experiences, Learning Centers, Use of Manipulatives
 - Good Listener, Immediate Feedback, Monitoring, Preplanned Instruction, Well Organized
 - Assertive Discipline, High Expectations, Peer Tutoring, Reteaching
 - Effective Communication with Parents, Love of Children
 - Enthusiasm, Flexibility, Patience, Sense of Humor
 - Ability to establish effective communication with the home.
 - Ability to involve the family in the education of their children.
 - Ability to teach parents how to teach their children.
 - Ability to make home visits.

WHAT POLICY IMPLICATIONS RESULTED FROM STAR?:

- Tennessee's school finance plan, the Basic Education Plan, includes incentives for school systems to reduce class sizes to 20 or fewer students in the early primary grades (K-3).
- Approximately 30 states across the U.S. and several foreign countries have used the STAR findings to initiate steps toward smaller classes.

WHAT IS THE CURRENT STATUS OF PROJECT STAR? :

The Tennessee Legislature and private foundations have funded HEROS, Inc. to conduct follow-up studies through the end of the STAR students' high school graduation and beyond. The full-scale study of the effect of small primary classes (K-3) on long-term social outcomes includes research related to higher education, juvenile detention and adult prison rates, and welfare and employment security. This research is still in progress. Preliminary findings show:

- ###% small-class, ##% regular-class, & ###% regular/aide-class students completed high school honors English courses.
- ###% small-class, ##% regular-class, & ###% regular/aide-class students completed a foreign language course during high school.
- ###% small-class, ##% regular-class, & ###% regular/aide-class students completed advanced mathematics course during high school.
- ## was the overall high school Grade Point Average (GPA) for small-class students; the regular-class students' GPA was ##, and the regular-aide class students had a GPA of ##.
- ###% small class, ##% regular-class, and ###% regular/aide-class students graduated from high school.
- ##% of small-class students received an honors diploma; ##% of regular-class students and ##% of regular/aide-class students also received an honors diploma.
- ##% of small-class students received a regular/vocational high school diploma; ##% of regular-class students and ##% of regular/aide-class students also received a regular/vocational diploma.

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- ##% of small-class students received a special education diploma; ##% of regular-class students and ##% of regular/aide-class students also received special education diplomas.
- ##% of small-class students received an attendance diploma; ##% of regular-class students and ##% of regular/aide-class students also received an attendance diploma.
- ##% of small-class students completed either the ACT Assessment or Scholastic Aptitude Test (SAT) college entrance exams; ##% of regular-class students and ##% of regular/aide-class students also completed either the ACT or SAT.
- IF KRUEGER WANTS OTHER ACT/SAT INFO, IT CAN GO HERE.

HEROS, Inc. announced release of the first public version of the Project STAR small class-size research database. The database is accessible via the World Wide Web at www.telalink.net/~heros. This web site also features up-to-the-minute information on the official Project STAR longitudinal research results.

**For more information on Project STAR, please contact: Jayne Boyd-Zaharias, Director,
Health & Education Research Operative Services (HEROS), Inc.,
PO Box 1271, Lebanon, TN 37088-1271
Phone: (615) 449-7904, FAX: (615) 449-7904, e-mail: heros@telalink.net**

Helen Patz-Bain, Chairperson: (334) 640-7012

HEROS, Inc. is a 501 (c) (3) nonprofit organization.

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Apr 12 '99 8:46 No.001 P.02

Draft: Executive Summary. 4/9/98**The Effect of Attending a Small Class in the Early Grades on College Attendance Plans****Alan B. Krueger and Diane M. Whitmore¹
Princeton University****Background**

Project STAR was an experiment in which 11,600 students and their teachers in grades K-3 were randomly assigned to a small class (13-17 students), regular-size class (22-25 students), or regular-size class with a teacher aide within 80 Tennessee public schools. The experiment began with kindergarten students in the 1985-86 school year. After four years, all students were returned to regular-size classes. Project STAR students who moved along on pace would have graduated from high school in the Spring of 1998. To determine the impact of having attended a smaller class in elementary school on students' long-term educational outcomes, we asked ACT, Inc. and the College Board/Educational Testing Service to link information on high school seniors in the class of 1998 who took the ACT or SAT exam to records that we provided on the 11,600 students from Project STAR, regardless of where the Project STAR students resided in 1998. The resulting database contains information on whether Project STAR students in the class of 1998 wrote either the ACT or SAT exam, their test score, and information from the background questionnaire students fill out when they take the ACT or SAT exam. This is the first database that permits a long-term examination of the behavior and post-high school aspirations of Project STAR participants. This Executive Summary describes our initial findings for a sample of more than 9,000 Project STAR students who were high school seniors in 1998.

Specific Findings

◆ The main results are illustrated in Figure 1. This figure reports the percent of students who took either the ACT or the SAT exam by the type of class they were assigned to attend their initial year in Project STAR. The figures are reported for all students combined, for white and black students separately, and for students who received free or reduced-price lunch in at least one year in grades K-3. For the entire sample, Figure 1 indicates that 43.74 of students who were assigned to a small class took either the ACT or SAT exam, whereas 40.06 of those assigned to a regular-size class took one of the exams, and 39.94 of those assigned to a regular-size class with an aide took one of the exams. The 3.6 percentage point higher test-taking rate for the students assigned to small classes relative to those assigned to regular-size classes was statistically significant at the .05 level; that is, this difference is unlikely to have occurred by chance.

¹Alan Krueger is the E. B. Dineen Professor of Economics and Public Affairs at Princeton University and a Research Associate of the National Bureau of Economic Research. Diane Whitmore is a graduate student in the Economics Department at Princeton University.

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* Figure 1 also indicates that attending a small class was particularly effective in raising the proportion of black students who wrote one of the college entrance exams. Only 31.7% of black students in regular-size classes wrote the ACT or SAT exam, whereas 40.2% of black students in small classes wrote the college entrance exam. To gain some perspective on the magnitude of this effect, note that black-white gap in taking a college entrance exam was 13.3 percentage points for students in regular-size classes, and 6.1 percentage points for students in small classes. Thus, attending a small class reduced the black-white gap in the college-entrance-test-taking rate by 54 percent.

* Earlier research on Project STAR has found that minority students and students on free lunch exhibited the greatest gains in test scores as a consequence of attending a small class. The findings in Figure 1 complement a result that has been found consistently throughout Project STAR: minority students benefited most from attending a small class, and small classes were able to considerably narrow, although not eliminate, the gap in educational performance between black and white students.

* Table 1 provides further evidence on the effect of class size on the percent of students who took the college entrance exam. The first three columns of Table 1 contain the data used to construct Figure 1. To ensure that our results are not due to extraneous factors, we estimated a series of logistic regressions in which we controlled for the students' race, sex, free or reduced-price lunch status, and the specific elementary school he or she attended. Our findings were unchanged when we controlled for these variables, so we emphasize the simpler raw tabulations. Nonetheless, the fourth column of the table reports a statistical test of the null hypothesis that initial class-type assignment is unrelated to the likelihood the student writes either the ACT or SAT exam. With the exception of white students, these tests indicate that it is very unlikely that the observed differences in test-taking rates across the three types of classes would have occurred by chance.

* Tennessee is a state in which a majority of college-bound students take the ACT exam. Tables 2 and 3 provide separate tabulations of the test-taking rates for the ACT and for the SAT: some 60% of STAR students wrote the ACT exam while fewer than 5% wrote the SAT exam. The disaggregated results in Tables 2 and 3 indicate that, compared to students assigned to regular-size classes, students assigned to small classes were more likely to take the ACT exam, and were more likely to take the SAT exam.

* Class size may not have to shrink to 15 students for smaller classes to raise the likelihood that students take the ACT or SAT exams. We find that students who were initially assigned to a class with 21-25 students their first year in Project STAR were more likely to take the ACT or SAT exam than students who were assigned to classes with 26-30 students. And students who were assigned classes with 16-20 students were more likely to take the ACT or SAT exam than students who were assigned to classes with 31-35 students.

* We do not know how many students who took the ACT or SAT exam have actually enrolled in college, or how many years of higher education they will ultimately complete. But based on an analysis of the High School Class of 1972 Database, we found that high school seniors who took the ACT or SAT exam completed an

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average of 1.63 more years of schooling than students who did not take one of the college entrance exams, after controlling for the race and gender of the students.

• Lastly, we examined the test scores students achieved on the ACT and SAT exams. For students who took the SAT but not the ACT exam, we converted their SAT score to an ACT equivalent score using a concordance developed by researchers at the College Board. For any student who wrote the ACT exam we used their ACT score, even if he or she also took the SAT exam. The average ACT test scores were virtually identical for students who were assigned to small and regular-size classes. For the full sample of 3,813 test takers, the average student in small and regular-size classes both earned a 19.3 composite ACT score. Moreover, assignment to a small class did not appear to alter the average test score for any of the subgroups that we examined (i.e., black, white and free or reduced-price lunch students). Past studies have found that average test scores tend to decline when more students take the college entrance exam, because the marginal test takers are weaker students than the average student. In the STAR experiment, however, students assigned to small classes were more likely to take the ACT or SAT exam, but the average score of those in small classes did not decline. One possibility is that there are two offsetting effects: (1) scores increased for those who would have otherwise written the exam; (2) the additional students who took the college entrance exam because they attended a small class were weaker students, on average.

Conclusion

Attendance in a small class in grades K-3 appears to have raised the likelihood that students take either the ACT or SAT college-entrance exam. Since most colleges in the U.S. require students to take either the ACT or SAT exam to be admitted, these findings suggest that lowering class size in the elementary school grades raises the prospect that students will attend college. The beneficial effect of smaller classes on college aspirations appears to be particularly strong for minority students, and students on free or reduced-price lunch. Indeed, attendance in small classes appears to have cut the black-white gap in the probability of taking a college-entrance exam by more than half. Moreover, attending a small class appears to raise the probability that students write the ACT or SAT exam without lowering the overall average score of students who take the exam.

Appendix: Description of the Sample

With the assistance of HEDD's, Inc., we provided the ACT and NTA organizations computer files which contained several variables from the STAR database, including demographic data, class assignment, and primary school test scores. The ACT and SAT data were merged to these records on Project STAR students on the basis of the students' names, dates of birth and Social Security numbers. If a STAR record was missing information on one of these three identifiers, the remaining identifiers were used to complete the merger. The data were merged together by searching over ACT and SAT records for the entire U.S., so any student who had moved away from Tennessee should still be included in the sample. About 8 percent of the STAR students who were identified by the search algorithm took the ACT or SAT exam outside of Tennessee. Once the data were merged together, the students' names, dates of birth, and Social Security numbers were concealed to preserve confidentiality.

Several checks indicated that the data were linked properly. For example, the correlation between the students' ACT score percentile rank and their 8th grade Tennessee Comprehensive Assessment Program (TCAP) Test percentile rank was .80, which is even higher than the correlation between the students 3rd grade Stanford Achievement Test Score percentile and their 7th grade TCAP percentile (.74). Additionally, the sex of the students based on their STAR records matched their sex in the ACT records in 98.78 of cases. These checks suggest that STAR students were correctly linked to their ACT and SAT records.

The ACT and SAT databases are organized by graduating high school classes. Only members of the High School Class of 1998 were included in the ACT and SAT records that formed the basis of the search. As a consequence, STAR students who repeated a grade or for some other reason were not high school seniors in 1998 could not be matched to their ACT and SAT records, even if they had taken one of the exams. Because of this feature of the data, we restrict our sample to the subset of 9,397 students who were on grade-level based on information that we have on students who wrote the TCAP exam through the eighth grade. As a further check, however, we re-calculated Figure 1 for the entire sample of 11,600 students in our database (which includes students who fall behind and were not high school seniors in 1998), and find qualitatively similar results as in Figure 1. Thus, our results are robust to the inclusion of students who have fallen behind grade level.

Project **STAR NEWS**

HEROS, P.O. Box 1271, Lebanon, TN 37088

www.telalink.net/heros

(615) 449-7904

EMBARGOED until 9:30 a.m.
April 29, 1999**For More Information:**
Jayne Boyd-Zaharias (615) 449-7904

Benefits of small classes pay off at graduation

Project STAR finds small classes in K-3 linked to greater student achievement, better grades, lower dropout rates, and higher college aspirations

Washington, D.C. – A ground-breaking Tennessee-based class size study has found that public school students placed in small classes in grades K-3 continue to outperform students in larger classes right through high school graduation.

Researchers for **Project STAR** (Student/Teacher Achievement Ratio) – whose earlier findings helped form the basis for class size reduction in some 20 states – today reported that students placed in small class sizes in grades K-3 have better high school graduation rates, higher grade point averages, and are more inclined to pursue higher education.

"This research adds to the evidence we have compiled over the past 14 years," said Dr. Helen Pate-Bain, who convinced the Tennessee state legislature to provide funding for the initial STAR research. "The project's findings indicate that students placed in small classes in grades K-3 continue to benefit from that experience in grades 4-12."

The original STAR research tracked the progress of an average of 8,500 students each year in 79 schools between 1985 and 1989 (and 11,600 students overall). It found that children who attended small classes (13-17 pupils per teacher) in kindergarten through grade 3 outperformed students in larger classes (22-26 pupils) in both reading and math on the Stanford Achievement Test for elementary students. The second phase of the STAR research found that even after returning to larger classes in grade 4, STAR's small class students continued to outperform their peers who had been in larger class sizes.

At a news conference held today at the National Press Club, STAR researchers released a new wave of findings:

- **Students in small classes are more likely to pursue college:** STAR students who attended small classes – and black students in that group in particular – were more likely to take the ACT or SAT college entrance exams, according to Princeton University economist Dr. Alan B. Krueger, who researched test data linked to the Project STAR database. "Attendance in small classes appears to have cut the black-white gap in the probability of taking a college-entrance exam by more than half," Krueger said.
- **Small classes lead to higher graduation rates:** Preliminary data from participating STAR school districts in Tennessee show that students in small classes were more likely to graduate on schedule; they were less likely to drop out of high school; and they were more likely to graduate in the top 25% of their classes, according to Dr. Jayne Boyd-Zaharias, a STAR researcher since 1986. In addition, Boyd-Zaharias found that small class students graduated with higher grade point averages (GPAs) than regular class size students.
- **Students in small classes achieve at higher levels:** Three other researchers – Dr. Jeremy D. Finn, professor of education at SUNY Buffalo, Susan B. Gerber of SUNY Buffalo, and Charles M. Achilles, Ed.D., of Eastern Michigan University, together with Boyd-Zaharias – released new findings showing that STAR students who attended small classes in grades K-3 were between 6 and 13 months ahead of their regular-class peers in math, reading, and science in each of grades 4, 6, and 8. "Our analyses show that at least three years in a small class are necessary in order for the benefits to be sustained through later grades," wrote the researchers. "Further, the benefits of having been in a small class in the primary years generally increase from grade to grade."
- **Class size is different from pupil/teacher ratio:** Achilles, one of the original STAR researchers, explained the difference between class size (the number of students assigned to a teacher) and pupil/teacher ratio (the total number of students divided by the total number of educators in a school). Many "class size" studies, he noted, have relied on pupil/teacher ratios to make their case. The STAR research is able to track students based on specific class size. Achilles noted that some 20 states – including Michigan, California, Nevada, Florida, Texas, Utah, Illinois, Indiana, New York, Oklahoma, Iowa, Minnesota, Massachusetts, South Carolina, and Wisconsin – have initiated or considered STAR-like class size reduction efforts.



UNITED STATES DEPARTMENT OF EDUCATION
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PAGE(S) TO FOLLOW: 2

MESSAGE: Scheduled for 11³⁰-12 in
Capitol "Swamp" - Senate side

He's also doing the Ed Flex
bill signing today at 230

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UNITED STATES
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NEWS

For Release: April 29, 1999

Contact: Julie Green (202) 401-3026

**STATEMENT BY U.S. SECRETARY OF EDUCATION RICHARD W. RILEY
On new Project STAR Research**

Good morning, and thank you all for coming.

It has been nine days since the tragic events at Columbine High School in Littleton, Colorado, shook and saddened our nation. Since that day, the American people have been searching for answers to the problem of school violence. We may never have all the answers, but I am convinced that we can take real action to make American schools safer and better. Today, we are here to talk about one of those steps -- reducing class size in the early grades.

Last year, I met with school security experts. I expected them to tell me that the solutions to school violence were more metal detectors and more armed policemen in schools. While they said these could help, I will never forget what one security officer said to me: "If you want safer schools, give kids more attention in the early grades."

He understood the critical importance of early childhood education. He knew that putting children on the right track in life is easiest when they're very young.

We must give every young child as much individual attention as possible. If we want to have safer schools tomorrow, we must invest in our young children today.

President Clinton has made a dramatic proposal to help school districts hire and pay 100,000 well prepared teachers to reduce class size to an average of 18 students in the first three grades nationally. This would allow teachers to provide more individualized instruction and attention to each student. ~~It would also~~ allow teachers to identify troubled, disconnected students and get them the help they need.

This isn't only about the quantity of teachers -- it's also about the quality of teachers. School districts would be able to use a portion of their allocations to test new teachers for academic content knowledge and to upgrade professional development opportunities for current teachers. Teachers would also learn proven practices that help children learn to read, and they would receive instruction in the best ways to teach small classes. This initiative is just one part of the Clinton-Gore Administration's overall effort to recruit, prepare, and support quality teachers.

The current budget includes the first down payment of 1.2-billion dollars to hire the first group of teachers. Last week, when the Congress passed the excellent Ed-Flex bill, it wisely rejected an attempt to derail the drive to hire 100,000 new teachers and reduce class size. This bipartisan action showed that we can work together to improve education, and the President will sign the Ed-Flex bill this afternoon.

Now we are urging Congress to finish the job of hiring 100,000 good new teachers. We are also urging Congress to take the next logical step. Reducing class size will mean that we'll need more classrooms. So we will continue to work for passage of the President's initiative to help build, repair, or modernize 6,000 public schools.

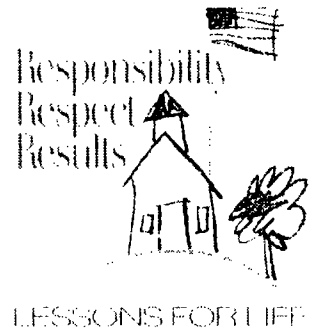
The best research on class reduction has been the Tennessee "Project STAR" study. Several of the researchers who took part in that study are with us today. Earlier this morning, they reported on their study's latest findings. They found that public school students placed in smaller classes in grades K-3 continue to outperform students in larger classes right through high school graduation.

They also found that students from smaller classes have better high school graduation rates, higher grade-point averages, and are more likely to go to college.

I might add that we also know that when students do better in school, they're less likely to be attracted to gangs, drugs, and violence.

And now it is my honor to turn these proceedings over to a leader who has championed the cause of children and education in the U. S. Senate and all across this nation – Senator Ted Kennedy.

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NEWS RELEASE

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EMBARGOED for 12:01 am, June 21, 1999

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TEACHER SALARY BOOST IS ONE WAY TO STEM TEACHER SHORTAGES AFT Releases 1997-98 Teacher Salary Survey

Raising teacher salaries will be necessary to stem a serious teacher shortage caused in large part by a red-hot job market offering lucrative salaries to college graduates, the American Federation of Teachers said today in releasing its 1997-98 teacher salary survey.

“To attract college graduates to teaching, salaries must keep pace with other professions that are luring people away from the classroom. Teaching is enormously gratifying, and many more would make it their career choice if they felt they were treated like professionals,” said AFT President Sandra Feldman. Along with higher salaries, she said schools must also reduce class sizes, enforce a strict discipline policy, modernize school buildings, and make other improvements to attract and retain teachers.

The U.S. Department of Education has estimated that 2 million teachers will need to be hired over the next decade. According to the AFT report, the chief reasons for the teacher shortage include inferior salaries, a rapidly graying teaching force and increasing enrollments due to the so-called “baby boomlet.”

The national average beginning teacher salary in the 1997-98 school year was \$25,735. By contrast, new college graduates in 1998 received an average salary offer in other fields of more than \$35,000. For example, in engineering, offers averaged \$42,862; computer science, \$40,920; math or statistics, \$40,523; chemistry, \$36,036; business administration, \$34,831; accounting, \$33,702; and sales/marketing, \$33,252.

The national average teacher salary in the 1997-98 school year was \$39,347. By contrast, the 1998 average annual salary of other white-collar occupations was much higher. For example, attorneys earned \$71,530; engineers, \$64,489; computer systems analysts, \$63,072; buyer/contract specialists, \$54,625; and accountants, \$45,919.

In the early 1990s, corporate downsizing contributed to a poor job market for new college graduates and new teacher salaries increased at two or three times the rate of other salary offers for new college graduates, according to the salary report. But starting in 1995, unemployment fell, the labor market for new college graduates grew, and salary offers in the private sector grew at twice the rate as those for new teachers.

-More-

As part of the salary report, AFT surveyed personnel officers of the nation's 200 largest school districts. Among the findings:

- A teacher shortage clearly exists, especially in large urban districts. More than two-thirds of respondents indicated an insufficient supply of teacher applicants in 1998-99.
- School districts were adopting a variety of responses to the shortage, including providing signing bonuses and housing allowances and issuing emergency teaching credentials.
- Respondents said they had more difficulty attracting qualified teachers compared to four years ago.
- The shortage is particularly severe for math, special education and bilingual education teachers. Districts also noted shortages of teachers in the following fields: foreign language, science, computers, school psychologists, and occupational and physical therapists. No field of teaching rated in the category of "considerable surplus," although a sufficient number of elementary and social studies teachers was noted.
- School districts reported that 8.5 percent of teachers taught under temporary or emergency credentials in 1998-99, up from 8 percent in 1997-98. Last year, the AFT called for a moratorium on emergency credentials for teachers. As part of the current reauthorization of the Elementary and Secondary Education Act, the Clinton administration also has pushed states to end emergency teacher credentials, proposing that within four years, 95 percent of all teachers in a state would have to be fully certified or working toward obtaining certification within three years.

Other highlights of the AFT 1997-98 salary survey:

- The \$39,347 average teacher salary is a 2.4 percent increase over the 1996-97 average salary of \$38,415.
- The \$25,735 average beginning teacher salary is a 2.9 percent increase over the 1996-97 beginning salary of \$25,015.
- The five states with the highest average salaries: Connecticut (\$51,727); New Jersey (\$50,284); New York (\$48,712); Michigan (\$48,361); and Alaska (\$48,275). The five states with the lowest average salaries: New Mexico (\$30,309); Louisiana (\$30,090); Mississippi (\$28,691); North Dakota (\$28,231); and South Dakota (\$27,839).
- Teachers had an average 16.1 years of experience in 1997-98, just over five more years than in 1978.

(Sources for the AFT's salary survey include state departments of education and the Department of Defense survey of teacher salaries.)

(To obtain a copy of the complete report, *Survey & Analysis of Salary Trends 1998*, contact the AFT Research Department at 202-879-4428.)

The AFT represents more than one million teachers, school support staff, higher education faculty, nurses and other healthcare professionals, and state and local government employees.

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TABLE I-1

**AVERAGE TEACHER SALARY IN 1997-98
STATE RANKINGS**

Rank	State	Average Salary	Percent of U.S. Average
1	Connecticut	\$51,727	131.5%
2	New Jersey	50,284	127.8%
3	New York	48,712 c	123.8%
4	Michigan	48,361 b	122.9%
5	Alaska	48,275	122.7%
6	Pennsylvania	47,542	120.8%
7	D.C.	44,746 b	113.7%
8	California	44,585	113.3%
9	Rhode Island	44,506 b	113.1%
10	Massachusetts	44,285 b	112.5%
11	Illinois	43,707 e	111.1%
12	Delaware	42,439	107.9%
13	Oregon	42,301 e	107.5%
14	Maryland	41,404 f	105.2%
15	Nevada	40,572 e	103.1%
16	Indiana	39,752	101.0%
17	Minnesota	39,104 b	99.4%
18	Ohio	39,099	99.4%
19	Washington	38,755 a	98.5%
20	Wisconsin	38,179 f	97.0%
21	Georgia	37,412	95.1%
22	Colorado	37,240	94.6%
23	Virginia	37,024 f	94.1%
24	New Hampshire	36,663	93.2%
25	Hawaii	36,598 b	93.0%
26	Vermont	36,299	92.3%
27	Tennessee	34,584 f	87.9%
28	Florida	34,473	87.6%
29	Kentucky	34,453 f	87.6%
30	Maine	34,349	87.3%
31	Iowa	34,084	86.6%
32	Arizona	34,071 b	86.6%
33	Missouri	34,001 a,f	86.4%
34	Kansas	33,800 d	85.9%
35	South Carolina	33,608	85.4%
36	Texas	33,537	85.2%
37	West Virginia	33,396 f	84.9%
38	North Carolina	33,123	84.2%
39	Utah	32,981 a	83.8%
40	Idaho	32,834	83.4%
41	Alabama	32,799	83.4%
42	Nebraska	32,668	83.0%
43	Arkansas	32,119 a,f	81.6%
44	Wyoming	32,022	81.4%
45	Oklahoma	30,940	78.8%
46	Montana	30,617	77.8%
47	New Mexico	30,309 b	77.0%
48	Louisiana	30,090	76.5%
49	Mississippi	28,691	72.9%
50	North Dakota	28,231	71.7%
51	South Dakota	27,839	70.8%
	U.S. Average	\$39,347	100.0%
	Guam	\$27,827 e,f	70.7%
	Puerto Rico	\$24,000	61.0%
	Virgin Islands	\$33,311	84.7%

a=estimate or preliminary; b=AFT estimate; c=median; d=estimated to exclude fringe benefits at 8%; e=includes employer pick-up of employee pension contribution, where applicable; f=includes extra duty pay.
Source: American Federation of Teachers, annual survey of state departments of education.

TABLE I-2

TRENDS IN THE AVERAGE SALARY, 1995-96 TO 1997-98

State	Average Salary						Percent Change		
	1995-96	Rank	1996-97	Rank	1997-98	Rank	1995-96 to 1996-97	1996-97 to 1997-98	1995-96 to 1997-98
	Connecticut	\$50,938	1	\$51,181	1	\$51,727	1	0.5%	1.1%
New Jersey	48,751	3	49,786	2	50,284	2	2.1%	1.0%	3.1%
New York	48,115	4	48,000	4	48,712	3	-0.2%	1.5%	1.2%
Michigan	46,832	5	47,181	5	48,361	4	0.7%	2.5%	3.3%
Alaska	49,148	2	49,140	3	48,275	5	0.0%	-1.8%	-1.8%
Pennsylvania	46,087	6	47,147	6	47,542	6	2.3%	0.8%	3.2%
D.C.	42,424	8	43,443	7	44,746	7	2.4%	3.0%	5.5%
California	42,259	9	42,992	10	44,585	8	1.7%	3.7%	5.5%
Rhode Island	41,829	10	43,084	8	44,506	9	3.0%	3.3%	6.4%
Massachusetts	43,025	7	42,995	9	44,285	10	-0.1%	3.0%	2.9%
Illinois	40,890	12	42,339	11	43,707	11	3.5%	3.2%	6.9%
Delaware	40,533	13	41,436	12	42,439	12	2.2%	2.4%	4.7%
Oregon	39,708	14	41,093	14	42,301	13	3.5%	2.9%	6.5%
Maryland	41,186	11	41,257	13	41,404	14	0.2%	0.4%	0.5%
Nevada	39,535	15	40,841	15	40,572	15	3.3%	-0.7%	2.6%
Indiana	37,675	18	38,845	16	39,752	16	3.1%	2.3%	5.5%
Minnesota	37,161	19	38,113	18	39,104	17	2.6%	2.6%	5.2%
Ohio	38,087	16	38,806	17	39,099	18	1.9%	0.8%	2.7%
Washington	37,853	17	37,812	20	38,755	19	-0.1%	2.5%	2.4%
Wisconsin	36,964	21	37,872	19	38,179	20	2.5%	0.8%	3.3%
Georgia	33,869	28	35,679	24	37,412	21	5.3%	4.9%	10.5%
Colorado	35,364	24	36,271	21	37,240	22	2.6%	2.7%	5.3%
Virginia	34,792	25	35,651	25	37,024	23	2.5%	3.9%	6.4%
New Hampshir	35,792	22	36,029	23	36,663	24	0.7%	1.8%	2.4%
Hawaii	37,044	20	35,532	26	36,598	25	-4.1%	3.0%	-1.2%
Vermont	35,526	23	36,052	22	36,299	26	1.5%	0.7%	2.2%
Tennessee	33,126	28	34,222	27	34,584	27	3.3%	1.1%	4.4%
Florida	33,330	27	33,855	28	34,473	28	1.6%	1.8%	3.4%
Kentucky	32,935	29	33,797	29	34,453	29	2.6%	1.9%	4.6%
Maine	32,869	30	33,676	30	34,349	30	2.5%	2.0%	4.5%
Iowa	32,372	33	33,272	31	34,084	31	2.8%	2.4%	5.3%
Arizona	32,843	31	33,208	33	34,071	32	1.1%	2.6%	3.7%
Missouri	32,323	34	33,155	34	34,001	33	2.6%	2.6%	5.2%
Kansas	32,429	32	33,087	35	33,800	34	2.0%	2.2%	4.2%
South Carolina	31,622	36	32,830	36	33,608	35	3.8%	2.4%	6.3%
Texas	31,400	39	32,426	38	33,537	36	3.3%	3.4%	6.8%
West Virginia	32,155	35	33,258	32	33,396	37	3.4%	0.4%	3.9%
North Carolina	30,411	43	31,167	43	33,123	38	2.5%	6.3%	8.9%
Utah	30,587	42	31,866	39	32,981	39	4.2%	3.5%	7.8%
Idaho	30,891	41	31,280	42	32,834	40	1.3%	5.0%	6.3%
Alabama	31,324	40	32,551	37	32,799	41	3.9%	0.8%	4.7%
Nebraska	31,496	38	31,768	40	32,668	42	0.9%	2.8%	3.7%
Arkansas	29,964	44	31,021	44	32,119	43	3.5%	3.5%	7.2%
Wyoming	31,571	37	31,716	41	32,022	44	0.5%	1.0%	1.4%
Oklahoma	29,177	47	30,184	45	30,940	45	3.5%	2.5%	6.0%
Montana	29,364	45	29,958	46	30,617	46	2.0%	2.2%	4.3%
New Mexico	29,285	46	29,715	47	30,309	47	1.5%	2.0%	3.5%
Louisiana	26,800	50	29,025	48	30,090	48	8.3%	3.7%	12.3%
Mississippi	27,692	48	27,877	49	28,691	49	0.7%	2.9%	3.6%
North Dakota	26,966	49	27,709	50	28,231	50	2.8%	1.9%	4.7%
South Dakota	26,346	51	27,072	51	27,839	51	2.8%	2.8%	5.7%
U.S. Average	\$37,594		\$38,415		\$39,347		2.2%	2.4%	4.7%
Guam	n.a.		\$27,827		\$27,827		n.a.	0.0%	n.a.
Puerto Rico	n.a.		\$24,000		\$24,000		n.a.	0.0%	n.a.
Virgin Islands	\$31,372		\$33,218		\$33,311		5.9%	0.3%	6.2%

Source: American Federation of Teachers, annual survey of state departments of education.

TABLE I-4

AVERAGE TEACHER SALARIES FOR 1987-88 AND 1997-98

State	Average Salary		Rank		Percent of U.S. Average		Change	Rank
	1987-88	1997-98	1987-88	1997-98	1987-88	1997-98	1987-88 1997-98	
New Jersey	\$30,778	\$50,284	10	2	110%	128%	63.4%	1
Pennsylvania	29,177	47,542	16	6	104%	121%	62.9%	2
West Virginia	21,736	33,396	45	37	77%	85%	53.6%	3
Connecticut	33,776	51,727	7	1	120%	131%	53.1%	4
New Hampshire	24,019	36,663	42	24	86%	93%	52.6%	5
Arkansas	21,133	32,119	49	43	75%	82%	52.0%	6
Oregon	28,060	42,301	20	13	100%	108%	50.8%	7
Vermont	24,507	36,299	37	26	87%	92%	48.1%	8
Idaho	22,242	32,834	44	40	79%	83%	47.6%	9
Illinois	29,667	43,707	13	11	106%	111%	47.3%	10
Indiana	27,028	39,752	24	16	96%	101%	47.1%	11
Nevada	27,599	40,572	19	15	98%	103%	47.0%	12
Maine	23,425	34,349	47	30	83%	87%	46.6%	13
Utah	22,572	32,981	38	39	80%	84%	46.1%	14
Massachusetts	30,379	44,265	9	10	108%	113%	45.8%	15
Tennessee	23,785	34,584	31	27	85%	88%	45.4%	16
Georgia	25,738	37,412	27	21	92%	95%	45.4%	17
Nebraska	22,683	32,668	43	42	81%	83%	44.0%	18
Delaware	29,573	42,439	15	12	105%	108%	43.5%	19
Kentucky	24,253	34,453	41	29	86%	88%	42.1%	20
Michigan	34,080	48,361	4	4	121%	123%	41.9%	21
Louisiana	21,209	30,090	48	48	76%	76%	41.9%	22
Ohio	27,606	39,099	21	18	98%	99%	41.6%	23
New York	34,500	48,712	3	3	123%	124%	41.2%	24
South Dakota	19,758	27,839	51	51	70%	71%	40.9%	25
Alabama	23,320	32,799	32	41	83%	83%	40.6%	26
Mississippi	20,562	28,691	50	49	73%	73%	39.5%	27
South Carolina	24,403	33,608	36	35	87%	85%	37.7%	28
Missouri	24,709	34,001	34	33	88%	86%	37.6%	29
Washington	28,217	38,755	18	19	101%	98%	37.3%	30
Kansas	24,647	33,800	33	34	88%	86%	37.1%	31
Iowa	24,858	34,084	39	31	89%	87%	37.1%	32
Florida	25,198	34,473	29	28	90%	88%	36.8%	33
Virginia	27,193	37,024	25	23	97%	94%	36.2%	34
Oklahoma	22,773	30,940	40	45	81%	79%	35.9%	35
Rhode Island	32,858	44,506	6	9	117%	113%	35.4%	36
California	33,159	44,585	5	8	118%	113%	34.5%	37
Maryland	30,933	41,404	8	14	110%	105%	33.9%	38
North Carolina	24,900	33,123	30	38	89%	84%	33.0%	39
Texas	25,558	33,537	26	36	91%	85%	31.2%	40
Minnesota	29,900	39,104	11	17	107%	99%	30.8%	41
Wisconsin	29,206	38,179	14	20	104%	97%	30.7%	42
North Dakota	21,660	28,231	46	50	77%	72%	30.3%	43
Colorado	28,651	37,240	17	22	102%	95%	30.0%	44
D.C.	34,705	44,746	2	7	124%	114%	28.9%	45
Montana	23,774	30,617	35	46	85%	78%	28.8%	46
Hawaii	28,445	36,598	22	25	101%	93%	28.7%	47
New Mexico	23,958	30,309	28	47	85%	77%	26.5%	48
Arizona	27,388	34,071	23	32	98%	87%	24.4%	49
Wyoming	27,141	32,022	12	44	97%	81%	18.0%	50
Alaska	41,190	48,275	1	5	147%	123%	17.2%	51
U.S. Average	\$28,071	\$39,347			100%	100%	40.2%	
Guam	\$27,713	\$27,827			99%	71%	0.4%	
Puerto Rico	\$11,700	\$24,000			42%	61%	105.1%	
Virgin Islands	\$18,682	\$33,311			67%	85%	78.3%	

Source: American Federation of Teachers, annual survey of state departments of education.

TABLE III-1

ACTUAL AVERAGE BEGINNING BA TEACHER SALARIES, 1996-97 AND 1997-98

State	Beginning Salary 1997-98	Average Salary 1997-98	Beginning To Average Salary Ratio	Beginning Salary 1996-97	Increase In:	
					Beginning Salary	Average Salary
1 Alaska	33,162	48,275	68.7%	32,502	2.0%	0.0%
2 New York	30,204 c	48,712 c	62.0%	28,749	5.1%	-0.2%
3 Pennsylvania	29,581	47,542	62.2%	29,426	0.5%	2.3%
4 Connecticut	29,506	51,727	57.0%	29,154	1.2%	0.5%
5 Nevada	28,641	40,572 e	70.6%	28,538	0.4%	3.2%
6 New Jersey	28,319	50,284	56.3%	28,039	1.0%	2.1%
7 Illinois	28,183 e	43,707 e	64.5%	27,210 e	3.6%	3.5%
9 California	27,852	44,585	62.5%	26,684	4.4%	1.7%
8 Alabama	\$27,388	\$32,799	83.5%	\$27,107	1.0%	3.7%
10 Massachusetts	27,238 b	44,285 b	61.5%	26,445 b	3.0%	2.5%
11 D.C.	27,234 b	44,746 b	60.9%	25,937 b	5.0%	0.0%
12 Michigan	27,064 b	48,361 b	56.0%	26,404 b	2.5%	2.0%
13 Maryland	27,010 f	41,404 f	65.2%	26,548 f	1.7%	0.2%
14 Hawaii	26,744	36,598 b	73.1%	25,965	3.0%	2.9%
15 Georgia	26,708 b	37,412	71.4%	25,434 b	5.0%	5.3%
16 Rhode Island	26,300 b	44,506 b	59.1%	25,450 b	3.3%	3.0%
17 Minnesota	26,266 b	39,104 b	67.2%	25,600 b	2.6%	3.0%
18 Oregon	26,098 e	42,301 e	61.7%	25,373 e	2.9%	3.5%
19 Delaware	25,493	42,439	60.1%	24,349	4.7%	2.2%
20 Virginia	25,272 f	37,024 f	68.3%	24,774 f	2.0%	3.8%
21 Florida	25,266	34,473	73.3%	24,736	2.1%	1.7%
22 Vermont	25,183 b	36,299	69.4%	24,934 b	1.0%	1.5%
23 Arizona	24,917 b	34,071 b	73.1%	24,286	2.6%	1.1%
24 Colorado	24,867	37,240	66.8%	24,199	2.8%	2.6%
25 Texas	24,736	33,537	73.8%	24,079	2.7%	3.3%
26 Indiana	24,716	39,752	62.2%	24,266	1.9%	2.8%
27 Missouri	24,125 a,f	34,001 a,f	71.0%	23,400 a,f	3.1%	2.5%
28 Wisconsin	24,077 f	38,179 f	63.1%	23,619 f	1.9%	2.5%
29 New Hampshire	23,927 b	36,663	65.3%	23,690 b	1.0%	0.7%
30 Washington	23,860	38,755 a	61.6%	23,933	-0.3%	0.0%
31 Oklahoma	23,676	30,940	76.5%	23,842	-0.7%	3.5%
32 Kentucky	23,536 f	34,453 f	68.3%	23,015 f	2.3%	2.6%
33 South Carolina	23,427	33,608	69.7%	22,794	2.8%	3.3%
34 New Mexico	23,297 b	30,309 b	76.9%	22,840	2.0%	1.5%
35 Louisiana	22,843	30,090	75.9%	20,615	10.8%	5.8%
36 Ohio	22,535	39,099	57.6%	22,146	1.8%	2.3%
37 West Virginia	22,529 f	33,396 f	67.5%	22,278 f	1.1%	3.4%
38 Iowa	22,475	34,084	65.9%	21,884	2.7%	2.8%
39 Kansas	22,445 d	33,800 d	66.4%	21,909 d	2.4%	2.2%
40 Utah	22,241	32,981 a	67.4%	21,475	3.6%	2.4%
41 Wyoming	22,230 b	32,022	69.4%	22,010 b	1.0%	0.5%
42 North Carolina	22,150	33,123	66.9%	21,330	3.8%	2.5%
43 Tennessee	22,140 f	34,584 f	64.0%	21,705 f	2.0%	3.4%
44 Nebraska	21,949	32,668	67.2%	21,189	3.6%	0.9%
45 Maine	21,554	34,349	62.8%	20,972	2.8%	2.5%
46 Montana	21,045 b	30,617	68.7%	20,592 b	2.2%	2.0%
47 Arkansas	21,000	32,119 a,f	65.4%	21,000	0.0%	3.4%
48 Mississippi	20,630	28,691	71.9%	20,150	2.4%	-0.1%
49 South Dakota	20,340	27,839	73.1%	19,412	4.8%	2.8%
50 Idaho	20,248 b	32,834	61.7%	20,006	1.2%	3.0%
51 North Dakota	19,146	28,231	67.8%	18,889	1.4%	2.8%
U.S. Average	\$25,735	\$39,347	65.4%	\$25,015	2.9%	2.4%
Guam	\$26,197	\$33,854	77.4%	\$26,197	0.0%	0.0%
Puerto Rico	\$18,000	\$24,000	75.0%	\$18,000	0.0%	0.0%
Virgin Islands	\$21,913	\$33,216	66.0%	\$20,226	8.3%	0.0%

a=estimate or preliminary; b=AFT estimate; c=median; d=estimated to exclude fringe benefits (at 8%); e=includes employer pick-up of employee pension contribution, where applicable; f=includes extra duty pay.

Figure II-8
Average Teacher Salary in 1998 Falls Short
of Earnings in Other Professions



**Figure III-6
New Teacher Salaries Lag Behind Beginning
Salaries in Other Occupations**

