AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

PREPARING TEACHERS FOR THE CLASSROOM: THE ROLE OF THE HIGHER EDUCATION ACT AND NO CHILD LEFT BEHIND

HEARING

BEFORE THE

SUBCOMMITTEE ON HIGHER EDUCATION, LIFELONG LEARNING, AND COMPETITIVENESS

COMMITTEE ON EDUCATION AND LABOR

U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

HEARING HELD IN WASHINGTON, DC, MAY 17, 2007

Serial No. 110–39

Printed for the use of the Committee on Education and Labor

Available on the Internet:
http://www.gpoaccess.gov/congress/house/education/index.html

U.S. GOVERNMENT PRINTING OFFICE

35–187 PDF WASHINGTON : 2007

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

COMMITTEE ON EDUCATION AND LABOR

GEORGE MILLER, California, *Chairman*

Dale E. Kildee, Michigan, *Vice Chairman*
Donald M. Payne, New Jersey
Robert E. Andrews, New Jersey
Robert C. "Bobby" Scott, Virginia
Lynn C. Woolsey, California
Rubén Hinojosa, Texas
Carolyn McCarthy, New York
John F. Tierney, Massachusetts
Dennis J. Kucinich, Ohio
David Wu, Oregon
Rush D. Holt, New Jersey
Susan A. Davis, California
Danny K. Davis, Illinois
Raúl M. Grijalva, Arizona
Timothy H. Bishop, New York
Linda T. Sánchez, California
John P. Sarbanes, Maryland
Joe Sestak, Pennsylvania
David Loebsack, Iowa
Mazie Hirono, Hawaii
Jason Altmire, Pennsylvania
John A. Yarmuth, Kentucky
Phil Hare, Illinois
Yvette D. Clarke, New York
Joe Courtney, Connecticut
Carol Shea-Porter, New Hampshire

Howard P. "Buck" McKeon, California, *Ranking Minority Member*
Thomas E. Petri, Wisconsin
Peter Hoekstra, Michigan
Michael N. Castle, Delaware
Mark E. Souder, Indiana
Vernon J. Ehlers, Michigan
Judy Biggert, Illinois
Todd Russell Platts, Pennsylvania
Ric Keller, Florida
Joe Wilson, South Carolina
John Kline, Minnesota
Bob Inglis, South Carolina
Cathy McMorris Rodgers, Washington
Kenny Marchant, Texas
Tom Price, Georgia
Luis G. Fortuño, Puerto Rico
Charles W. Boustany, Jr., Louisiana
Virginia Foxx, North Carolina
John R. "Randy" Kuhl, Jr., New York
Rob Bishop, Utah
David Davis, Tennessee
Timothy Walberg, Michigan

Mark Zuckerman, *Staff Director*
Vic Klatt, *Minority Staff Director*

SUBCOMMITTEE ON HIGHER EDUCATION, LIFELONG LEARNING, AND COMPETITIVENESS

RUBÉN HINOJOSA, TEXAS, *Chairman*

George Miller, California
John F. Tierney, Massachusetts
David Wu, Oregon
Timothy H. Bishop, New York
Jason Altmire, Pennsylvania
John A. Yarmuth, Kentucky
Joe Courtney, Connecticut
Robert E. Andrews, New Jersey
Robert C. "Bobby" Scott, Virginia
Susan A. Davis, California
Danny K. Davis, Illinois
Mazie Hirono, Hawaii

Ric Keller, Florida, *Ranking Minority Member*
Thomas E. Petri, Wisconsin
Cathy McMorris Rodgers, Washington
Virginia Foxx, North Carolina
John R. "Randy" Kuhl, Jr., New York
Timothy Walberg, Michigan
Michael N. Castle, Delaware
Mark E. Souder, Indiana
Vernon J. Ehlers, Michigan
Judy Biggert, Illinois

C O N T E N T S

	Page
Hearing held on May 17, 2007	1
Statement of Members:	
Altmire, Hon. Jason, a Representative in Congress from the State of Pennsylvania, prepared statement of	2
Hinojosa, Hon. Rubén, Chairman, Subcommittee on Higher Education, Lifelong Learning, and Competitiveness	2
Prepared statement of	3
Prepared statement of the Board of Directors of the Association of Teacher Educators (ATE)	5
Keller, Hon. Ric, Senior Republican Member, Subcommittee on Higher Education, Lifelong Learning, and Competitiveness	4
Prepared statement of	5
Statement of Witnesses:	
Fallon, Daniel, director, Program in Higher Education, Carnegie Corporation of New York	24
Prepared statement of	26
"Teachers for a New Era: A National Initiative to Improve the Quality of Teaching"	63
Feistritzer, Emily, president, National Center for Alternative Certification and the National Center for Education Information	29
Prepared statement of	31
Robinson, Sharon P., Ed.D., president and CEO, American Association of Colleges for Teacher Education	17
Prepared statement of	18
Summary of AACTE's HEA legislative language recommendations	38
Summary of AACTE's NCLB legislative language recommendations	42
"What Can the Federal Government Do? A Marshall Plan for Teaching," by Linda Darling Hammond, professor, Stanford University	49
Scott, George A., Director, Education, Workforce, and Income Security Issues, U.S. Government Accountability Office	8
Prepared statement of	9
Wiley, Dr. Janice, deputy director, Region One Education Service Center	21
Prepared statement of	23

PREPARING TEACHERS FOR THE CLASSROOM: THE ROLE OF THE HIGHER EDUCATION ACT AND NO CHILD LEFT BEHIND

Thursday, May 17, 2007

U.S. House of Representatives

Subcommittee on Higher Education,

Lifelong Learning, and Competitiveness

Committee on Education and Labor

Washington, DC

The subcommittee met, pursuant to call, at 10 a.m., in Room 2175, Rayburn House Office Building, Hon. Ruben Hinojosa [chairman of the subcommittee] presiding.

Present: Representatives Hinojosa, Tierney, Bishop, Altmire, Yarmuth, Courtney, Scott, Davis of California, Keller, Foxx, Kuhl, Walberg, Castle and Ehlers.

Staff Present: Tylease Alli, Hearing Clerk; Jeff Appel, GAO Detailee; Amy Elverum, Legislative Fellow, Education; Lamont Ivey, Staff Assistant, Education; Brian Kennedy, General Counsel; Ricardo Martinez, Policy Advisor for Subcommittee on Higher Education, Lifelong Learning and Competitiveness; Stephanie Moore, General Counsel; Lisette Partelow, Staff Assistant, Education; Rachel Racusen, Deputy Communications Director; Theda Zawaiza, Senior Disability Policy Advisor; Mark Zuckerman, Staff Director; James Bergeron, Minority Deputy Director of Education and Human Services Policy; Robert Borden, Minority General Counsel; Kathryn Bruns, Minority Legislative Assistant; Steve Forde, Minority Communications Director; Taylor Hansen, Minority Legislative Assistant; Susan Ross, Minority Director of Education and Human Services Policy; Linda Stevens, Minority Chief Clerk/Assistant to the General Counsel; and Brad Thomas, Minority Professional Staff Member.

Chairman HINOJOSA. A quorum is present. The hearing of the subcommittee will come to order. Pursuant to committee rule 12, any Member may submit an opening statement in writing, which will be made part of the permanent record.

[The statement of Mr. Altmire follows:]

Prepared Statement of Hon. Jason Altmire, a Representative in Congress From the State of Pennsylvania

Thank you, Mr. Chairman, for holding this important hearing on the role the Higher Education Act and No Child Left Behind can play in preparing teachers for the classroom.

I would like to extend a warm welcome to today's witnesses. I appreciate all of you for taking the time to be here and look forward to your testimony.

Everyone agrees that all children deserve to be taught by a teacher who has both a deep understanding of the subject they are teaching and the ability to clearly convey that understanding to their students. I believe that the majority of students are being taught by teachers that have the subject knowledge and teaching skill necessary to be highly effective. The difficult question is how federal policy can best be used to help ensure that all teachers can be highly effective.

I believe that this Congress has begun to take steps in the right direction by providing additional funding for teacher professional development. It is particularly important to provide professional development to math and science teachers in this country, because many a currently teaching subjects that they do not have an expertise in. However, more professional development alone is not the answer. I look forward to hearing more ideas about how Title II of the Higher Education Act and Title II of No Child Left Behind can best be used to attract, train and retain the highest quality teachers.

Thank you again, Mr. Chairman, for holding this hearing. I yield back the balance of my time.

Chairman HINOJOSA. Before making my opening statement, I want to say that today many of the members of our Committee on Education and Labor are participating at a memorial at the Capitol where we are paying our respect to a former Member of Congress who passed away and were unable to attend the memorial service in California, Juanita Millender-McDonald. And because of that, we are not going to have as many Members at this congressional hearing.

The schedule, as you all can imagine, has been extremely tight for all Members of Congress, and the record will, of course, be complete with a quorum, and there will be a few Members coming to our hearing and then going on to that memorial or other committees that are going on at the same time.

So I wish to start by giving you a good morning and welcome to the Subcommittee on Higher Education. This committee on lifelong learning and competitiveness hearing is on Preparing Teachers for the Classroom: The Role of the Higher Education Act and No Child Left Behind.

Reaching the goals of the No Child Left Behind Act will hinge on the quality of teaching in our classrooms. Unfortunately, too often the number of poor and minority students in a school is also an indicator of the number of teachers who are not certified or who are teaching outside of their field of expertise in a school. The students who need the most experienced and skilled teachers are typically in schools that have the least experienced teachers. Our goal should be to change that.

Not only do we need to ensure that teachers are experts in the subjects that they are teaching, we also need to ensure that they are highly qualified to teach the students they have in their classrooms. The National Center for Education Statistics reported in its 1999-2000 schools and staffing survey that 41 percent of teachers in the country had limited-English-proficient students in their classroom, yet only 13 percent of teachers had more than 8 hours

of training in how to teach these students. Clearly there is room for improvement.

Our Federal programs in the Higher Education Act and the No Child Left Behind Act are aimed toward improving the quality of teaching through better preparation and professional development. They are also aimed at improving the distribution of these teachers so that concentrations of poverty or minority populations are no longer coupled with a concentration of underprepared teachers.

They also recognize that we need to do a better job of making sure that the teaching profession reflects the diversity of America's schools. Title II of the Higher Education Act supports teacher quality by focusing on improving the quality of teacher preparation programs, rigor of teacher certification requirements, and recruiting teachers to serve in high-need districts and schools. It is funded at less than $60 million.

Title II of the No Child Left Behind Act is a formula grant to States to improve teacher quality and reduce class size. It is funded at 2.9 billion, a very significant Federal investment. While similar in goals, it is not clear how complementary these two programs are.

In this 110th Congress we will reauthorize both the Higher Education Act and the No Child Left Behind Act. This presents a unique opportunity to improve these laws so that they operate in a more integrated fashion and move us closer to our goal of a highly qualified teacher in every classroom.

I would like to thank our excellent panel of witnesses for joining us today, and I am looking forward to your testimony on how the programs are currently working and on what steps we can take to better coordinate them.

[The statement of Mr. Hinojosa follows:]

Prepared Statement of Hon. Rubén Hinojosa, Chairman, Subcommittee on Higher Education, Lifelong Learning, and Competitiveness

Good Morning. Welcome to the Subcommittee on Higher Education. Lifelong Learning and Competitiveness hearing on "Preparing Teachers for the Classroom: The Role of the Higher Education Act and No Child Left Behind."

Reaching the goals of the No Child Let Behind Act will hinge on the quality of teaching in our classrooms. Unfortunately, too often, the number of poor and minority students in a school is also an indicator of the number of teachers who are not certified or who are teaching outside of their field of expertise in a school. The students who need the most experienced and skilled teachers are typically in schools that have the least experienced teachers. Our goal should be to change that.

Not only do we need to ensure that teachers are experts in the subjects that they are teaching. We also need to ensure that they are highly qualified to teach the students they have in their classrooms. The National Center for Education Statistics reported in its 1999-2000 Schools and Staffing Survey that 41.2 percent of teachers in the country had limited English proficient students in their classroom. Yet, only 12.5 percent of teachers had more than 8 hours of training in how to teach these students. Clearly, there is room for improvement.

Our federal programs in the Higher Education Act and the No Child Left Behind Act are aimed toward improving the quality of teaching through better preparation and professional development. They are also aimed at improving the distribution of these teachers so that concentrations of poverty or minority populations are no longer coupled with a concentration of under-prepared teachers They also recognize that we need to do a better job of making sure that the teaching profession reflects the diversity of America's schools.

Title II of the Higher Education Act supports teacher quality by focusing on improving the quality of teacher preparation programs, rigor of teacher certification requirements and recruiting teachers to serve in high need districts and schools. It is funded at less than $60 million. Title II of the No Child Left Behind Act is a formula grant to states to improve teacher quality and reduce class size. It is funded

at $2.9 billion—significant federal investment. While similar in goals, it is not clear how complementary these two programs are.

This Congress, we will reauthorize both the Higher Education Act and the No Child Left Behind Act. This presents a unique opportunity to improve these laws so that they operate in a more integrated fashion and move us closer to our goal of a highly qualified teacher in every classroom.

I would like to thank our excellent panel of witnesses for joining us today. I am looking forward to your testimony on how the programs are currently working and on what steps we can take to better coordinate them.

I would like to yield to my good friend and ranking Member, Mr. Ric Keller of Florida, for his opening statement.

Chairman HINOJOSA. Before introducing the panel, I would like to yield to my good friend and Ranking Member Mr. Ric Keller of Florida for his opening statement.

Mr. KELLER. Well, thank you very much, Mr. Chairman, and good morning to all our witnesses. I want to thank each of our witnesses for joining us today to discuss teacher training and professional development.

Both the Higher Education Act and No Child Left Behind play a key role in preparing, recruiting, training and retaining today's teachers. Today we are here to listen and learn about ways that Congress can improve Title II and both of these laws to improve teacher quality and to make sure that quality teachers are staying in the classroom.

There are over 1,200 institutions of higher education that award degrees in elementary and secondary education. In addition to earning baccalaureate degrees in education, other undergraduates get ready to teach by participating in teacher education programs while earning a degree in an academic subject area. Still other individuals enter teaching through postbaccalaureate certificate programs or master's programs offered by institutions of higher education. Finally, alternative routes to teaching that target, for example, individuals changing careers may also involve higher education institutions.

In years past there has been much discussion and scrutiny of the caliber of teacher education programs at institutions of higher education. Teacher preparation programs have been criticized for providing prospective teachers with inadequate time to learn subject matter, for teaching a superficial curriculum, and for being unduly fragmented. On the other hand, many teacher preparation programs are outstanding and deserve to be emulated.

As we work to reauthorize the Higher Education Act this year, Congress will examine the most effective use of Federal funding for teacher training, whether it is teacher education programs at colleges and universities or alternative routes for teacher certification.

I hope that the discussion we have today gives us some good news about improvements that are being made at the institutional level as well as some recommendations for improvements to the Higher Education Act and No Child Left Behind Act to target policy and funding toward what works best.

Thank you to our distinguished panel of witnesses who are here today. I look forward to hearing your testimony.

Mr. Chairman, I yield back.

[The statement of Mr. Keller follows:]

Prepared Statement of Hon. Ric Keller, Senior Republican Member, Subcommittee on Higher Education, Lifelong Learning, and Competitiveness

Good morning, thank you for joining us here today to discuss teacher training and professional development. Both the Higher Education Act and No Child Left Behind play a role in preparing, recruiting, training and retaining today's teachers. Today, we are here to listen and learn about ways that Congress can improve Title II in both of these laws to improve teacher quality and to make sure that quality teachers are staying in the classroom.

There are over 1,200 institutions of higher education that award degrees in elementary and secondary education. In addition to earning baccalaureate degrees in education, other undergraduates get ready to teach by participating in a teacher education program while earning a degree in an academic subject area. Still other individuals enter teaching through post-baccalaureate certificate programs or master's programs offered by institutions of higher education. Finally, alternative routes to teaching that target, for example, individuals changing careers, may also involve higher education institutions.

In years past, there has been much discussion and scrutiny of the caliber of teacher education programs at institutions of higher education. Teacher preparation programs have been criticized for providing prospective teachers with inadequate time to learn subject matter; for teaching a superficial curriculum; and for being unduly fragmented. As we work to reauthorize the Higher Education Act this year, Congress will examine the most effective use of federal funding for teacher training, whether it is teacher education programs at colleges and universities or alternative routes for teacher certification.

Additionally, Congress needs to look into how efficiently the K-12 Title II funds are spent. Title II funds under No Child Left Behind are used for two purposes: professional development and class size reduction. According to a November 2005 GAO study on teacher qualification requirements, half of Title II NCLB funds are currently used for classroom size reduction. Concerning to me though is that there is very little evidence to suggest that reducing class size improves student achievement. While I agree that we should strive to keep class sizes as small as possible, I think we should also make sure these funds are spent wisely on the best professional development available.

I hope that the discussion we have today gives us some good news about improvements that are being made at the institutional level, as well as some recommendations for improvements to the Higher Education Act and No Child Left Behind to target policy and funding towards what works best. Thank you to our distinguished panel of witnesses who are here today. I look forward to your testimony.

Chairman HINOJOSA. Without objection, all Members will have 14 days to submit additional materials or questions for the hearing record.

[The statement of the Association of Teacher Educators submitted by Mr. Hinojosa follows:]

Prepared Statement of the Board of Directors of the Association of Teacher Educators (ATE)

Chairman Hinojosa and members of the Subcommittee, thank you for the opportunity to submit a written statement which may be considered for adding to the official record of the hearing held May 17, 2007, "Preparing Teachers for the Classroom: The Role of the Higher Education Act and the No Child Left Behind Act". The Association of Teacher Educators was founded in 1920 and is an individual membership organization devoted solely to the improvement of teacher education both for school-based and post secondary teacher educators. ATE members represent over 700 colleges and universities, over 500 major school systems, and the majority of state departments of education.

In considering the subject of the hearing and the testimony that was presented, we would like to emphasize the following points:

Research has shown that novice teachers, whether they gain certification through traditional programs or alternative programs, need continuing mentoring and induction in the critical first three years of their careers. There is a need for accountability and structure for both university-based and alternative teacher preparation programs to ensure novice teachers entering the classrooms will be prepared. As Dr. Emily Feistritzer pointed out, traditional teacher preparation programs have done a good job preparing classroom teachers, but alternative certification programs have

arisen in response to high demands, often in high needs and hard to staff schools or specific subject areas such as math, science or special education. Both HEA and NCLB should support efforts to develop partnerships between institutions of higher education and K-12 districts that emphasize mentoring, induction for novice teachers and meaningful, regular, and ongoing professional development for tenured or seasoned teachers.

The Federal government has spent more than $50 million on one program, the American Board for Certification of Teacher Excellence, that has licensed a total of 200 teachers and is accepted in five states. On a per-teacher cost basis, this is clearly not the best use of scarce Federal resources. ABCTE relies on a test alone to put teachers into classrooms. Reauthorization of the Higher Education Act and No Child Left Behind should use government funds to promote university-based teacher preparation programs which prepare much greater numbers of teachers. Research demonstrates that these programs have a higher retention rate for novice teachers in their first five years of teaching than alternative programs do. This is because of their multiple, intensive, research-based clinical experiences and student teaching requirements.

Teacher education programs have changed significantly in the past several years, and they can be expected to change in the future. The Association of Teacher Educators strongly supports the concept of Professional Development Schools, in which college and university schools of education partner with pre-K-12 schools in a variety of meaningful ways. Other partnerships that are being discussed, including Teachers for a New Era, represent innovations that encourage this evolution of teacher preparation. We believe the reauthorization of the Higher Education Act and No Child Left Behind should support such collaborative innovations between institutions of higher education and K-12 districts.

In considering reauthorization of the Higher Education Act and No Child Left Behind, we support the following:

• We strongly support passage of the Teacher Excellence for All Children (TEACH) Act of 2007 (H.R.2204), and urge incorporation of its provisions into Title II of HEA and Title II of NCLB;

• We believe NCLB reauthorization, in particular, should include funds to help states develop methods to measure teacher effectiveness and to refine the NCLB definition of a highly qualified teacher to address the unique circumstances of certain kinds of teachers, such as special education teachers and teachers in rural areas who teach multiple subjects;

• We support a comprehensive approach to recruiting and retaining teachers in high-need schools by requiring adequate working conditions for all teachers and providing financial incentives, high-quality residency programs, improved professional development to them.

• We believe these reauthorizations should provide resources to states to develop and implement comprehensive teacher induction and data tracking systems (at both university and district levels) that will help document the relationship of different teacher education program strategies with K-12 student learning performance. This is an accomplishment in educational research that is now hindered by the lack of funds available to track teachers from their institutions of higher education or alternative teacher education programs through their teaching career and relate their educational experiences and teaching practices to the performance outcomes of the students they teach.

Chairman Hinojosa, thank you for the opportunity to provide this statement as your Subcommittee continues its important work.

Chairman HINOJOSA. I would like to introduce our very distinguished panel of witnesses here with us this morning. The first will be Mr. George Scott. He is the Director of Education, Workforce and Income Security Issues at the Government Accountability Office in Washington, D.C., and he has over 19 years of public service. His current responsibilities include issues in higher education, student loans and grant programs, as well as accreditation in institutional grant programs. His previous assignments include work on retirement income security, private and public sector pensions, Federal retirement programs, and Social Security.

Welcome, Mr. Scott.

Dr. Sharon Robinson has served the last 2 years as the president of the American Association of Colleges for Teacher Education. She was formally president of the Educational Testing Services Educational Policy Leadership Institute as well as a senior vice president and chief operating officer at EPS. Sharon also has worked in the Department of Education as well as with the National Education Association. She is a Ph.D. Graduate from the University of Kentucky and has completed the renowned Harvard Business School Advanced Management Program.

Thank you for being with us.

Dr. Janice Wiley is the deputy director of instruction for the Region One Education Service Center in Edinburg, Texas, which just happens to be located in the congressional district which I represent. Region One serves 37 school districts in a 7-county area along the Texas-Mexico border and includes over 370,000 students. She has been an educator for 33 years, and 29 of those years have been in service to our students in Region One. Janice holds a Ph.D. From the University of Texas in 1999, and she also holds certification in five separate instructional or administrative areas. Finally, she has taught leadership classes at the University of Texas Pan American in Edinburg.

Region One has been very important to my congressional district for many years. It is a pleasure to welcome someone from home. Thanks for coming today.

Dr. Daniel Fallon is the director of higher education at Carnegie Corporation of New York. He oversees support for grants in areas of teacher education and reform, school leadership development, general education, and other areas of great national interest. He is professor emeritus of psychology and of public policy at the University of Maryland College Park. In addition to his teaching duties, he also served there as the vice president for academic affairs and provost. Dr. Fallon has worked in colleges in Texas, including Texas A&M; Colorado; and New York; and has published widely in academia and is the author of a prize-winning book entitled The German University.

Most importantly, my staff informs me that your heritage is part Spanish and Irish, so I give you bienvenido.

Dr. Emily Feistritzer is president and CEO of the National Center for Alternative Certification as well as president of the National Center for Education Information, a private nonpartisan research organization here in Washington, D.C. For the past 25 years, she has been conducting studies on the status of the teaching profession. She has coauthored 38 widely acclaimed database books on education. Dr. Feistritzer has testified before Congress many times, and she began her career as a high school science and mathematics teacher.

We appreciate your willingness to share your expertise with us today, and welcome.

For those of you who have not testified before this subcommittee, let me explain our lighting system and the 5-minute rule. Everyone, including Members, is limited to 5 minutes of presentation or questioning. The green light is illuminated when you begin to speak. When you see the yellow light, it means you have 1 minute remaining. When you see the red light, it means your time has ex-

pired, and you should need to conclude your testimony. Please be certain as you testify to turn on and speak into the microphones in front of you.

We will now hear our first witness.

Mr. Scott, you may begin.

STATEMENT OF GEORGE SCOTT, DIRECTOR, EDUCATION, WORKFORCE AND INCOME SECURITY ISSUES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Mr. SCOTT. Thank you, Mr. Chairman and members of the subcommittee. I am pleased to be here today to discuss the results of GAO's studies of Federal efforts to improve teacher quality.

Approximately 3 million teachers are responsible for educating over 48 million students, and they account for over one-half of public school expenditures each year. While the hiring and training of teachers is primarily a State and local responsibility, a thorough investment in teacher training is substantial.

In 1998, Congress amended the Higher Education Act to enhance the quality of teaching. In 2001, Congress passed the No Child Left Behind Act, which established Federal requirements that all teachers of core academic subjects be highly qualified.

In 2006, about $3 billion in Federal funds were appropriated for teacher quality efforts on Title II of HEA and Title II of No Child Left Behind. Given that both laws are scheduled for reauthorization this year, this hearing presents an excellent opportunity to explore teacher quality provisions under these laws.

My testimony will discuss approaches to and funding of teacher quality programs, how recipients are using Title II funds, and the Department of Education support of these activities.

In summary, we reported that teacher quality provisions under HEA and No Child Left Behind have different approaches and are funded differently. While the overall goal of both titles is to improve student achievement by improving the quality of teachers, some of the specific approach is different. For example, a major focus of HEA provisions is on training prospective teachers, while No Child Left Behind provisions focus on improving teacher quality in the classroom and employing highly qualified teachers.

Also, both laws use reporting mechanisms to increase accountability; however, HEA focuses more on institutions of higher education, while No Child Left Behind focuses on schools and school districts.

Teacher quality funds under HEA and No Child Left Behind are distributed differently. HEA funds are distributed through one-time competitive grants, State partnerships and recruitment grants. All three types of grants require a match from non-Federal sources. No Child Left Behind provides funds to States annually through formula grants. States and districts generally receive No Child Left Behind funds based on the amount they received in 2001, the percentage of children residing in the State or district, and the number of children in low-income families.

In 2006, Congress appropriated $2.9 billion to No Child Left Behind and about $60 million under HEA for teacher quality activities.

HEA and No Child Left Behind provide flexibility for recipients to use funds for a broad range of efforts to improve teacher quality, including many similar activities. However, one difference is that No Child Left Behind specifies that teachers can be hired to reduce class size, while HEA does not specifically mention class size reduction. Both laws fund professional development and recruitment activities. For example, mentoring was the most common professional development activity among the HEA grantees we visited. Some districts also use No Child Left Behind funds for mentoring as well.

HEA and No Child Left Behind funds also support efforts to recruit teachers. For example, many HEA grantees we visited use their funds to fill teacher shortages, while some districts we visited use No Child Left Behind funds to provide recruitment bonuses and advertise opening teaching positions.

The Department of Education is providing better assistance to recipients of Title II funds and is improving its oversight of teacher quality efforts. Our work identified areas where education could improve its assistance to grantees, enhance information on their efforts, and more effectively measure the results of these activities.

In response to our recommendations, Education has improved communication with HEA grantees and potential applicants. Education has also provided assistance to recipients of No Child Left Behind funds by offering professional development workshops and related materials that teachers can access on Education's Website. In addition, Education assisted States and districts by providing updated guidance on teacher qualification requirements.

Education has also made progress in addressing GAO concerns by improving how the Department measures the results of teacher quality activities by establishing performance targets. For example, in 2005, Education established performance for State and partnership grants under HEA.

In conclusion, the Nation's public schoolteachers play a vital role in educating over 48 million students. While Title II of HEA and No Child Left Behind share the goal of improving teacher quality, it is not clear the extent to which these laws complement each other. Our studies of teacher quality programs under each law have found areas for improvement, such as data quality and assistance from education. We have also found that HEA grantees, States, districts and schools engage in similar activities; however, not much is known about how well, if at all, these laws are aligned. Thus, there are additional opportunities to understand how the laws work together at the Federal, State and local level.

Mr. Chairman, this concludes my statement, and I will be happy to answer any questions from you or members of the subcommittee. Thank you.

[The statement of Mr. Scott follows:]

Prepared Statement of George A. Scott, Director, Education, Workforce, and Income Security Issues, U.S. Government Accountability Office

Mr. Chairman and Members of the Subcommittee: I am pleased to be here this morning to discuss the federal government's efforts to improve teacher quality. Teachers are the single largest resource in our nation's elementary and secondary education system. Approximately 3 million teachers are responsible for educating over 48 million students and they account for over one half of public school expenditures ($215 billion) each year. Research has shown that teachers play a significant role in improving student performance. However, research has also shown that

many teachers—especially those in high-poverty districts—lack competency in the subjects they teach and that most teacher training programs leave new teachers feeling unprepared for the classroom.

While the hiring and training of teachers is primarily the responsibility of state and local governments and institutions of higher education, the federal investment in enhancing teacher quality is substantial and growing. In 1998, the Congress amended the Higher Education Act (HEA) to enhance the quality of teaching in the classroom by improving training programs for prospective teachers and the qualifications of current teachers. In 2001, the Congress passed the No Child Left Behind Act (NCLBA)—the most recent reauthorization of the Elementary and Secondary Education Act—which established federal requirements that all teachers of core academic subjects be highly qualified. In 2006, about $3 billion of federal funds were appropriated for NCLBA Title II and HEA Title II to address teacher quality. Given that NCLBA and HEA are both slated for reauthorization in 2007, this hearing presents a timely opportunity to explore teacher quality provisions covered under those laws.

This statement focuses on the approaches, implementation, and evaluation of teacher quality programs under HEA and NCLBA. I will first provide information on the goals, approaches, and funding of these programs. Then I will discuss the allowable activities and how recipients are using the funds. Finally, I will summarize our findings related to Education's support and evaluation of these activities.

My remarks today are drawn from previous GAO reports covering HEA teacher quality programs and Title II under NCLBA,[1] supplemented with updated information. We updated information by interviewing state officials, officials from institutions of higher education, and Education officials. We also reviewed recent studies and Education documents. We conducted our work in accordance with generally accepted government auditing standards.

In summary:

• While the overall goal of Title II in both HEA and NCLBA is to improve teacher quality, some of the specific approaches differ. For example, HEA focuses more on training prospective teachers than NCLBA. In addition, HEA and NCLBA are funded differently, with HEA funds distributed through competitive grants, while Title II under NCLBA provides funds annually to all states through a formula.

• Both acts provide states, districts, and grantees with the flexibility to use funds for a broad range of activities to improve teacher quality, including many activities that are similar, such as professional development and recruitment. A difference is that NCLBA's Title II specifies that teachers can be hired to reduce class size, while HEA does not specifically mention class-size reduction. With the broad range of activities allowed, we found both similarities and differences in the activities undertaken.

• Under both HEA and NCLBA, Education has provided assistance and guidance to recipients of these funds and is responsible for holding recipients accountable for the quality of their activities. Our previous work identified areas in which Education could improve its assistance to states on their teacher quality efforts and more effectively measure the results of these activities. Education has made progress in addressing our concerns by disseminating more information to recipients particularly on teacher quality requirements and activities and improving how the department measures the results of teacher quality activities by, for example, establishing performance targets.

Teacher Quality Provisions under HEA and NCLBA Have Somewhat Different Approaches and Are Funded Differently

While the overall goal of Title II under both HEA and NCLBA is to improve student achievement by improving the teacher workforce, some of the specific approaches differ. For example, a major focus of HEA provisions is on the training of prospective teachers (preservice training) while NCLBA provisions focus more on improving teacher quality in the classroom (in service training) and hiring highly qualified teachers. Also, both laws use reporting mechanisms to increase accountability. However, HEA focuses more on institutions of higher education while NCLBA focuses on schools and school districts. Additionally, HEA focuses on expanding the teacher workforce by supporting recruitment from other professions.

In addition, HEA and NCLBA Title II funds are distributed differently. HEA teacher quality funds are disbursed through three distinct types of grants: state, partnership, and recruitment grants. State grants are available for states to implement activities to improve teacher quality in their states by enhancing teacher training efforts, while partnership grants support the collaborative efforts of teacher training programs and other eligible partners.[2] Recruitment grants are available to states or partnerships for teacher recruitment activities.

All three types of grants require a match from non-federal sources. For example, states receiving state grants must provide a matching amount in cash or in-kind support from non-federal sources equal to 50 percent of the amount of the federal grant.[3] All three grants are one-time competitive grants; however, state and recruitment grants are for 3 years while partnership grants are for 5 years.[4] HEA amendments in 1998 required that 45 percent of funds be distributed to state grants, 45 percent to partnership grants, and 10 percent to recruitment grants. As of April 2007, 52 of the 59 eligible entities (states, the District of Columbia, and 8 territories) had received state grants.[5] Because the authorizing legislation specifically required that entities could only receive a state grant once, only seven would be eligible to receive future state grants. In our 2002 report, we suggested that if Congress decides to continue funding teacher quality grants in the upcoming reauthorization of HEA, it might want to clarify whether all 59 entities would be eligible for state grant funding under the reauthorization, or whether eligibility would be limited to only those states that have not previously received a state grant. We also suggested that if Congress decides to limit eligibility to entities that have not previously received a state grant, it may want to consider changing the 45 percent funding allocation for state grants. In a 2005 appropriation act, Congress waived the allocation requirement. In 2006, about 9 percent of funds were awarded for state grants, 59 percent for partnership grants, and 33 percent for recruitment. When Congress reauthorizes HEA, it may want to further clarify eligibility and allocation requirements for this program.

NCLBA, funded at a much higher level than HEA, provides funds to states through annual formula grants. In 2006, Congress appropriated $2.89 billion through NCLBA and $59.9 million for HEA for teacher quality efforts.[6] While federal funding for teacher initiatives was provided through two other programs prior to NCLBA, the act increased the level of funding to help states and districts implement the teacher qualification requirements. States and districts generally receive NCLBA Title II funds based on the amount they received in 2001, the percentage of children residing in the state or district, and the number of those children in low-income families. After reserving up to 1 percent of the funds for administrative purposes, states pass 95 percent of the remaining funds to the districts and retain the rest to support state-level teacher initiatives and to support NCLBA partnerships between higher education institutions and high-need districts that work to provide professional development to teachers.

While there is no formula in NCLBA for how districts are to allocate funds to specific schools, the act requires states to ensure that districts target funds to those schools with the highest number of teachers who are not highly qualified, schools with the largest class sizes, or schools that have not met academic performance requirements for 2 or more consecutive years. In addition, districts applying for Title II funds from their states are required to conduct a districtwide needs assessment to identify their teacher quality needs. NCLBA also allows districts to transfer these funds to most other major NCLBA programs, such as those under Title I, to meet their educational priorities.[7]

Some HEA and NCLBA Funds Were Used for Similar Activities As Allowed under Both Acts

HEA provides grantees and NCLBA provides states and districts with the flexibility to use funds for a broad range of activities to improve teacher quality, including many activities that are similar under both acts. HEA funds can be used, among other activities, to reform teacher certification requirements, professional development activities, and recruitment efforts. In addition, HEA partnership grantees must use their funds to implement reforms to hold teacher preparation programs accountable for the quality of teachers leaving the program. Similarly, acceptable uses of NCLBA funds include teacher certification activities, professional development in a variety of core academic subjects, recruitment, and retention initiatives. In addition, activities carried out under NCLBA partnership grants are required to coordinate with any activities funded by HEA. Table 1 compares activities under HEA and NCLBA.

Table 1: Examples of Activities under HEA Title II and NCLBA Title II

HEA	NCLBA
Reforming teacher certification or licensure requirements	Reforming teacher and principal certification or licensing requirements
Recruitment and retention	Recruitment and retention
Professional development	Professional development
Implement reforms within teacher preparation programs to hold the programs accountable for preparing highly competent teachers	Reforming tenure systems, implementing teacher testing for subject matter knowledge, and implementing teacher testing for State certification or licensing, consistent with Title II of HEA
Providing preservice clinical experience and mentoring	Hiring teachers to reduce class size
Disseminating information on effective practices	Developing systems to measure the effectiveness of specific professional development programs
Teacher education scholarships	Funding projects to promote reciprocity of teacher and principal certification or licensing between or among States
Follow-up services for new teachers	Support to teachers or principals

Source: GAO summary of HEA Title II and NCLBA Title II.

With the broad range of activities allowed under HEA and NCLBA, we found both similarities and differences in the activities undertaken. For example, districts chose to spend about one-half of their NCLBA Title II funds ($1.2 billion) in 2004-2005 on class-size reduction efforts, which is not an activity specified by HEA.[8] 1We found that some districts focused their class-size reduction efforts on specific grades, depending on their needs. One district we visited focused its NCLBA-funded class-size reduction efforts on the eighth grade because the state already provided funding for reducing class size in other grades. However, while class-size reduction may contribute to teacher retention, it also increases the number of classrooms that need to be staffed and we found that some districts had shifted funds away from class-size reduction to initiatives to improve teachers' subject matter knowledge and instructional skills. Similarly, Education's data showed that the percent of NCLBA district funds spent on class-size reduction had decreased since 2002-2003, when 57 percent of funds were used for this purpose.

HEA and NCLBA both funded professional development and recruitment efforts, although the specific activities varied somewhat. For example, mentoring was the most common professional development activity among the HEA grantees we visited. Of the 33 HEA grant sites we visited, 23 were providing mentoring activities for teachers. In addition, some grantees used their funds to establish a mentor training program to ensure that mentors had consistent guidance. One state used the grant to develop mentoring standards and to build the capacity of trainers to train teacher mentors within each district. Some districts used NCLBA Title II funds for mentoring activities as well. We also found that states and districts used NCLBA Title II funds to support other types of professional development activities. For example, two districts we visited spent their funds on math coaches who perform tasks such as working with teachers to develop lessons that reflected state academic standards and assisting them in using students' test data to identify and address students' academic needs. Additionally, states used a portion of NCLBA Title II funds they retained to support professional development for teachers in core academic subjects. In two states that we visited, officials reported that state initiatives specifically targeted teachers who had not met the subject matter competency requirements of NCLBA. These initiatives either offered teachers professional development in core academic subjects or reimbursed them for taking college courses in the subjects taught.

Both HEA and NCLBA funds supported efforts to recruit teachers. Many HEA grantees we interviewed used their funds to fill teacher shortages in urban schools or to recruit new teachers from nontraditional sources—mid-career professionals, community college students, and middle- and high-school students. For example, one

university recruited teacher candidates with undergraduate degrees to teach in a local school district with a critical need for teachers while they earn their masters in education. The program offered tuition assistance, and in some cases, the district paid a full teacher salary, with the stipulation that teachers continue teaching in the local school district for 3 years after completing the program. HEA initiatives also included efforts to recruit mid-career professionals by offering an accelerated teacher training program for prospective teachers already in the workforce. Some grantees also used their funds to recruit teacher candidates at community colleges. For example, one of the largest teacher training institutions in one state has partnered with six community colleges around the state to offer training that was not previously available. Finally, other grantees targeted middle and high school students. For example, one district used its grant to recruit interns from 14 high-school career academies that focused on training their students for careers as teachers. Districts we visited used NCLBA Title II funds to provide bonuses to attract successful administrators, advertise open teaching positions, and attend recruitment events to identify qualified candidates. In addition, one district also used funds to expand alternative certification programs, which allowed qualified candidates to teach while they worked to meet requirements for certification.

Finally, some states used HEA funds to reform certification requirements for teachers. Reforming certification or licensing requirements was included as an allowable activity under both HEA and NCLBA to ensure that teachers have the necessary teaching skills and academic content knowledge in the subject areas. HEA grantees also reported using their funds to allow teacher training programs and colleges to collaborate with local school districts to reform the requirements for teacher candidates. For example, one grantee partnered with institutions of higher education and a partner school district to expose teacher candidates to urban schools by providing teacher preparation courses in public schools.

Education Is Working to Provide Better Assistance and Improve Its Evaluation and Oversight Efforts

Under both HEA and NCLBA, Education has provided assistance and guidance to recipients of these funds and is responsible for holding recipients accountable for the quality of their activities. In 1998, Education created a new office to administer HEA grants and provide assistance to grantees. While grantees told us that the technical assistance the office provided on application procedures was helpful, our previous work noted several areas in which Education could improve its assistance to HEA grantees, in part through better guidance. For example, we recommended that in order to effectively manage the grant program, Education further develop and maintain its system for regularly communicating program information, such as information on successful and unsuccessful practices. We noted that without knowledge of successful ways of enhancing the quality of teaching in the classroom, grantees might be wasting valuable resources by duplicating unsuccessful efforts. Since 2002, Education has made changes to improve communication with grantees and potential applicants. For example, the department presented workshops to potential applicants and updated and expanded its program Web site with information about program activities, grant abstracts, and other teacher quality resources. In addition, Education provided examples of projects undertaken to improve teacher quality and how some of these efforts indicate improved teacher quality in its 2005 annual report on teacher quality.[9]

Education also has provided assistance to states, districts and schools using NCLBA Title II funds. The department offers professional development workshops and related materials that teachers can access online through Education's website. In addition, Education assisted states and districts by providing updated guidance. In our 2005 report, officials from most states and districts we visited who use Education's Web site to access information on teacher programs or requirements told us that they were unaware of some of Education's teacher resources or had difficulty accessing those resources. We recommended that Education explore ways to make the Web-based information on teacher qualification requirements more accessible to users of its Web site. Education immediately took steps in response to the recommendation and reorganized information on its website related to the teacher qualification requirements.

In addition to providing assistance and guidance, Education is responsible for evaluating the efforts of HEA and NCLBA recipients and for overseeing program implementation. Under HEA, Education is required to annually report on the quality of teacher training programs and the qualifications of current teachers. In 2002, we found that the information collected for this requirement did not allow Education to accurately report on the quality of HEA's teacher training programs and the qualifications of current teachers in each state. In order to improve the data that

states are collecting from institutions that receive HEA teacher quality grants, and all those that enroll students who receive federal student financial assistance and train teachers, we recommended that Education should more clearly define key data terms so that states provide uniform information. Further, in 2004, the Office of Management and Budget (OMB) completed a Program Assessment Rating Tool (PART) assessment[10] of this program and gave it a rating of "results not demonstrated," due to a lack of performance information and program management deficiencies. Education officials told us that they had aligned HEA's data collection system with NCLBA definitions of terms such as "highly qualified teacher." However, based on the PART assessment, the Administration proposed eliminating funding for HEA teacher quality grants in its proposed budgets for fiscal years 2006-2008, and redirecting the funds to other programs. Congress has continued to fund this program in fiscal years 2006 and 2007.

Education has responded to our recommendations and issues raised in the PART assessment related to evaluating grantee activities and providing more guidance to grantees on the types of information needed to determine effectiveness. When the Congress amended HEA in 1998 to provide grants to states and partnerships, it required that Education evaluate the activities funded by the grants. In 2005, Education established performance measures for two of the teacher quality enhancement programs—state grants and partnership grants—and required grantees to provide these data in their annual performance plans submitted to Education.[11] The performance measure for state grants is the percentage of prospective teachers who pass subject matter tests, while the measure for partnership grants is the percentage of participants who complete the program and meet the definition of being "highly qualified." In addition, in 2006, Education included information in letters to grantees on the types of information that it requires to assess the effectiveness of its teacher quality programs. For example, in its letters to state grantees, Education noted that when reporting on quantitative performance measures, grantees must show how their actual performance compared to the targets (e.g., benchmarks or goals) that were established in the approved grant application for each budget period.

In addition, in May 2006, Education issued its final report on HEA's partnership grants, focusing on the 25 grantees of the 1999 cohort.[12] The goal of the study was to learn about the collaborative activities taking place in partnerships. It was designed to examine approaches for preparing new and veteran teachers and to assess the sustainability of project activities after the grant ends. Among its findings, Education reported that partnerships encouraged and supported collaboration between institutions of higher education and schools to address teacher preparation needs.

Under NCLBA, Education holds districts and schools accountable for improvements in student academic achievement, and holds states accountable for reporting on the qualifications of teachers. NCLBA set the end of the 2005-2006 school year as the deadline for teachers of core academic subjects, such as math and science, to be highly qualified.[13] Teachers meeting these requirements must (1) have at least a bachelor's degree, (2) be certified to teach by their state, and (3) demonstrate subject matter competency in each core academic subject they teach.[14] Education collects state data on the percent of classes taught by highly qualified teachers and conducts site visits in part to determine whether states appropriately implemented highly qualified teacher provisions.[15]

In state reviews conducted as part of its oversight of NCLBA, Education identified several areas of concern related to states' implementation of teacher qualification requirements and provided states feedback.[16] For example, some states did not include the percentage of core academic classes taught by teachers who are not highly qualified in their annual state report cards,[17] as required. In addition, because some states inappropriately defined teachers as highly qualified, the data that these states reported to Education were inaccurate according to a department official. In many states, the requirements for teachers were not sufficient to demonstrate subject matter competency. Since subject matter competency is a key part of the definition of a highly qualified teacher, such states' data on the extent to which teachers have met these requirements could be misleading. Education also found that a number of states were incorrectly defining districts as high-need, in order to make more districts eligible for partnerships with higher education institutions. According to Education, each of these states corrected their data and the department will continue to monitor states to ensure they are using the appropriate data.

In addition to Education's oversight efforts, OMB completed a PART assessment of NCLBA Title II in 2005 and rated the program as "moderately effective." While OMB noted that the program is well-managed, it also noted that the program has not demonstrated cost-effectiveness and that an independent evaluation has not been completed to assess program effectiveness. In response to OMB's assessment,

Education took steps to more efficiently monitor states and conducted two program studies related to teacher quality. An Education official told us that the program studies had been conducted but the department has not yet released the findings.

Concluding Observations

In conclusion, the nation's public school teachers play a key role in educating 48 million students, the majority of our future workforce. Recognizing the importance of teachers in improving student performance, the federal government, through HEA and NCLBA, has committed significant resources and put in place a series of reforms aimed at improving the quality of teachers in the nation's classrooms. With both acts up for reauthorization, an opportunity exists for the Congress to explore potential interrelationships in the goals and initiatives under each act.

While HEA and NCLBA share the goal of improving teacher quality, it is not clear the extent to which they complement each other. Our separate studies of teacher quality programs under each of the laws have found common areas for improvement, such as data quality and assistance from Education. We have also found that states, districts, schools, and grantees under both laws engage in similar activities. However, not much is known about how well, if at all, these two laws are aligned. Thus, there may be opportunities to better understand how the two laws are working together at the federal, state, and local level. For example, exploring links between efforts aimed at improving teacher preparation at institutions of higher education and efforts to improve teacher quality at the school or district level could identify approaches to teacher preparation that help schools the most.

Mr. Chairman, this concludes my prepared statement. I welcome any questions you or other Members of this Subcommittee may have at this time.

Teacher Quality

APPROACHES, IMPLEMENTATION, AND EVALUATION OF KEY FEDERAL EFFORTS

Teachers are the single largest resource in our nation's elementary and secondary education system. However, according to recent research, many teachers lack competency in the subjects they teach. In addition, research shows that most teacher training programs leave new teachers feeling unprepared for the classroom.

While the hiring and training of teachers is primarily the responsibility of state and local governments and institutions of higher education, the federal investment in enhancing teacher quality is substantial and growing. In 1998, the Congress amended the Higher Education Act (HEA) to enhance the quality of teaching in the classroom and in 2001 the Congress passed the No Child Left Behind Act (NCLBA), which established federal requirements that all teachers of core academic subjects be highly qualified.

This testimony focuses on

(1) approaches used in teacher quality programs under HEA and NCLBA, (2) the allowable activities under these acts and how recipients are using the funds, and (3) how Education supports and evaluates these activities.

This testimony is based on prior GAO reports. We updated information where appropriate.

While the overall goal of Title II in both HEA and NCLBA is to improve teacher quality, some of their specific approaches differ. For example, a major focus of HEA provisions is on the training of prospective teachers while NCLBA provisions focus more on improving teacher quality in the classroom and hiring highly qualified teachers. Both laws use reporting mechanisms to increase accountability; however, HEA focuses more on institutions of higher education while NCLBA focuses on schools and districts. In addition, HEA and NCLBA grants are funded differently, with HEA funds distributed through one-time competitive grants, while Title II under NCLBA provides funds annually to all states through a formula.

Both acts provide states, districts, or grantees with the flexibility to use funds for a broad range of activities to improve teacher quality, including many activities that are similar, such as professional development and recruitment. A difference is that NCLBA's Title II specifies that teachers can be hired to reduce class-size while HEA does not specifically mention class-size reduction. Districts chose to spend about one-half of their NCLBA Title II funds on class-size reduction in 2004-2005. On the other hand, professional development and recruitment efforts were the two broad areas where recipients used funds for similar activities, although the specific activities varied somewhat. Many HEA grantees we visited used their funds to fill teacher shortages in urban schools or recruit teachers from nontraditional sources, such as mid-career professionals. Districts we visited used NCLBA funds to provide bonuses, advertise open teaching positions, and attend recruitment events, among other activities.

Under both HEA and NCLBA, Education has provided assistance and guidance to recipients of these funds and is responsible for holding recipients accountable for the quality of their activities. GAO's previous work identified areas where Education could improve its assistance on teacher quality efforts and more effectively measure the results of these activities. Education has made progress in addressing GAO's concerns by disseminating more information to recipients, particularly on teacher quality requirements, and improving how the department measures the results of teacher quality activities by establishing definitions and performance targets under HEA.

While HEA and NCLBA share the goal of improving teacher quality, it is not clear the extent to which they complement each other. States, districts, schools, and grantees under both laws engage in similar activities. However, not much is known about how well, if at all, these two laws are aligned. Thus, there may be opportunities to better understand how the two laws are working together at the federal, state, and local level.

ENDNOTES

[1] GAO, Higher Education: Activities Underway to Improve Teacher Training but Reporting on These Activities Could Be Enhanced, GAO-03-6 (Washington, D.C.: Dec. 11, 2002) and GAO, No Child Left Behind Act: Improved Accessibility to Education's Information Could Help States Further Implement Teacher Qualification Requirements, GAO-06-25 (Washington, D.C.: Nov. 21, 2005).

[2] Eligible partnerships must include at least three partners, consisting of teacher training programs, colleges of Arts and Sciences, and eligible local school districts. Partnerships may include other groups such as state educational agencies, businesses, and nonprofit educational organizations.

[3] Partnerships must match from non-federal sources 25 percent of the partnership grant in the first year, 35 percent in the second, and 50 percent in each succeeding year. States and partnerships that receive recruitment grants have the same matching requirements for these grants as they have under their separate grant programs.

[4] According to Education, an institution of higher education can have more than one grant (simultaneously or sequentially) as long as the members of the partnership are not identical (i.e. a new partnership is formed).

[5] Since 1999, 63 partnership grants have been made to various entities, and 68 recruitment grants were made.

[6] The funding authorizations for Title II, along with the rest of HEA, were extended through June 30, 2007, under the Third Higher Education Extension Act of 2006 (Pub. L. No. 109-292).

[7] Specifically, districts are allowed to transfer up to 50 percent of the funds allocated to them under most major NCLBA programs, including Title II, into other programs under NCLBA. For example, districts may transfer a portion of their Title II funds into Title I for initiatives designed to improve student achievement.

[8] Education surveyed approximately 800 districts and found that they spent $1.2 billion, about half of their NCLBA Title II funds in 2004-2005, to hire more teachers in order to reduce class size. According to an Education official, no comparable HEA expenditure data is available.

[9] The Secretary's Fourth Annual Report on Teacher Quality, U.S. Department of Education (Washington, D.C.) August 2005.

[10] OMB uses the PART as a diagnostic tool meant to provide a consistent approach to evaluating federal programs as part of the executive budget formulation process and as a central component of its overall governmentwide management efforts.

[11] Grantees are required to submit data on how well they meet their project performance measures that they negotiate with their Education grant managers.

[12] See Partnerships for Reform: Changing Teacher Preparation through the Title II HEA Partnership Program: Final Report, May 2006. Department of Education, 2006.

[13] Although 2005-2006 was the original deadline, on October 15, 2005 Education sent a policy letter to the Chief State School Officers saying that states that do not quite reach the 100 percent goal by the end of the 2005-2006 school year will not lose federal funds if they are implementing the law.

[14] Veteran teachers may demonstrate subject matter competency through a state-developed High Objective Uniform State Standard of Evaluation, whereby subject matter competency is established through teaching experience, professional development, coursework, and other activities.

[15] In 2003, Education aligned HEA's definition of highly qualified teacher" to that in NCLBA.

[16] As of April 2006, Education officials had completed reviews of all states.

[17] States must prepare and disseminate an annual report card that includes information on student achievement and the professional qualifications of teachers in the state, the percentage of teachers teaching with emergency or provisional credentials, and the percentage of classes in the state not taught by highly qualified teachers. These data are presented in the aggregate and are also disaggregated by high-poverty compared to low-poverty schools.

Chairman HINOJOSA. Dr. Robinson.

STATEMENT OF SHARON ROBINSON, PRESIDENT, AMERICAN ASSOCIATION OF COLLEGES FOR TEACHER EDUCATION

Ms. ROBINSON. Good morning, Mr. Chairman and members of the subcommittee. Thank you so much for the opportunity to testify before you today. I represent the American Association of Colleges for Teacher Education. Our members are 800 schools and colleges of education in all the States of the Nation.

In my written testimony I describe three myths about schools of education that I am hoping to dispel. Myth number one holds that teacher candidates leaving the academy are weak in content knowledge. Myth number two states that schools of education are ivory towers divorced from the realities of the pre-K-12 classrooms, producing teachers who are unprepared for today's realities in the classroom. Myth number 3, my personal favorite, suggests that schools of education reject accountability.

While I argue that each of these myths is wrong, I do not assert that schools of education are where they need to be, for there is certainly considerable work yet to be done, but I think it is important to acknowledge that we are not standing still, and I think Mr. Fallon's testimony will dramatically illustrate this fact.

It is also important to acknowledge that schools of education alone cannot solve the Nation's teacher supply and distribution problems. Federal incentives are needed to support able candidates in becoming well prepared and to distribute these well-prepared teachers to the schools where they are most needed.

In order to make real headway, we need a much more systemic approach. One such approach was recently developed by my colleague Linda Darling-Hammond. It is called the Marshall Plan for Teaching. This bold plan is reflected in Chairman Miller's recently introduced TEACH Act, which includes many of the features of the Marshall Plan for Teaching.

Title II both of the Higher Education Act and of the No Child Left Behind Act are linchpins in the Federal investment for teacher quality, yet neither is currently robust enough to produce the transformation that is needed. The purpose of Title II of the Higher Ed Act is to transform teacher education so that it is rigorous and accountable. I am pleased to report that transformation is under way, but that which was envisioned by the law, systemic and comprehensive, has not occurred. Worthy efforts are too few and unsustained given the minimal and uncertain $60 million Federal investment.

Title II of the Higher Education Act was envisioned as a $300 million program. It has never been funded at that level, and every year funds seem to dwindle.

In summary, our reauthorization recommendations for Title II of the Higher Education Act include a targeted investment in data systems for program improvement and accountability, partnerships focused on clinical development to produce expertise in teaching diverse learners, a new teaching fellowship program such as a service scholarship program, and a revision of the pass rate requirements.

Title II of No Child Left Behind is the $2.9 billion investment in professional development, yet according to the Department, only 28 percent of Title II Part A funds are actually spent on professional

development. Title II No Child Left Behind funds should be targeted to produce systemic and sustainable change in the States working through partnerships involving higher education and school districts.

I submit for the record our recommendations for improving Title II of No Child Left Behind, which include support for the development of teacher performance assessments to be used in programs and in licensing, state-of-the-art mentoring programs for beginning teachers, preparation and professional development to help teachers learn to use data and assessments more effectively, clinical training to ensure that all teachers are prepared to teach diverse populations including English-language learners and special education students, and partnerships to reduce teacher shortages in urban and rural areas.

The relationship between higher education and pre-K-12 schools has changed dramatically in the last decade, resulting in ongoing relationships that promote innovation leading to improved instructional practice in both the academy and the Nation's classrooms. Both Title IIs need to support and fund these rich partnerships to yield maximum benefit to our Nation's learners. I look forward to discussing these comments with you further.

Chairman HINOJOSA. Thank you.

[The statement of Ms. Robinson follows:]

Prepared Statement of Sharon P. Robinson, Ed.D., President and CEO, American Association of Colleges for Teacher Education

Good morning, Chairman Hinojosa and members of the Subcommittee. Thank you for the opportunity to testify before you today.

I represent the American Association of Colleges for Teacher Education. Our members are 800 schools and colleges of education in all states of the nation. Schools of education produce over 90% of the new teachers who enter our classrooms every year.

Colleges of education have changed dramatically over the last decade. Major reforms of programs since the late 1980s have created a curriculum much stronger in content and how to teach it, in how to serve diverse learners well, and in how to apply what is learned in courses to the classroom through tightly connected clinical training. Gone from most universities are the education majors that ducked serious subject matter and provided abstract theory divorced from practice. Our teacher candidates have also changed. A major share are mid-career professionals moving into teaching as a second career. Many are instructional aides who have returned to school to become highly qualified teachers. Others go to classes from their own living rooms via the Internet. And a growing number attend their university classes in the public schools where they are teaching, which function like teaching hospitals do in medicine.

Indeed, we are not your grandmothers' schools of education!

Although there are still some weak programs of teacher education that are a matter of significant concern to us, most of the enterprise has changed dramatically as a result of reforms launched by states, universities, and the federal government.

I would like to dispel three myths about schools of education that often masquerade as facts.

Myth #1 holds that teacher candidates leaving the academy are weak in content knowledge. While that once was often true, nothing could be further from the truth today. In every state, beginning teachers demonstrate significant content knowledge in their area of concentration either by completing a major or by passing a rigorous content test or both. The most recent MetLife survey reported that 98% of principals reported that first-time teachers are well prepared to teach subject matter. Nearly 60% of principals found the quality of new teachers entering the profession today to be noticeably better than the quality of new teachers in the past. And in states like Kentucky and California where major reforms of preparation were undertaken, studies have found that at least 85% of teachers and employers report that new teachers from public colleges are entering teaching well prepared for their work.

Preliminary findings from a forthcoming report from the Education Testing Service indicate that the academic quality of teacher candidates is improving—in terms of SAT scores, grade point averages, and Praxis scores. Indeed, an earlier ETS study found that newly prepared high school teachers have higher SAT scores than their peers and equivalent or higher grade point averages in their subject matter majors. The practice of majoring in education without strong subject matter preparation and then entering teaching as a mathematics or chemistry teacher is a thing of the past.

Myth #2 holds that schools of education are ivory towers, divorced from the realities of the K-12 classroom, producing teachers who are unprepared for today's schools. This, too, has changed dramatically. Schools of education are integrally involved with K-12 schools. Professional development schools, which are schools modeled after teaching hospitals in the medical profession, are increasingly the norm. In the last decade, universities have launched more than 1,000 such school partnerships across the country, which provide state-of-the-art sites for preparing teachers, pursuing reforms, and conducting research. Studies have found that teachers trained in these sites—many of which are in hard-to-staff urban communities—feel better prepared and are rated as more effective. In addition, veteran teachers report improvements in their own practice, and curriculum reforms stimulated by these university partnerships have produced student achievement gains. Candidates in these sites often complete a full year of student teaching or residency under the wing of an expert veteran teacher. Research tells us that such sustained clinical experiences are a predictor of effectiveness and retention.

Myth #3, my personal favorite, suggests that schools of education reject accountability. In fact, we may be the only portion of the higher education community that fully embraces accountability. We want to know if our graduates are effective; if they remain in the profession; if they generate high achievement from their students. Higher education systems in Texas, Louisiana, California, Florida, and Ohio, to name a few, are actively developing the capacity to follow education graduates and make determinations about program effectiveness. These efforts are underway based on the initiative of the colleges of education supported by external funding.

Even though national professional accreditation is voluntary in most states, most teacher education institutions volunteer to undertake national accreditation, even though about 1/4 of institutions do not receive full approval on their first attempt. NCATE accreditation now requires solid evidence of teacher education outcomes, including how candidates perform on licensing examinations, how they succeed in classrooms, how many enter and stay in teaching, and, increasingly, how they influence student learning. Teacher educators are committed to evaluating preparation programs based on the success of graduates

I am not asserting that there is no room for improvement in schools of education—for there certainly is considerable work yet to be done. But I think it is important to acknowledge that we are not standing still. It is also important to acknowledge that schools of education alone cannot solve the nation's teacher supply and distribution problems. Federal incentives are needed to support able candidates in becoming well-prepared and to distribute these well-prepared teachers to the schools where they are most needed.

Teachers in the U.S. are paid considerably less than their peers who go into other lines of work, and many must go into debt to complete their preparation, as there is very little governmental support to help them gain the skills they need to do their extraordinarily complex jobs well. If they go to teach in high-need communities, they will generally earn considerably less than if they teach in wealthy districts. Meanwhile, our competitor nations that are higher achieving (such as Finland, Sweden, Norway, Netherlands, Germany, France, Australia, New Zealand, Japan, Taiwan, and Singapore) have made substantial investments in teacher training and equitable teacher distribution in the last two decades. These nations recruit their best and brightest into high-quality graduate-level teacher education (which includes a year of practice teaching in a clinical school connected to the university), completely subsidized for all candidates at government expense. They provide mentoring for all beginners in their first year of teaching, and their funding mechanisms ensure equitable salaries, often with additional stipends for hard-to-staff locations, which are competitive with other professions.

In order to make headway on the issue of recruiting, preparing, and retaining teachers where they are needed most, we need a much more systemic approach.

I would like to submit for the record a copy of the "Marshall Plan for Teaching" that was written recently by AACTE Board member and internationally renowned teacher educator Dr. Linda Darling-Hammond. This bold plan points out that in order for our nation to ensure that every student has a teacher who knows how to teach challenging content to diverse learners, we need to invest $3 billion annually. Chairman Miller's TEACH ACT that he recently introduced includes some features

of this plan. The simple fact is that the federal government has not made the kind of investment in either higher education or pre-K-12 education that is needed to get the result we want.

The two Title IIs—of the Higher Education Act and of the No Child Left Behind Act—are lynchpins in the federal investment in teacher quality. Yet neither is currently robust enough to produce the transformation that is needed.

Title II of the Higher Education Act was first authorized in 1998, four years before the enactment of No Child Left Behind. This will be the first time Congress has had an opportunity to look at the Higher Education Act in relation to the requirements of NCLB.

The purpose of Title II of HEA is to transform teacher preparation—so that it is rigorous and accountable. I am pleased to report to you that transformation is under way. Schools of education are deeply involved with other components of the university—including schools of arts and sciences—and with local school districts. The successes of some of these new models of preparation have been documented in a number of recent reports, including a major volume by the National Academy of Education. When the "highly qualified" mandate was enacted in NCLB, Title II HEA funds were increasingly used to prepare teachers to meet those requirements.

Schools of education are at the beginning of developing more meaningful and robust capacity for accountability—through collection of rich assessment data regarding their candidates and their programs. The development of valid and reliable performance assessments is an essential element of those activities. For example, a consortium of universities in California has developed the PACT assessment (Performance Assessment for California Teachers) that, like the National Board's assessments, measures the actual teaching skills and outcomes of prospective teachers. This assessment and similar efforts in Wisconsin, Washington, Oregon, North Carolina, and elsewhere demonstrate the possibilities for improving preparation by measuring whether new teachers can actually teach before they enter the profession. Such measures build on earlier work—such as the teacher work sample assessment—and could provide much stronger accountability than the current requirements for teachers to pass paper-and-pencil tests of basic skills and subject matter knowledge that, though important, fall short of looking at whether teachers can actually succeed in teaching diverse students.

We believe that state certification requirements should include this type of performance assessment so that parents and students are assured that a beginning teacher is skilled in instructing all students. A modest investment by the federal government could facilitate the continued development of valid and reliable teacher performance assessments so that states may adopt them. Such an investment is called for in the TEACH Act recently re-introduced by Chairman Miller.

The Higher Education Act has also put a premium on partnerships among K-12 schools, colleges of education, and schools of arts and sciences. Such partnerships are no longer novel, but are increasingly routine.

But the transformation envisioned by the law—systemic and comprehensive—has not occurred. The transformation remains spotty and unsustained given the minimal $60 million federal investment. Title II of the Higher Education Act was envisioned in 1998 as a $300 million program. This amount is a bare minimum for starting on the critical agenda of ensuring that every beginning teacher is adequately prepared to teach the challenging content standards required under NCLB and to do so successfully with students with a wide array of learning needs. Yet every year the funds dwindle.

I would like to submit our reauthorization recommendations for Title II of the Higher Education Act for the record. In summary, we propose

- A targeted investment in the development of data systems so that schools of education can follow their graduates and assess their impact on student learning, track teacher movement, and measure retention.
- An investment in partnerships among schools of education, schools of arts and sciences, and K-12 schools that targets sustained clinical experience, teaching diverse learners (including ELL and special education students), addressing the critical shortage areas (including, math, science, special education, and ELL) and addressing teacher turnover in high-need schools—with a significant increase in funding. This would include support for partnerships that provide high-quality internships and residencies in communities where teachers are most needed.
- A new Teaching Fellowship program that would provide service scholarships to cover the cost of preparation in exchange for teaching in high-need fields and high-need schools for at least four years.
- A revision of the Pass Rate requirements so that pass rates are reported for candidates who have completed 100% of their coursework. (This will ensure that

candidates taking certification exams have completed all content and pedagogical curricula courses.)

Title II of the No Child Left Behind Act is the federal government's $2.9 billion investment in professional development. Yet, according to the Department of Education, only 28% of the funds are actually spent on professional development. About half of the funds go to class-size-reduction initiatives in states.

Title II NCLB funds should be targeted to produce systemic and sustainable change in states—working through partnership involving higher education and local school districts. The funds should support developing and carrying out statewide initiatives to address the following challenges:

• Persistent and critical shortages in fields such as math, science, special education, and ELL.

• The maldistribution of teachers so that the neediest students are most likely to have the least qualified teachers.

• Ensuring that rural and urban schools have effective teachers and high retention rates.

• Ensuring that all teachers can provide instruction in a rigorous curriculum to diverse learners.

I submit for the record our recommendations for improving the No Child Left Behind Act, which include:

• Partnerships to reduce teacher shortages in urban and rural areas;

• Preparation that will ensure that all new teachers are prepared to teach diverse populations, including English language learners and special education students;

• Preparation and professional development to help teachers learn to use data and assessments to improve teaching and learning; and

• State-of-the-art mentoring programs for beginning teachers so that they become increasingly competent and stay in teaching.

• Support for the development of teacher performance assessments that enhance teacher preparation and teacher accountability.

I would also like to submit our publication "Teacher Education Reform: The Impact of Federal Investments," which profiles grants funded by Title II of the Higher Education Act. Next month, I will be pleased to submit to the Subcommittee our upcoming publication, "Preparing STEM Teachers: The Key to Global Competitiveness."

The relationship between higher education and K-12 schools has changed dramatically in the last decade. There is no longer a clear line between the role of higher education and the role of public schools. Rather, there are ongoing innovative relationships that promote the improvement of instructional practice in both the academy and the classroom. Both Title IIs need to support and fund these rich partnerships to yield maximum benefit for our nation's learners.

Thank you, Mr. Chairman.

Chairman HINOJOSA. Dr. Wiley.

STATEMENT OF JANICE WILEY, DEPUTY DIRECTOR, REGION ONE SERVICE CENTER

Ms. WILEY. Mr. Chairman and members of the subcommittee, I thank you for the opportunity to testify today. I am Janice Wiley, deputy director for the Region One Education Service Center located in Edinburg, Texas. We serve a student population of over 373,000 students along the south Texas-Mexico border, and of those, about 144,000 are limited-English-proficient students. Ninety-seven percent of our student population is of Hispanic decent, with 85 percent qualifying as economically disadvantaged.

To serve these students there are over 23,000 teachers in the Region One area, and over 18,000 of those teachers serve core academic subject areas. Of those, about 12 percent hold a master's degree, and about 40 percent have less than 10 years experience.

If you can imagine for a first-year teacher entering the first day of teaching at a local high school, there she finds 25 to 30 students in each class period, and the class is made up of the demographic characteristics that I just mentioned. There are also many diverse

learners, including limited-English-proficient migrant students as well as special needs students, and for many of them, at least half, they will be the first in their family to earn a high school diploma and the first to attend college.

Not only is the novice teacher faced with the challenge of helping all these students meet State and Federal standards, but the school is rated based on the passing rate of his or her students. Can you feel the immense pressure that this teacher must be facing? And what can we do to support the teacher so that after a few years he/she does not feel burned out, leave the classroom and feel like they are facing a losing battle?

We can continue to provide professional development and mentoring programs to assist the teacher so their students are successful not only in meeting, but surpassing these academic standards. We believe a key factor in increasing student achievement lies in improving the quality of teachers in our classrooms. Title II funds make it possible to provide these learning opportunities for our teaching force.

It is impossible for teachers to learn everything they need to know for a lifetime of teaching during their college preparation work. Therefore, professional development and mentor programs are crucial for beginning teachers. Research clearly shows a well-trained teacher is the greatest factor in predicting student achievement, and that, dollar for dollar, money spent on professional development produces far greater gains in learning than do investments in tests, materials or programs.

Even our most experienced teachers have professional development needs. Many graduated from teacher preparation programs before State content standards were developed and well before technology played such an important role in our profession. Additionally, due to brain research, we know more about how students learn cognitively than ever before. Experienced teachers must be knowledgeable about new scientifically research-based strategies in order to reach all students.

Through Title II funds we have been able to fulfill many of these professional development needs in Region One. We have formed a local P-16 council to align instruction from high school to our colleges and universities to create a seamless transition for our students.

Title II funds have been used also in our Texas Regional Science and Math Collaborative. This is a network of State universities, service centers and school districts that provide professional development in math and science. Teacher mentors are developed, and participating teachers may earn college credit and pursue graduate degrees in the math and science content fields.

The Texas Science, Math, Engineering and Technology Center, Region One is one of five centers in Texas that were created to develop professional development opportunities in the STEM content areas. Project-based learning is emphasized, in which teachers learn how to engage students in more relevant, real-world problem-solving activities. This is a collaboration of our local school districts, service centers, the local university, community college and the Workforce of South Texas.

Region One has also formed a collaborative with other service centers to produce a curriculum based on the State content standards. Districts use Title II funds to pay for professional development needed to implement the

standards-based curriculum. Key participants in the training are campus administrators, who learn how to support the curriculum, monitor and provide feedback. Also through our Texas American History Grant, which is designed to raise student achievement by improving teachers' knowledge and appreciation of traditional U.S. history.

Title II moneys have also been used to pay stipends to recruit highly qualified teachers in shortage areas, mentor programs for beginning teachers and principals, hiring of additional teachers to reduce class size, particularly in the early grades.

Since 2004, Region One has shown immense gains in student achievement. In reading we have gained 10 percent, from 71 to 81 percent; mathematics, a gain of 11 percent; and in science we have seen the largest gain of 18 percent. We believe these gains are due to the Title II professional development that we provide to our teachers, and we are hopeful these funds will continue.

Thank you for the opportunity to be here and present my testimony.

Chairman HINOJOSA. Thank you.

[The statement of Ms. Wiley follows:]

Prepared Statement of Dr. Janice Wiley, Deputy Director, Region One Education Service Center

Mr. Chairman and members of the Subcommittee, I thank you for the opportunity to testify today. I am Dr. Janice Wiley, Deputy Director for Instructional Support Services of the Region One Education Service Center located in Edinburg, Texas. The Region One Service Center serves a student population of over 373,000 located along the south Texas-Mexico border, of which approximately 144,000 students are limited English proficient. Ninety-seven percent of the student population is of Hispanic descent with 85% qualifying as Economically Disadvantaged. To serve these students, there are over 23,256 teachers in the Region One area, with over 18,000 teachers in the academic core subject areas. Of those, only 12.6% hold a master's degree and approximately 40% have less than 10 years experience.

Imagine a first-year teacher entering his/her first day of teaching at local high school. There are 25-30 students in each class period; the class made up of many of the demographic characteristics that I just mentioned. There are also many diverse learners including students that are Limited English Proficient, migrant students, as well as special needs students. For many of them, at least half will be the first in their family to earn a high school diploma and the first to attend college, much less have an advanced degree. Not only is the novice teacher faced with the challenge of helping all of these students meet state and federal standards, but the school is rated based on the passing rates of his/her students. Can you feel the immense pressure this teacher must be facing? What can we do to support this teacher so that after a few years he/she does not feel burned out or worse yet, feel like they are facing a losing battle all by themselves? We can continue to provide quality professional development and mentoring programs to assist the teacher so that their students are successful in not only meeting, but surpassing state and federal academic standards. The Region One Education Service Center believes vehemently that a key factor in increasing student achievement lies in improving the quality of teachers in our classrooms. Title II funds make it possible to provide these learning opportunities for our teaching force.

It is impossible for teachers to learn everything they need to know for a lifetime of teaching during their college preparation work; therefore professional development and mentor programs are crucial for beginning teachers. Research clearly shows that a well-trained teacher is the greatest factor in predicting student achievement and that, dollar for dollar, monies that are spent on professional devel-

opment produce far greater gains in student learning than do investments in tests, materials, or programs.

Even our most experienced teachers have professional development needs. Many graduated from teacher preparation programs before state content standards were developed and well before technology played such an important role in our profession. Additionally, due to brain research we know more about how students learn cognitively than ever before. Experienced teachers must be knowledgeable about new scientifically researched-based strategies in order to reach all students.

Through Title II funds we have been able to fulfill many of our teachers' professional development needs. Many efforts are being coordinated locally with the service center facilitating many of the activities. We have formed a local P-16 council to align instruction from high school to our colleges and universities and to create a seamless transition for our students.

Title II funds have been used to serve identified needs and have been used by the Region One Education Service Center to form the numerous initiatives:

• Texas Regional Science and Math Collaborative—A network of statewide universities, education service centers, and school districts that provide professional development in math and science. Teacher mentors are developed and participating teachers may earn college credit and pursue graduate degrees in the math and science content fields.

• Texas Science, Math, Engineering, and Technology (TSTEM) Center—Region One ESC is one of only 5 centers in Texas created to develop professional development opportunities in the STEM content areas. Project-based learning will be emphasized in which teachers will learn how to engage students in more relevant real-world problem solving activities. This is a collaboration of local school districts, Region One ESC, universities, community colleges, and the Workforce of South Texas.

• CSCOPE Curriculum—Region One Esc has formed a collaborative to produce a curriculum based on the state content standards. Districts use Title II funds to pay for the professional development needed to implement the standards-based curriculum. Key participants in the training are campus administrators who also learn how to support the curriculum, monitor the implementation, and provide feedback to teachers through analysis of data from six weeks tests and walkthrough observations.

• Teaching American History Grant -This program is designed to raise student achievement by improving teachers' knowledge and understanding of and appreciation for traditional U.S. history. This is a partnership between local school districts, Region One ESC, University of Texas Pan American, and local museums.

Title II monies have also been used in recruitment and retention in the following manner:

• Stipends to recruit highly qualified teachers in shortage areas;

• Mentor programs for beginning teachers and principals;

• Hiring of additional teachers to reduce class size, particularly in the early grades

Since the 2004 school year, Region One has shown significant gains in student achievement for all students on state assessments. Reading increased from 71% to 81% passing rate, a gain of 10%. Mathematics increased from 58% to 69%, a gain of 11%. Social Studies increased from 77% to 81%, a gain of 4%. Science has seen the largest increase, from 43% to 61%, a gain of 18%. We firmly believe that these gains are due to the professional development that we provide to our teachers through Title II funds. We are hopeful that these funds will continue to be available to meet the needs of the children in south Texas.

Thank you for the opportunity to be here today to present this information. I will be happy to answer any questions that the committee may have.

Chairman HINOJOSA. Dr. Fallon.

STATEMENT OF DANIEL FALLON, PROGRAM DIRECTOR, CARNEGIE CORPORATION

Mr. FALLON. Good morning. Thank you for inviting me to testify on behalf of our common goal: to provide high-quality teachers for the Nation's classrooms.

I am Dan Fallon. In the summer of 2000, I began planning an ambitious private philanthropic initiative to rethink and thus improve the way teachers receive their education at our country's col-

leges and universities. For the past 6 years I have been administering this program, which is called Teachers for a New Era. I work for Carnegie Corporation of New York, one of the oldest large philanthropies in the United States. With the cooperation and support of the Annenberg Foundation and the Ford Foundation, Carnegie Corporation of New York has enabled 11 institutions of higher education throughout the United States to restructure their academic programs of teacher education by focusing on learning gains made by pupils in working classrooms of public schools.

We have financed the big bet we are making on teacher education through an investment from all sources of more than $125 million in funds provided primarily by the private sector. Although it is still too early to draw definitive conclusions about the many features of Teachers for a New Era, some promising patterns are emerging. We believe on the basis of our experience, for example, that teacher quality could be significantly advanced first through incentives to the States to improve educational data systems and use them for purposes of program improvement; second, by providing incentives to encourage teacher education programs to support novice teachers; and, third, by inviting teacher education programs to partner with school districts on evidence-based, continuous improvement designs for teacher education focused on pupil learning.

Teachers for a New Era does not dictate a common curriculum or structure for teacher education. There is as yet no solid research basis to justify with persuasive evidence the imposition of a single model. More importantly, the genius of American education is its diversity and its responsiveness to local needs and local culture.

Instead of curricular conformity, Teachers for a New Era demands attention to three large design principles. The first is fostering a culture of respect for persuasive evidence. The second is effectively engaging contributions from faculty in the academic content disciplines of the arts and sciences. And the third is thinking about teaching as academically taught, skilled clinical practice. This is a template for reform that any teacher education program anywhere in the United States could implement.

Embedded within the requirement of an evidence-based program is for us the generally novel challenge that the teacher education program find a way to measure the quality of its work by demonstrable pupil learning occurring in the classrooms of teachers who are graduates of the program. A similarly novel challenge is embedded within the conception of teaching as clinical practice. It obliges the teacher education program to offer each of its graduates intensive mentoring and support during the first 2 full years of professional teaching, a feature we call academy-based induction.

The apparent success of focusing on pupil learning and of academy-based induction forms the rationale for what my testimony offers to you. First, we believe you can facilitate the production of high-quality teachers by providing incentives to the States to enable the formation of educational data systems that serve broad purposes of program improvement. Second, encouraging the adoption of academy-based induction holds the promise of significantly reduced costs coupled with instructional improvement. Third, promoting partnerships between school districts and teacher education

programs to construct evidence-based continuous improvement designs focused on pupil learning appears from our experience a promising strategy for increased teacher quality, especially in challenging, high-need schools.

Mr. Chairman, members of the committee, we offer you a vision for a reliable means of preparing effective teachers who can teach all children from all walks of life to learn to high standards. It is a vision of higher education in the Nation's service.

Thank you for your attention this morning.

Chairman HINOJOSA. Thank you.

[The statement of Mr. Fallon follows:]

Prepared Statement of Daniel Fallon, Director, Program in Higher Education, Carnegie Corporation of New York

Introduction

My name is Daniel Fallon. I serve as Director of the Program in Higher Education at Carnegie Corporation of New York, which is the philanthropic organization established in 1911 by Andrew Carnegie to maintain the benefaction he intended to pursue with the wealth he had accrued in his lifetime. In Mr. Carnegie's words, our mission is to promote "* * * the advancement and diffusion of knowledge and understanding to benefit the citizens of the United States."

Over the course of the twentieth century Carnegie Corporation of New York has provided support for many worthwhile American activities, with a particular focus on education. For example, resources from the philanthropy helped establish the first nationally available pension fund for college teachers, the Teachers Insurance Annuity Association, known by its initials TIAA. Research supported by the Corporation provided the basis for establishing national need-based financial aid, now known more commonly as Pell Grants. Other investments were instrumental in establishing the College Board, the Educational Testing Service, and more recently the National Board for Professional Teaching Standards.

Since the early 1980's the Corporation has increased its efforts to improve the quality of teaching in the nation's schools. Under its current president, Vartan Gregorian, it undertook a major initiative beginning in 2001 to reform teacher education. The initiative is called Teachers for a New Era and I am its principal designer and have directed its development since its inception. The Annenberg Foundation and the Ford Foundation have joined Carnegie Corporation in this effort, contributing significant resources to extend the reach of Teachers for a New Era and to disseminate positive findings arising from its work.

Purpose of this testimony

I have accepted your invitation to describe today the work we are doing in teacher education reform. Some of our findings thus far may be helpful to you if you begin to consider ways to facilitate the production of high quality teachers. For example, in my testimony I will discuss three areas you may find useful: (1) the value for states of recording educational data, releasing such data to higher education institutions for purposes of improvement of teacher education programs, and placing responsibility for educational data with research institutions; (2) how academy-based induction functioning as a complement to district-based induction increases efficiency, reduces costs, and improves pupil learning; and (3) why it may be worthwhile to provide incentives for teacher-education programs to adopt evidence-based continuous-improvement designs focused on facilitating pupil learning.

I speak on behalf of the eleven institutions of higher education that are participating in Teachers for a New Era, and with their consent. I should add that the presidents of the Teachers for a New Era institutions, led by President Simon of Michigan State University and President Hennessy of Stanford University, are preparing a letter to the National Research Council. You will be receiving a copy of this letter, which addresses the congressional charge to the Council to prepare a report on teacher education. It echoes some of the themes I raise today, but also places a particular emphasis on the value of teacher education reform to improve the nation's competitiveness in the areas of science, technology, engineering, and mathematics.

As an officer of Carnegie Corporation of New York I hope my testimony may serve one of our basic purposes: to increase the life chances of citizens of the United States.

Why try to reform teacher education?

We decided to undertake this work seven years ago with no illusions. There was a well-justified consensus within the policy community about teacher education. It was judged in general to be intellectually incoherent. Its value in providing certified teachers was of unproven effectiveness. Finally, numerous well-organized efforts at reform of teacher education had not led to any fundamental change in the enterprise. In short, most informed observers did not think that teacher education was a worthy target of philanthropic attention. Nonetheless, we decided to make a big bet on it.

We undertook our initiative on teacher education for two principal reasons. The first is the much-discussed emergence in the U.S. of a knowledge-based economy. Our nation is today and for the foreseeable future generating wealth principally through knowledge, information, and services. If the nation is to preserve its standard of living and protect the quality of life of its citizens, it must place priority on producing a highly educated work force. We understand the reauthorizations of the Elementary and Secondary Education Act and the Higher Education Act in recent years as a rational political response to the challenge of a new economy.

The second reason for our investment is a fundamental paradigm shift in our conception of how well children learn in schools. For more than a generation our knowledge was based on the excellent pioneering work of sociologist James Coleman sponsored by the U.S. government in the late 1960's. These analyses led to a prevailing conclusion that pupil achievement was largely controlled by economic inequality mediated in large part by family circumstances. The science on which this idea was based depended for the most part on cross-sectional analyses of average test scores of some groups of pupils compared with others. Longitudinal data permitting the analysis of the change in test scores by individual pupils over time were largely nonexistent and thus not available to Coleman. That circumstance changed with the broad introduction in several states during the decade of the 1980's of mandatory state-wide testing in the public schools. As the accumulation of these data made further analysis possible, researchers began to look at the performance of individual pupils in successive years with different teachers. They discovered that some teachers demonstrated an ability to raise pupil achievement reliably, in some cases quite dramatically, even in the face of severe economic hardship experienced by the pupil. In other words, our knowledge shifted from thinking that wealth, families, and neighborhoods were the principal source of pupil achievement to understanding that high quality teaching made a very significant contribution.

The two new developments, a new knowledge-based economy and an understanding that the quality of the teacher was likely the single most important school-based factor influencing the achievement of pupils, were foremost in giving Carnegie Corporation of New York confidence that an investment in improving the quality of teacher education would be worthwhile. To these we added other considerations. We believe, on principle, that higher education institutions are the best place to educate teachers. Further, we are convinced that a new generation of faculty at colleges and universities are more prepared than ever before to accept the challenge of designing strong programs of teacher education.

Evidence-based guidelines for reform

The U.S. has not on the whole invested heavily in rigorous research on education. Primarily for that reason we do not know with high confidence what an ideal teacher education program might look like. We began with a straightforward presumption that observable pupil learning is the only way to make high quality teaching visible. Therefore, if we want to see evidence of high quality teaching, we must look for pupil learning. We studied the limited amount of relevant research literature carefully and could find no reason based on evidence to recommend a specific structure or curriculum for teacher education. Instead, we asked higher education institutions to respond to challenges for teacher education around three large design principles that were justified to the best of our ability on sound evidence.

The first design principle is cultivating a respect for evidence. Within this general framework we embedded a radical idea, that the higher education institution must find a way to measure the quality of the teacher education program by demonstrable pupil learning occurring in classrooms of teachers who were graduates of the program.

The second design principle is effectively engaging faculty from the disciplines of the arts and sciences. This includes acquiring knowledge of the content that the teacher will teach, of course, but also speaks to the importance of general education for the teacher. Also important is the idea that faculty from the disciplines of the arts and sciences will learn from their contact with teacher candidates and with

their colleagues in colleges of education more effective ways of representing content so that it is readily learned by students.

Finally, the third design principle calls for understanding the act of teaching as skilled clinical practice. Thus, it considers pupils as clients, the classroom as a clinic, and the teacher as a clinician who assists each child in learning to high standards. Taking this idea seriously requires that teacher education programs work closely with representative school districts, that teacher candidates be exposed early and often to working classrooms, that some highly effective teachers from schools be appointed to positions as "professors of practice" in the teacher education program, and that higher education faculty from the disciplines of the arts and sciences also observe teaching in classrooms and assist in instructing teacher candidates about the teaching of the content. The third design principle embeds a second radical idea within the teacher education program, namely, that the teacher education program should offer to each of its graduates a program of intensive mentoring and support during the first two full years of professional clinical practice. Through this device the novice teacher who was once a teacher candidate in the teacher education program continues to receive education to become an effective teacher. We call this idea academy-based induction, or residency.

By tightly coupling the teacher education program to working classrooms in schools, requiring an ongoing professional relationship with recent graduates who are working as novice teachers, and using pupil learning in the classrooms of graduates as the primary means of measuring quality, Teachers for a New Era is explicitly a design for continuous improvement. We believe this is an evidence-based program that will enable a teacher education program to gather the data it needs to improve continuously over time. The functional nature of the reform challenge ensures that any teacher education program anywhere in the United States today could meet it by applying the design principles.

A capsule description of how Teachers for a New Era is being implemented

Instead of requesting proposals to participate, Carnegie Corporation of New York engaged policy analysts from the RAND Corporation, and appointed a National Advisory Panel of distinguished figures from the world of policy, practice and research. With assistance from these two groups, we went through an iterative process of investigation of teacher education programs, culminating in site visits to numerous institutions, and ultimately in the identification of eleven institutions of higher education that we believed were capable of meeting the challenges we posed in our general prospectus, which is attached to this document. We then invited proposals from just these eleven, and went through multiple revisions of the proposals until each proposal was judged to have produced a work plan capable of meeting our requirements.

In addition to the prospectus describing Teachers for a New Era, I have separately provided each member of the Subcommittee with a laminated 4x6 card containing a list of the eleven participating institutions on one side, and a schematic summary of the design principles on the other side. We designed the initiative so as to provide strong support for fundamental reform. Each of the eleven institutions of higher education was awarded $5 million over a five to seven year period, and was then asked to raise another $5 million independently, with at least 30% of the matching money dedicated to a permanent endowment to support the reconfigured program of teacher education. In addition, each institution received $500,000 to be shared with "partners," such as school districts or other cooperating institutions, to facilitate relationships necessary for preparing effective teachers. Thus, each institution received $10.5 million in direct support. Carnegie Corporation of New York also contracted with outside partners, primarily the Academy for Educational Development, to provide direct technical assistance for the life of the project that included assistance for each institution with budget development, monitoring of benchmarks, consultation services, and several meetings of teams from all institutions each year to discuss progress on the design principles. All in all, the philanthropic investment in this unusual national initiative has exceeded $125 million.

Early findings and implications

Although it is too early to draw many confident conclusions about the long-term success of this initiative, a few patterns are becoming clear. First, in a few pilot studies several of the institutions have been able to link pupil learning gains in public school classrooms with teachers who have pursued distinct teacher education programs before being appointed as teachers. These investigations have been very helpful in pointing to areas within the teacher education curriculum that require strengthening. The promise of this approach seems clear. Nonetheless, we have found in many instances that there are severe obstacles to retrieving data for legiti-

mate program improvement purposes, even when the data are available, there are no objections from union representatives, and proper safeguards have been taken to protect the identities of particular teachers and particular students. In other cases, state or local data are not collected in ways that make comparisons for research purposes useful.

We thus find ourselves faced with the dilemma that (a) we cannot mount an evidence-based system for program improvement without data from the schools; and (b) the authorities responsible for school data are often unable to provide data for program improvement. Therefore, if your legislative deliberations include data systems, and you wish to improve the education of future teachers, you may wish to consider incentives to states and local school districts to construct comprehensive data systems that collect measures that can be compared directly from school to school within a district, and from district to district within a state. It would be helpful if such data systems included unique identifiers that permitted the linking of performance of individual pupils with the teachers that taught them, in ways that protect the identity of the pupils and the teachers, and also included provisions that require such data to be made available to institutions of higher education with teacher education programs for the purpose of program improvement. There may also be distinct advantages in ensuring that school data repositories be entrusted to research institutions in the state rather than to state regulatory agencies.

A second finding of importance has been the remarkable success of the implementation of academy-based induction as a supplement to district-based induction programs. For example, one of our grantees, the University of Virginia, has shown that its academy-based induction achieved a 33% reduction in attrition of novice teachers over and above the existing district-based induction program by itself. Innovations of this kind result in enormous cost savings to districts and lead to more effective instruction for pupils. To offset the cost of design and introduction of academy-based induction nationally, you may want to consider offering incentives to partnerships between teacher-education programs and school districts to propose them.

Finally, a third finding is that the introduction of an evidence-based continuous-improvement program built around the Teachers for a New Era design principles has resulted in substantial long-term administrative and organizational changes within these higher education institutions. The effect of new management has been to promote greater institution-wide responsibility for teacher education and to improve the application of the considerable knowledge resources throughout these institutions to the enterprise of teacher education. Therefore, you may want to consider some form of incentive grants to higher education institutions that propose to restructure teacher education by agreeing to design principles similar to Teachers for a New Era.

Summary and conclusion

As we review the fifth year of implementation since the first group of institutions received awards under Teachers for a New Era, a wide variety of very encouraging developments are beginning to emerge. The comprehensive application of the design principles appears to be shaping a coherent vision of effective teaching as academically-taught skilled clinical practice. Therefore, we have reason to hope that a foundation is being laid for an evidence-based program of teacher education driven by attention to pupil learning in working classrooms in a form that enables continuous improvement of teacher education.

Ours is a vision for reliable means of preparing effective teachers who can teach all children, from all walks of life, to learn to high standards. It is a vision of higher education in the nation's service.

Thank you for your attention this morning.

Chairman HINOJOSA. Yes, Dr. Feistritzer. You may begin.

STATEMENT OF EMILY FEISTRITZER, PRESIDENT, NATIONAL CENTER FOR ALTERNATIVE CERTIFICATION

Ms. FEISTRITZER. Thank you, Mr. Chairman and members of the committee. Thank you for this opportunity to speak to you this morning on the very critical topic of preparing teachers for the classroom.

I am Emily Feistritzer, and I am actually the founder and president of the National Center for Alternative Certification, which was created in 2003 with a discretionary grant awarded to the Na-

tional Center For Education Information, which I also run, to serve as a national clearinghouse for information about alternative routes to teacher certification.

Since 1983, the National Center for Education Information has been tracking what is going on in teacher preparation and certification at all levels throughout the country, and we actually started focusing on documenting what States were doing regarding creating alternative routes for certifying teachers in 1983.

I would like to discuss with you data and information about these alternative routes to teaching and their impact on the preparation of all teachers going forward. Alternate routes to teacher certification are having a profound impact on who enters teaching, how they enter teaching, when they enter teaching, and where they teach.

What began in the early 1980s as a way to ward off a projected shortage of teachers and replace emergency certification have evolved into very sophisticated models for recruiting, training and certifying people who already have at least a bachelor's degree and want to become teachers.

In 1983, when we first started tracking this issue, there were eight States that said they had some type of alternative to the approved college undergraduate teacher education program route for certifying teachers. In 2007, and the latest report I will make copies available to the committee, every State in the United States and the District of Columbia report that they now have at least one alternative route to teacher certification. All told, 13 alternate routes to teacher certification have been created in the 50 States, and they are being implemented in approximately 485 programs throughout the country.

Last year 59,000 individuals entered teaching through alternative routes and this constitutes about a third of all of the new teachers, new, never-taught-before teachers, in that year. That number increased from 39,000 in 2003-2004. I have a graph in my written testimony which you will have which shows the exponential growth of the production of teachers through alternative routes.

Furthermore, Title II of the No Child Left Behind Act, resubmissions of their plans for meeting the highly qualified teacher requirements, we analyzed those, and 38 of the States specifically said they were going to use alternative routes to ensure that their teachers met the highly-qualified teacher mandate.

So this is not any longer a stepchild of the system. Alternate routes have become a major player in the production of teachers. A hallmark of alternative routes is that they are a market-driven phenomenon. They don't exist unless there is a demand for a teacher in a specific subject in a specific area in a specific geographic region of the country. Alternate routes are very efficient in that the programs do exist to recruit, train, place teachers where teachers are most needed.

There has been a lot of change in the alternative teacher certification movement over time, and currently—and my yellow light is already on—it is important to note that they are specifically designed to recruit, prepare and license individuals who already have at least a bachelor's degree. They require rigorous screening processes such as passing tests, interviews. They are very heavily on-

the-job training programs. The coursework and equivalent experiences in professional education studies generally occur while they are teaching. They involve working with mentor teachers and other support personnel, and they set high performance standards for completion of the programs.

What do we know about preparing teachers through alternate routes? In summary, we know that there is a wide variation in preparation of programs, from about a third of them that require 31 or more credit hours that an individual takes on a college campus for which they pay tuition to a college or university, all the way down to about a third that don't require any such courses. About a half of alternate route programs now are being administered by higher education institutions, a fourth of them by school districts, and a fourth by collaborations, individual States or private entities.

Nearly all alternate routes are field-based teacher preparation programs that include mentoring and learning experiences directly related to classroom teaching. More than half of alternate-route teachers come into the profession with experience from other professional careers, and only a fourth of teachers who have entered teaching through alternate routes say they would have become a teacher if the program had not been available.

Chairman HINOJOSA. Thank you.

[The statement of Ms. Feistritzer follows:]

Prepared Statement of Emily Feistritzer, President, National Center for Alternative Certification and the National Center for Education Information

Mr. Chairman and members of the Committee, thank you for the opportunity to speak before you today on the critical topic of preparing teachers for the classroom. My name is Emily Feistritzer and I am the president of the National Center for Alternative Certification which was created in 2003 with a discretionary grant awarded to the National Center for Education Information to serve as a comprehensive clearinghouse for information about alternative routes to teacher certification.

The Center's web site, www.teach-now.org, is used by tens of thousands of individuals per day, including policy makers and individuals seeking to become teachers.

In addition to collecting, analyzing and disseminating information about teacher preparation and certification since 1979, the National Center for Education Information has been documenting what is going on in the development of alternatives to college-based undergraduate teacher education program routes to certification since 1983 and publishing descriptions of alternative routes in an annual publication, ALTERNATIVE TEACHER CERTIFICATION: A State-by-State Analysis. I have made the 2007 edition of this 346-page document available to you, as well as Alternate Routes to Teaching, a book I co-authored with Charlene K. Haar which was published by Pearson Education, Inc. in April of this year.

I would like to discuss with you data and information about these alternative routes to teaching and their impact on the preparation of all teachers going forward.

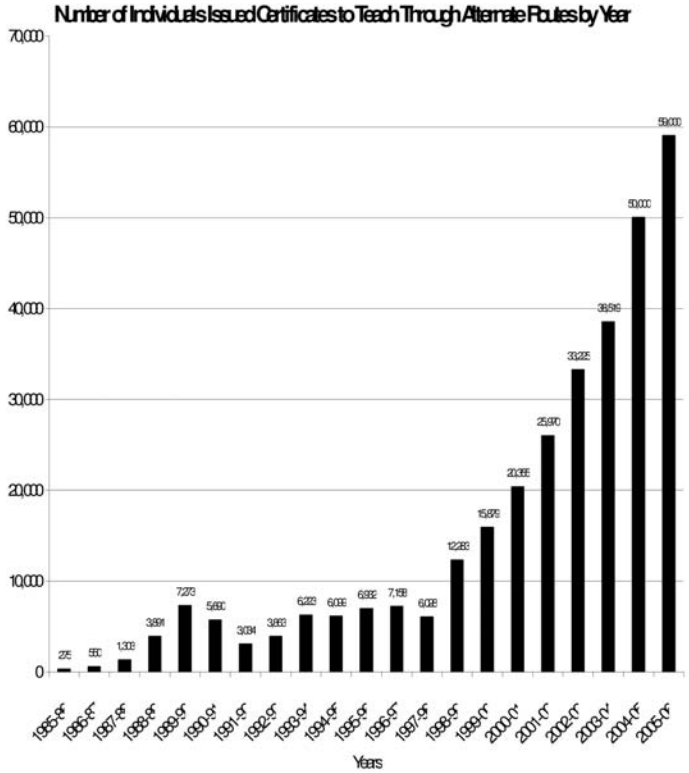
Alternate routes to teacher certification are having a profound impact on the who, what, when, where and how of K-12 teaching. What began in the early 1980s as a way to ward off projected shortages of teachers and replace emergency certification has evolved into a sophisticated model for recruiting, training and certifying people who already have at least a bachelor's degree and want to become teachers.

When the National Center for Education Information (NCEI) first began in 1983 asking state certification officials the question, "What is your state's status regarding alternatives to the traditional college teacher education program route for certifying teachers?" eight states said they were implementing some type of alternative route to teacher certification.

Now, in 2007, all 50 states and the District of Columbia report they have at least some type of alternate route to teacher certification. All toll, 130 alternate routes to teacher certification now exist in these 50 states and the District of Columbia.

In addition, these states report that approximately 485 alternate routes programs are implementing the alternative routes to teacher certification they established.

Based on data submitted by the states, NCEI estimates that approximately 59,000 individuals were issued teaching certificates through alternative routes in 2005-06, up from approximately 50,000 in 2004-05 and 39,000 in 2003-04. As shown in the figure below, the numbers of teachers obtaining certification through alternative routes have increased substantially since the late 1990s. Nationally, approximately one-third of new teachers being hired are coming through alternative routes to teacher certification.



Furthermore, an analysis of the NCLB Title II reports the states re-submitted to the U.S. Department of Education last summer after none of the original reports showed that any state had met the highly qualified teacher requirement, revealed that 38 states specifically stated they intend to utilize alternate routes to ensure that all of their teachers meet the highly qualified teacher requirements. This illustrates, further, the market-driven, solution-oriented role these effective programs are having in meeting the demand for qualified teachers.

A hallmark of alternative routes is that they are market-driven. Alternate routes to teaching are created for the explicit purpose of filling a demand for teachers in specific subject areas in specific schools in specific geographic regions. They are designed for individuals who already have at least a bachelor's degree—many of whom have experience in other careers—who want to teach the subjects in areas where there is a demand for teachers.

Why Alternate Routes?

Since the mid 1960s, reforming teacher education and certification was the focus of solving teacher quantity and quality issues. Having enough qualified teachers has been at the root of most reform efforts concerning teachers.

For decades, teacher education and certification have been identified as both the cause and solution of many of the problems regarding teachers. The 1,300 or so Colleges of Education have taken the brunt of criticism for not adequately preparing

qualified teachers. Additionally, state agencies responsible for licensing (certifying) teachers have been targets for an array of attacks -from the complicated certification processes to weak assessments that fail to measure competencies for teaching.

In 1983, the state of New Jersey grabbed national headlines with its out-of-the-box solution. New Jersey created an alternative route to teacher certification specifically to attract a new market for teaching -liberal arts graduates—and transition them into elementary and secondary teaching without going through a traditional college teacher education program.

This solution to teacher quantity and quality began the alternative teacher certification movement and the nation took notice. Significant changes in alternative routes to teacher certification have occurred since the mid-1990s. In addition to the development of alternative routes at the state level, an evolving consensus of essential characteristics shows that most alternate routes:

• are specifically designed to recruit, prepare and license individuals who already have at least a bachelor's degree—and often other careers.

• require rigorous screening processes, such as passing tests, interviews, and demonstrated mastery of subject matter content.

• provide on-the-job training.

• include coursework or equivalent experiences in professional education studies before and while teaching.

• involve work with mentor teachers and/or other support personnel.

• set high performance standards for completion of the programs.

What do we know about preparing teachers through alternate routes?

1. There is wide variation in preparation programs—from about a third that require 31 or more college credit hours of education courses to a third that require none for which a candidate pays college tuition.

2. About half of alternate route programs now are being administered by higher education institutions, a fourth by school districts and a fourth by collaborations, states, or private entities.

3. Nearly all alternate route programs are field-based teacher preparation programs that include mentoring and learning experiences directly related to classroom teaching.

4. More than half of alternate route teachers came into the profession with experience from a professional career outside of education.

5. Only one-fourth a teachers who have entered teaching through alternate routes say they would have become a teacher if the program had not been available.

What does the research say about the effectiveness of various teacher preparation routes?

Most of the research conducted concerning alternative routes to teacher certification shows that alternate routes do what they are designed to do: bring people into teaching who would not otherwise have become teachers. The research also indicates that the route one goes through does not seem to matter all that much as far as effective teaching goes. Experience and effective mentoring seem to be the most important variables for becoming a competent teacher.

A growing body of research shows that after a couple of years' experience, differences in teacher performance measures and/or student achievement disappear regardless of what kind of route a teacher comes into teaching through.

A scientifically designed study still underway shows similar results. How Changes in Entry Requirements Alter the Teacher Workforce and Affect Student Achievement reported findings from this study being conducted by Donald Boyd, Pamela Grossman, Hamilton Lankford, Susanna Loeb, and James Wyckoff. The researchers focused their study on pathways into teaching in New York City and the "effects of such programs on the teacher workforce and on student achievement" (1). The study's basic findings indicate that, after two years, the small differences among the groups at the beginning of teaching disappear (Boyd, et al, 2005).

In 2005, the American Educational Research Association (AERA) released Studying Teacher Education: The Report of the AERA Panel on Research and Teacher Education (2005).

The compendium's findings regarding alternate routes included:

• The studies provided some evidence that alternatively certified teachers may be "more willing than traditionally certified teachers to teach in low-SES urban schools, but these data may reflect more where teachers can get jobs than actual teacher preferences" (663).

• "there were no differences between alternatively and traditionally certified teachers in terms of teacher efficacy or in teaching competence as measured by classroom observations" (663).

• The research showed "very little difference between alternatively and traditionally certified teachers" (670).

• "The studies of the alternative certification programs in Houston, Dallas, and Milwaukee school districts indicate inconclusive results" (674). Anticipated retention was higher in Milwaukee in alternative programs. In Houston there were no significant differences between traditionally certified and alternatively certified teachers' "perception of the problems they faced in the classroom," at the end of the first academic year (674).

• The studies that "compared the impact of multiple teacher education programs on various dimensions of teacher quality have suggested that alternatively certified teachers may in some circumstances have higher expectations for the learning of students of color living in poverty than teachers who have been traditionally certified" (689).

More targeted research needs to be done to find out what it is that makes for effective teachers. The research conducted thus far seems to indicate that preparation route does not matter.

I would like to conclude my statement with some statistics from the U.S. Department of Education that shed light on who actually is being prepared to teach and who actually become teachers, as well as the structure of K-12 education which illustrates the realities of teacher demand.

A. Are Bachelor Degree Recipients a Reliable Market for Teachers?

Getting clarity about college graduates who are qualified to teach upon receiving their bachelor's degree and who go into teaching, as well as those who do not, is not easy. The U.S. Department of Education's Baccalaureate and Beyond Longitudinal Studies are often cited for these data which are based on samples, so NCES does not report these findings in numbers of individuals, but rather in percentages.

The latest published Baccalaureate and Beyond Longitudinal Studies show that 12.2 percent of baccalaureate degree recipients in 1999-2000 had taught as regular teachers "in a K-12 school at some point between receiving the 1999-2000 bachelor's degree and the 2001 interview" (USDoE, 2000/01, 5).

Given that NCES data show that 1,237,875 bachelor's degrees were awarded by degree-granting institutions in 1999-2000, one could estimate that 151,000 new graduates were teaching at some point within a year of receiving their baccalaureate degree.

The data indicate that, of those 151,000 who received a bachelor's degree in 1999-2000 and were teaching in 2001, 21 percent were neither certified nor had prepared to teach as part of their undergraduate program. It is conceivable that some of these individuals were becoming certified to teach through alternate route programs.

NCES data also show that more than one-third (35 percent) of Education Bachelor's Degree recipients in 1999-2000 were not teaching the following year. Furthermore, the data indicate that one-fourth (25 percent) of education bachelors' degree recipients in 1999-2000 had not even prepared to teach and/or were not certified to teach.

Fewer than half (47.5 percent) of graduates with education degrees in 1992-93 were teaching in 1994.

Furthermore, of the B.A. recipients who were certified and/or had prepared to teach as part of their undergraduate program, 23 percent were not teaching within a year of graduating.

A follow-up survey in 1997 of 1992-93 baccalaureate degree recipients indicated that 13 percent of those graduates had taught by 1997. However, the B&B follow-up report also stated that "8 percent expected to teach full-time in three years and 7 percent expected to teach in the longer term. Thus, it appears that many graduates who teach soon after college do not expect to spend much time teaching, let alone make it a career" (USDoE, 2000-152, x).

These statistics lead one to question the efficiency of the model for teacher production. The problem is further compounded by NCES data that show that about one-third of these new teachers leave within the first three years of teaching, and about half of them have left teaching after five years.

Alternative routes to teacher certification programs, on the other hand, accept only individuals who not only already have a bachelor's degree, but come into a program because they want to teach. In most alternate route programs, the participants fill particular existing teacher vacancies. Alternative routes exist to recruit, train and certify baccalaureate degree holders to meet the demand for specific teachers to teach specific subjects at specific grade levels in specific schools.

The retention rate for alternate route teachers in California and other large teacher-production states is 85-90 percent after five years.

B. School District Size and Student Enrollment.

The sizes of school districts and where students are enrolled vary greatly and bear directly on teacher demand.

National Center for Education Statistics (NCES) data indicate there were 14,383 regular public school districts in 2003-04. Fewer than 2 percent of these school districts enrolled one-third of all the students enrolled in the United States. These are the 256 school districts that enroll 25,000 or more students. When the next category of school districts by size is added—those that enroll between 10,000 and 24,999—587 additional school districts enter the count, taking the number of school districts that enroll 10,000 or more students to 843; these school districts represent just 6 percent of all school districts that enroll more than half (52.1 percent) of all the public elementary and secondary students.

At the other end of the spectrum, more than one-fifth (2,994) of all school districts enroll between 1 and 299 students each and account for less than 1 percent of all students enrolled. Nearly half of all school districts (6,703 or 46.6 percent) enroll fewer than 1,000 students each, and collectively account for only 5.5 percent of total public elementary and secondary school enrollment across the nation.

Since these local school districts are responsible for hiring and placing teachers, it is obvious that the needs and demands for teachers in a metropolitan school district with a diverse population that includes several hundred schools, each of which likely enrolls anywhere from fewer than 100 students to more than 3,000 are different from a school district that has a handful of small schools in a rural predominantly white community.

Alternate routes, again, by their very nature, address such disparities. Alternate routes are created to meet specific needs for specific teachers in specific areas.

C. Public School Size and Student Enrollment

NCES data indicate that more than one in 10 (11.02 percent) of all schools and nearly 17 percent of secondary schools enroll fewer than 100 students each.

Furthermore, more than one-third (35.89 percent) of public secondary schools enroll fewer than 300 students each. These statistics are crucial in any discussion about out-of-field teaching or having a teacher with a major or minor teaching every class in ever school in the country. In these small schools, generally there is no more than one physics class, one chemistry class and one biology class per day. The chances that a teacher with a major or minor in each of these sciences will be teaching each of those three classes per day in each of these schools are slim to none.

Many alternative routes to teacher certification meet the needs for highly qualified teachers in these and other high demand subjects, such as special education, in small schools by targeting programs that ensure that teachers have—or obtain—content and pedagogical mastery in the subjects they are teaching. Alternate routes that utilize technology and distance learning opportunities are likely to appeal to the needs of small schools.

D. Teacher Vacancies (Demand)

The 2003-04 SASS data (2006-313) also show that the demand for teachers, as indicated by vacancies in schools and subjects, is greatest:

In schools

- at the secondary level,
- in central cities and urban fringe/large towns,
- that enroll 750 or more students; In subjects of
- Special education,
- English/language arts,
- Mathematics,
- Sciences, and
- Foreign languages.

All of these statistics are important in understanding the context in which teachers are recruited, prepared and hired.

Alternate route programs, by their very nature, are established to meet specific needs for specific teachers in specific subject areas in specific schools.

The targeted nature of alternate routes is the reason they are proliferating at a rapid rate, why thousands of people who would not otherwise have done so are choosing to become teachers.

Recommendations

I urge the Congress in its reauthorization of Title II of the Higher Education Act (HEA) and of Title II of No child Left Behind (NCLB) to make changes that reflect

the significant and growing role alternate routes have in bringing high quality individuals into the teaching profession who—without them—would not otherwise become teachers. As I have documented earlier in this statement, these competent teachers make a commitment to teach in classrooms where teachers are most needed. They now constitute one-third of all new teachers being hired.

The Federal government needs to target the nation's resources so that the most qualified individuals who intend to teach can do so in high-quality efficient programs that meet the need for specific teachers in specific subjects in specific schools across this nation. Both HEA and NCLB are the very vehicles to ensure that programs of preparation are created and/or enhanced to attract highly qualified, experienced adults who know their subject matter and are eager to use their life experiences and practical knowledge to—as they report themselves—"help young people learn and develop."

Specific recommendations in the reauthorization of the Higher Education Act and No Child Left Behind are:

1. Shift the focus in the preparation of teachers from institutions of higher education exclusively to a wide variety of providers of recruitment and preparation programs that are targeted to actually producing effective teachers in the classrooms where they are needed.

2. Encourage school districts and state departments to collect and disseminate data about their teachers, including their preparation to teach and their effectiveness.

3. Encourage research that could be utilized by the public as well as researchers and policymakers that would yield answers to such critical questions as, "What makes for truly effective teachers and how do they come by those qualities?"

4. Funding should be more market-driven and flow to programs that are proving their effectiveness in recruiting and preparing competent teachers where they are needed.

5. One of the chief contributions of alternate routes to teaching has been infusing the teacher workforce with experienced adults that have earned valuable life skill equity. The federal government should encourage initiatives that help transition more of these people into teaching, particularly in high schools, where there is a need for their applied knowledge. With their real world experience base and maturity, alternate route teachers can do much to accelerate the development of skills high school students need to excel in college and the workforce.

6. The federal government should create incentives for states and school districts to expand alternate routes to solve particular shortfalls in highly qualified areas. Alternate routes have been a wonderful incubator for innovation in addressing niche teaching shortages with highly qualified teachers. A market driven environment needs to be encouraged not stifled by attempts to standardize or develop regulations constricting experimentation with alternate routes.

Thank you for this opportunity to speak before you today.

Chairman HINOJOSA. There will be opportunities for all of you to expand on your presentation as we go through the question-and-answer part of this hearing.

My first question is directed to George Scott with the Government Accountability Office. Your testimony indicates that both the HEA Title II and the NCLB Title II fund partnership initiatives. What is known about how well these efforts are linked?

Mr. SCOTT. Mr. Chairman, the prior work looked at these two programs separately. This is one area where we think further study is warranted in terms of looking at how well there is coordination between the HEA programs and the NCLBA programs. We think this is one area where additional study would really help provide additional information on how well these programs are coordinated.

Chairman HINOJOSA. Have you and your staff found any benefits in funding the teacher improvement efforts under the two different laws?

Mr. SCOTT. I think, as we discuss in our reports, while there is certainly benefit to allowing different approaches to funding some

of these programs, but to the extent that there is potential for overlap or duplication, I think it is important that we continue to receive good information on the efforts and outcomes of these programs so we can continue to monitor them and see to what extent there is overlap.

Chairman HINOJOSA. I appreciate that.

Dr. Robinson, I assume you are familiar with the American Board of Certification of Teacher Excellence. My understanding is that this is a teacher certification program developed in 2001 intended to be a fast track to produce certified teachers. I also note that the Federal Government invested $51 million in that effort. How do the costs per teacher certification compare between the teachers your association works with versus the cost for those certified by the alternative entity?

Ms. ROBINSON. Mr. Chairman, ABCTE, as we call it, is essentially a test in primarily model of alternative licensing. It is being marketed to the States. It is now being used in about five States, but the numbers are still quite low. So, in essence, the Federal Government since 2001 has spent $51 million to license fewer than 200 teachers, so that is quite a high cost per individual. If those funds had been devoted to scholarships for these individuals who want to come into teaching, had those funds been used to support monitoring programs, or, more importantly, I think these funds might have been used to develop performance assessments in teacher education so that we would have additional information on candidate quality.

Right now we have simply yet another test of content when there are already other tests of content out there. I would suggest that the funds now being used to support yet another content test be devoted to developing performance assessment in teacher education so that candidates can come to the licensing process with some valid information not just of what they know, but also of what they can do.

Chairman HINOJOSA. With that statement and the testimony I heard, what the current state of teacher training reflects, what percentage of any new funds which you recommend go directly for the accountability purposes?

Ms. ROBINSON. That is an interesting question. I think that in Title II of the Higher Education Act, we have got to dedicate a percentage of funds to developing the data system if the State is already not involved in designing such systems. We have enough evidence, given the work of the schools and Teachers for a New Era and other efforts, we know these data systems can be designed, and we know that the schools of education have to have some money to come to the table and intrude themselves, if you will, on an already intense effort to develop accountability systems at the State level.

Chairman HINOJOSA. I am going to cut you short because the time is moving real fast, and I want to ask questions of the other presenters. But give thought to my question and give us in writing what percentage you think would be best for us to consider.

[Additional information submitted by Ms. Robinson follows:]

Summary of AACTE's HEA Legislative Language Recommendations

Title II, Section 202, State Grants

Many states have developed or are in the process of developing statewide data systems that can connect K-12 to higher education so that teacher retention, teacher effectiveness, and preparation program effectiveness can be tracked. These data systems entail considerable costs both in dollars and labor, particularly in the development stages. Title II of the Higher Education Act is well situated to assist in these efforts. AACTE recommends refocusing the state grants on helping states develop these data systems. These data systems will allow states to better meet their educational needs as they will be able to use the data from the system to track teacher movement, analyze student learning in relation to teacher quality, measure induction program effectiveness, analyze what factors contribute most to effective teaching (and revamp preparation programs and certification requirements accordingly), and create uniformity in how districts and institutions within the state report on retention, accountability, and qualifications.

Title II, Section 203, Partnership Grants

AACTE recommends that the Partnership Grants be refocused on strengthening educator preparation programs by providing intensive clinical experiences through residency programs in high-need schools; preparing all educators to work with diverse learners, including ELL and special education students, as well as ensuring that all educators can use student data to inform their instruction; addressing critical shortage areas such as special education, ELL, mathematics and science; and, developing dissemination tools to disburse best practice models in effective educator preparation.

Title II, Section 204, Recruitment Grants

AACTE recommends folding the Teacher Recruitment grant program into Section 203.

Title II, Section 207, Accountability for Programs that Prepare Teachers

AACTE recommends revising the Pass Rate requirements so that pass rates are only reported for candidates who have completed 100% of their coursework. This will ensure that candidates taking certification exams have the benefit of completing all content and pedagogical curricula that will contribute to their performance on the exams.

Title II, Centers of Excellence

AACTE proposes an amendment to Title II called "Centers of Excellence". This new authority would strengthen educator preparation at institutions that serve historically underrepresented students. These Centers prepare teachers to use scientifically-based research to inform their instructional techniques, prepare teachers to close the achievement gap, strengthen mentoring programs for new teachers, and provide scholarships to help candidates at grantee institutions complete their preparation. This amendment was included in H.R. 609 in the last Congress.

Title IV

AACTE recommends that a new section be added to Title IV for the Teaching Fellowships program. This program would provide service scholarships to candidates who commit to teaching for a minimum of four years in a high-need school or field. The scholarships would cover the cost of the candidate's preparation program.

AACTE'S HEA RECOMMENDATIONS

LEGISLATIVE LANGUAGE

Title II, Section 202—State Grants

We recommend replacing the current use of funds with the language below

(d) USES OF FUNDS—An eligible State that receives a grant under this section shall use the funds to develop and establish State-level integrated data management systems capable of enabling evidence-based accountability, evidence-based decision making, and evidence-based management as applied to one or more of the following activities:

(1) TEACHER PREPARATION—(A) Collecting, synthesizing, and analyzing evidence demonstrating the influence of teacher preparation programs on teacher classroom performance and on student academic growth and achievement. (B) Identifying evidence for the most effective patterns of preparation for acquiring necessary academic content knowledge and essential pedagogical knowledge and skills in relation to various teaching licenses and teaching assignments.

(2) NOVICE TEACHER INDUCTION AND SUPPORT—Collecting, synthesizing, and analyzing evidence demonstrating the influence of novice teacher induction, support, and mentoring activities at State, district, and school levels on teacher classroom performance and on student academic growth and achievement.

(3) TEACHER PROFESSIONAL DEVELOPMENT—Collecting, synthesizing, and analyzing evidence demonstrating the influence of teacher professional development activities at State, district, and school levels on teacher classroom performance and on student academic growth and achievement.

States receiving a grant under this section must assure that state partnerships are established to engage all relevant providers and stakeholders in such a manner that enables evidence of effects to become the basis for evidence-based management directed at continuous system-level improvement.

Funding recommendation: Authorizing level of $400,000 per year for 5 years totaling $2,000,000 per state grants. This would enable funding for 15 state grants (assuming $6 million per year for 5 years). Recommend funding as many possible per year, with the provision that grantees would share learnings.

Title II, Section 203—Partnership Grants

We recommend incorporating the following language into Section 203

1. Authorization for partnership grants between institutions of higher education and high need school districts to a) strengthen educator preparation programs and b) prepare high quality educators for high-need communities through a) intensive one year clinical residencies as part of teacher preparation in specialized "teaching schools" or professional development schools and b) model induction and mentoring programs.

Eligible partnerships:

Required partners:

a) a school, college or department of education at an institution of higher education

b) a high need school district

c) the college of Arts and Sciences, or departments within, at an Institution of Higher Education (or in cases where institutions of higher education are exclusively educator preparation programs, assurances that in depth content knowledge is part of the program) (NOTE: Some schools such as Bank Street College are do not have colleges of arts and sciences)

optional partners:

a) a non-profit organization

b) a state education agency

Required use of funds:

a) Support of a teacher education model that includes, in addition to teacher education coursework necessary for certification, a one year intensive residency experience in a specialized teaching school or professional development school staffed by expert mentor teachers.

These teaching schools must be designed and staffed to offer high-quality education to students in high-need communities and high-quality preparation for teachers. The resident teacher works in the classroom of an expert mentor teacher throughout the year, while gradually taking on more responsibility for teaching. Coursework must meet state licensing standards and include subject matter pedagogy, knowledge of student learning and assessment, the teaching of students with disabilities and English language learners, classroom management, working effectively with parents, and uses of technology.

Such programs may serve undergraduate or graduate students preparing to be teachers in high-need schools

b) Development of a model mentoring and induction program for new teachers that provides regular coaching by an expert teacher in the same teaching field for at least the first year of a teacher's career

c) gather information about the impact of the residency program on student learning and teacher retention

Authorization: $300 million

2. Authorize challenge grants to improve the capacity of educator preparation programs to a) prepare all teachers and principals to work with diverse learners including ELL and special education students, b) prepare all educators to utilize data and evidence about student learning to inform instructional decision making, c) target the production of more teachers in key shortage areas including math, science, special education and teachers of English Language Learners d) ensure a high degree of curricular content knowledge and knowledge of how to teach that content to a wide range of learners.

Authorization: $200 million

Dissemination, collaboration, coordination and technical assistance contract

3. Proposal to create capacity to develop and disseminate knowledge about best practices in educator preparation

A grant or contract shall be made with education organizations with expertise in educator preparation and an established network of educator preparation programs for the following purposes:

a) to ensure sharing of best practices in designing and implementing educator preparation programs, including residency models

b) to provide technical assistance to educator preparation programs that need to strengthen their ability to a)prepare teachers to instruct diverse learners b) utilize data to make instructional decisions and c) ensure a high degree of curricular content knowledge and knowledge of how to teach that content to a wide range of learners.

Authorization: $2 million a year for 7 years

Title II, Section 204—Teacher Recruitment Grants

We recommend eliminating this section. The partnerships grants described above can be used for teacher recruitment efforts.

Title II, Section 207—Accountability for Programs that Prepare Teachers

We recommend amending subpart (f)(1)(A)—Pass Rate as follows

'(A) Pass rates and scaled scores——

'(i) For the most recent year for which the information is available, the pass rate and scaled scores for each prospective teacher who has completed 100 percent of the coursework required by the teacher preparation program on the teacher certification or licensure assessments of the State in which the institution or alternative certification program is located, but only for those prospective teachers who took those assessments within 3 years of completing the coursework.

'(ii) A comparison of the institution's or alternative certification program's pass rate and scaled scores for prospective teachers who have completed 100 percent of the coursework at the teacher preparation program with the average pass rate for institutions and alternative certification programs in the State.

'(iii) In the case of teacher preparation programs with fewer than 10 graduates who have completed 100 percent of the coursework required by the program taking any single initial teacher certification or licensure assessment during an academic year, the institution or alternative certification program shall collect and publish information with respect to an average pass rate on State certification or licensure assessments taken over a 3-year period.

Title II, Centers of Excellence

We recommend adding a new section in Title II for the Centers of Excellence Program

'(a) PURPOSES—The purposes of this part are——

'(1) to help recruit and prepare teachers, including minority teachers, to meet the national demand for a highly qualified teacher in every classroom; and

'(2) to increase opportunities for Americans of all educational, ethnic, class, and geographic backgrounds to become highly qualified teachers.

'(b) PROGRAM AUTHORIZED—From the amounts appropriated to carry out this part, the Secretary is authorized to award competitive grants to eligible institutions to establish centers of excellence.

'(c) DEFINITIONS—As used in this part:

'(1) ELIGIBLE INSTITUTION—The term 'eligible institution' means——

'(A) an institution of higher education that has a teacher preparation program that meets the requirements of section 301 and that is——

'(i) a institution (as defined in section 322);

'(ii) a Hispanic-serving institution (as defined in section 502);

'(iii) a Tribal College or University (as defined in section 316);

'(iv) an Alaska Native-serving institution (as defined in section 317(b)); or

'(v) a Native Hawaiian-serving institution (as defined in section 317(b));

'(B) a consortium of institutions; or

'(C) an institution or a consortium of institutions described in subparagraph (A) in partnership with any other institution of higher education, but only if the center of excellence established under section 205 is located at an institution described in subparagraph (A).

'(2) HIGHLY QUALIFIED—The term 'highly qualified' has the meaning given such term in section 9101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801).

'(3) SCIENTIFICALLY BASED READING RESEARCH—The term 'scientifically based reading research' has the meaning given such term in section 1208 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 6368).

'(4) SCIENTIFICALLY BASED RESEARCH—The term 'scientifically based research' has the meaning given such term in section 9101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801).

'(d) USE OF FUNDS—Grants provided by the Secretary under this part shall be used to ensure that current and future teachers are highly qualified, by carrying out one or more of the following activities:

'(1) Implementing reforms within teacher preparation programs to ensure that such programs are preparing teachers who are highly qualified, are able to understand scientifically based research, and are able to use advanced technology effectively in the classroom, including use for instructional techniques to improve student academic achievement, by——

'(A) retraining faculty; and

'(B) designing (or redesigning) teacher preparation programs that——

'(i) prepare teachers to close student achievement gaps, are based on rigorous academic content, scientifically based research (including scientifically based reading research), and challenging State student academic content standards; and

'(ii) promote strong teaching skills.

'(2) Providing sustained and high-quality pre-service clinical experience, including the mentoring of prospective teachers by exemplary teachers, substantially increasing interaction between faculty at institutions of higher education and new and experienced teachers, principals, and other administrators at elementary schools or secondary schools, and providing support, including preparation time, for such interaction.

'(3) Developing and implementing initiatives to promote retention of highly qualified teachers and principals, including minority teachers and principals, including programs that provide——

'(A) teacher or principal mentoring from exemplary teachers or principals; or

'(B) induction and support for teachers and principals during their first 3 years of employment as teachers or principals, respectively.

'(4) Awarding scholarships based on financial need to help students pay the costs of tuition, room, board, and other expenses of completing a teacher preparation program.

'(5) Disseminating information on effective practices for teacher preparation and successful teacher certification and licensure assessment preparation strategies.

'(6) Activities authorized under sections 203 and 204.

'(e) APPLICATION—Any eligible institution desiring a grant under this section shall submit an application to the Secretary at such a time, in such a manner, and accompanied by such information the Secretary may require.

'(f) MINIMUM GRANT AMOUNT—The minimum amount of each grant under this part shall be $500,000.

'(g) LIMITATION ON ADMINISTRATIVE EXPENSES—An eligible institution that receives a grant under this part may not use more than 2 percent of the grant funds for purposes of administering the grant.

'(f) REGULATIONS—The Secretary shall prescribe such regulations as may be necessary to carry out this part.

Title IV Amendments

We recommend adding a new section to Title IV for this program

4. Proposal to create a program of Teaching Fellowships to provide service scholarships that cover tuition and living costs in high-quality undergraduate or graduate programs, including residency models, for those who will teach in a high-need field or location for at least 4 years.

Service scholarships would be used proactively to recruit candidates to the fields and locations where they are needed, covering up to three years of undergraduate or two years of graduate teacher education and would be:

- Allocated on the basis of academic merit and indicators of potential success in teaching, such as perseverance, capacity and commitment to teaching in high-need communities;
- Targeted especially to areas of teaching shortage as defined nationally and by individual states, and
- Awarded in exchange for teaching for four years in priority schools, defined on the basis of poverty rates and educational needs (e.g. language minority status).

Authorization: $500 million

To provide 20,000 service scholarships of up to $25,000 each annually.

Summary of AACTE's NCLB Legislative Language Recommendations

Title IX, Section 9101, Highly Qualified Teacher Definition

The current definition of HQT emphasizes the importance of a teacher having content knowledge and does not explicitly address the importance of the teacher's ability to convey that knowledge to K-12 students. AACTE amends the definition to require all new teachers to have at least 450 supervised clinical hours in the P-12 classroom prior to certification or licensure. In addition, all new teachers must pass a performance assessment prior to certification or licensure. These new components would go into effect for the 2010-11 school year. AACTE also amends the HQT definition to ensure that only a teacher who has completed a state approved higher education or state approved alternate route preparation program is described as HQT. A teacher candidate in the process of becoming licensed or certified may not be described as HQT.

Title II, Section 2113, part (a)

Institutions of higher education are critical partners in preparing educators and providing professional development to teachers. As NCLB is currently written, the IHE role in contributing to professional development is quite limited. AACTE amends the allocation of NCLB Title II funds so that IHE's are eligible to receive 5% of the state's Title II funds to partner with LEA's.

Title II, Subpart 3, Section 2134, Use of Funds

NCLB reserves need to be targeted to the specific education needs of communities. AACTE recommends refocusing the Use of Funds solely on activities that will (1) address the teacher shortage areas such as in the STEM subject fields, ESL, and special education (2) address the teacher turnover and shortages in urban and rural areas (3) ensure that all teachers can serve diverse populations and, (4) provide substantial clinical experiences for teacher candidates.

Title II, Subpart 3, Subgrants to Eligible Partnerships, Preparing Teachers to Utilize Student Data

Part of being an effective teacher is the ability to analyze student achievement data and other measures of student performance to gauge where the students are in their learning and to improve instruction based on that information. AACTE recommends adding a new authorization that would support pre-service and in-service teachers in developing the skills to analyze student data and to improve their classroom instruction based on the data analysis.

Title II, Part C, Innovation for Teacher Quality, Regional Reciprocity Consortium

AACTE recommends a new program be added to Title VI that would encourage states to develop regional reciprocity agreements to facilitate teacher mobility and to allow states to more easily fill hard-to-staff subjects and schools. Teachers participating in this program would be highly effective teachers.

Title II, Subpart 1, Portable Performance-Based Teacher Assessment and 10 State Pilot Studies

Based on a proposal in the 109th Congress's TEACH Act (S. 1218, H.R. 2835), AACTE recommends that NCLB encourage the use of teacher performance assessments and add a new program that would authorize the development of valid and reliable model performance assessments and the piloting of these assessments in 10 states. The passage of performance assessments by teacher candidates will ensure their readiness to enter the classroom.

Title II, Section 2113, Use of State Funds, Subpart (c), State Activities

AACTE recommends adding to the use of funds initiatives addressing teacher workforce diversity, recruitment of teachers in the STEM fields and other shortage fields, and encouraging partnerships between P-12 schools and institutions of higher education.

Title II, Establishing Teacher Induction Programs

Critical to teacher success is the support he or she receives in the first years of teaching. Title II of NCLB should include an emphasis on induction. AACTE has modified slightly the induction program outlined in the 109th Congress's TEACH Act (S. 1218, H.R. 2835) so that partnerships of IHE's and LEA's would develop strong induction programs that provide mentoring and professional development for new teachers.

Title II, Section 2123 and Section 2201, IHE's as Partners

AACTE amends both sections to ensure that IHE's are required partners in the activities listed in each section.

P-16 Councils

AACTE supports the creation of P-16 councils to identify and redress alignment gaps in the education pipeline. AACTE believes that faculty from the division of education in IHE's should be required members of these councils.

Changes in blue and yellow indicate changes to current law and proposed new language

AACTE's NCLB Legislative Language Recommendations

Issue	Placement in Legislation (Title and Section) and Rationale	Legislative Language
Ensuring the HQT definition accounts for teacher effectiveness	Title IX, Section 9101 The current HQT definition includes reference to the importance of teaching skills for elementary teachers, but the measures used to establish HQT status do not focus on a teacher's effectiveness. Instead, the measures currently used focus primarily on the importance of content knowledge. This new definition requires evidence of teaching ability [you could say effectiveness, see below], established in two ways. First, that all teacher candidates, whether in an alternate or tradition preparation program, complete at least 450 hours of supervised clinical practice that evaluates teachers' effectiveness prior to certification. In addition, all teachers must pass a performance assessment as designed and carried out by the employing school district or state. This will ensure that all teachers, regardless of the grade they teach, their teaching discipline, the populations they serve (special education, English language learners, etc.), and the location of their school, have had significant clinical practice and have demonstrated the ability to effectively teach their students.	**From Title IX, Section 9101** (23) HIGHLY QUALIFIED- The term highly qualified' — (A) when used with respect to any public elementary school or secondary school teacher teaching in a State, means that — (i) the teacher has obtained full State certification as a teacher (including certification obtained by completing alternative routes to certification) or passed the State teacher licensing examination, and holds a license to teach in such State, except that when used with respect to any teacher teaching in a public charter school, the term means that the teacher meets the requirements set forth in the State's public charter school law; and (ii) the teacher has not had certification or licensure requirements waived on an emergency, temporary, or provisional basis; (iii) the term 'highly qualified" may be used to describe any person who has completed a state approved higher education or state approved alternate route teacher preparation program (B) when used with respect to — (i) an elementary school teacher who is new to the profession, means that the teacher — (I) holds at least a bachelor's degree; and (II) has demonstrated, by passing a rigorous State test, subject knowledge and teaching skills in reading, writing, mathematics, and other areas of the basic elementary school curriculum (which may consist of passing a State-required certification or licensing test or tests in reading, writing, mathematics, and other areas of the basic elementary school curriculum); or (ii) a middle or secondary school teacher who is new to the profession, means that the teacher holds at least a bachelor's degree and has demonstrated a high level of competency in the academic subjects in which the teacher teaches by — (I) passing a rigorous State academic subject test in each of the academic subjects in which the teacher teaches (which may consist of a passing level of performance on a State-required certification or licensing test or tests in each of the academic subjects in which the teacher teaches); or (II) successful completion, in each of the academic subjects in which the teacher teaches, of an academic

Deleted: through

Deleted: each of

		major, a graduate degree, coursework equivalent to an undergraduate academic major, or advanced certification or credentialing; and (C) when used with respect to an elementary, middle, or secondary school teacher who is not new to the profession, means that the teacher holds at least a bachelor's degree and — (i) has met the applicable standard in clause (i) or (ii) of subparagraph (B), which includes an option for a test; or (ii) demonstrates competence in all the academic subjects in which the teacher teaches based on a high objective uniform State standard of evaluation that — (I) is set by the State for both grade appropriate academic subject matter knowledge and teaching skills; (II) is aligned with challenging State academic content and student academic achievement standards and developed in consultation with core content specialists, teachers, principals, and school administrators; (III) provides objective, coherent information about the teacher's attainment of core content knowledge in the academic subjects in which a teacher teaches; (IV) is applied uniformly to all teachers in the same academic subject and the same grade level throughout the State; (V) takes into consideration, but not be based primarily on, the time the teacher has been teaching in the academic subject; (VI) is made available to the public upon request; and (VII) may involve multiple, objective measures of teacher competency. (D) when used with respect to any new teacher means that – (i) the teacher will have at least 450 hours of supervised clinical experience in the P-12 classroom _that includes an evaluation of teacher performance prior to being certified or licensed (ii) the teacher has passed a valid and reliable performance assessment as described in Title II, Subpart 1, Section 2115 (new program on p.4-5) (E) subsection (D) will go into effect for new teachers hired in the 2010-2011 school year

Providing more opportunities for IHEs to utilize Title monies to strengthen educator preparation	Title II, Section 2113, part (a)	(a) IN GENERAL- A State that receives a grant under section 2111 shall — (1) reserve ~~95~~ 92.5 percent of the funds made available through the grant to make subgrants to local educational agencies as described in subpart 2; (2) reserve ~~2.5~~ 5 percent (or, for a fiscal year described in subsection (b), the percentage determined under subsection (b)) of the funds to make subgrants to local partnerships as described in subpart 3; and (3) use the remainder of the funds for State activities described in subsection (c).
Addressing teacher shortage areas	Amending Title II, Subpart 3 – Subgrants to Eligible Partnerships, Section 2134 – Use of Funds (refers to grantees in Section 2112, part (a) We recommend replacing Section 2134 with the language in the column to the right. This new language addresses the importance of institutions of higher education and school districts targeting the specific educational needs in the community as well as the importance of teacher candidates having extensive clinical practice and evidence of effective teaching performance prior to certification. The list of activities found under the use of funds in the current law can be addressed in Title II, Subpart 1.	(1) activities that will reduce the teacher shortages in school districts (including but not limited to shortages in math, science, special education, teaching of English language learners) (2) activities that will reduce teacher shortages in urban and rural areas (3) activities that will ensure that all new teachers are prepared to teach diverse populations including English language learners and special education students (4) activities providing extensive clinical experiences to teacher candidates in the P-12 classroom
Link student data systems to teacher preparation programs	We recommend this language be added to Title II, Subpart 3 – Subgrants to Eligible Partnerships. The language for Preparing Teachers to Utilize Student Data is taken from the TEACH Act, Section 2521 (S. 1218, 109th) and modified slightly It is critical that teacher preparation programs ensure that their candidates are able to understand and utilize a range of evidence on student achievement to improve their instruction. In addition, the current longitudinal data systems and the ones in development are imperfect	**Section 2135, Preparing Teachers to Utilize Student Data.** '(A) Teacher Training- The Secretary may make grants to institutions of higher education, which may partner with local educational agencies, nonprofit organizations, or teacher organizations, to develop and implement innovative programs to provide preservice and in-service training to elementary and secondary schools on-- '(1) understanding increasingly sophisticated student achievement data, including, data derived from state and local data systems (such as systems developed through the IES Statewide, Longitudanal Data System grant program), as well as data from classroom and school-based assessments; (2) understanding how to develop and use formative and summative assessments to support student learning; and '(3) using such data and assessments to improve classroom instruction. '(B) Study- The Secretary shall enter into an agreement with the National Academy of Sciences-- '(1) to evaluate the quality of data on the effectiveness of elementary and secondary school teachers, based on student achievement gains; and

Deleted: ,

Deleted: local educational agencies, nonprofit organizations, and teacher organizations

Deleted: especially

Deleted: value-added longitudinal

Deleted: 2

Deleted: value-added

	and work needs to continue to evaluate the validity and reliability of such systems when used to judge teachers' effectiveness.	`(2) to compare a range of models for collecting and analyzing such data. `(C) Authorization of Appropriations- To carry out this section, there are authorized to be appropriated $50,000,000 for the period of fiscal years 2006 and 2007 and such sums as may be necessary for each of the 4 succeeding fiscal years.'.
Maldistribution of teachers and teacher reciprocity	Title II, Part C, Innovation for Teacher Quality (new section) There is a serious maldistribution of teachers in the K-12 schools. Hard-to-staff schools often have the least experienced teachers, geographic areas (particularly urban and rural) often do not have enough teachers and have the least experienced teachers, and there are many subject fields that have high turnover or a shortage of teachers. One part of a response to this challenge is to increase teacher mobility across states so that states can more easily recruit teachers to their high need schools and subject areas. An existing consortium, the Mid-Atlantic Regional Teachers Project (MARTP), and its Meritorious New Teacher Candidate designation (MNTC) can serve as a model for the program described in the column to the right.	**Regional Reciprocity Consortium** (a) Purpose - to address the inequitable distribution of teachers through facilitating teacher mobility across states to more quickly place teachers in hard-to-staff schools and in subject shortage areas (b) Grant – The Secretary may make grants to 3 regional state consortia comprised of the state and multiple institutes of higher education with teacher preparation programs (with each consortium consisting of no less than four states) to develop regional reciprocity agreements allowing new and veteran teachers licensed in a participating state to be considered fully licensed in the other states participating in the consortium. (c) Use of Funds (1) Develop initiatives to recruit teachers in the STEM fields, in special education, for English language learners, and teachers willing to teach in hard-to-staff school, such as in rural and urban areas, to participate in the regional reciprocity consortium (2) Develop consortium-wide longitudinal database containing all teachers recognized in the regional reciprocity consortium. (3) Conduct research on teacher retention rates, teacher placement patterns and other factors that can inform the participating states on the effectiveness of the consortium's ability to address its teacher shortage and teacher mobility issues (4) Develop and implement a comprehensive evaluation for all teachers seeking recognition through the consortium. The evaluation would include: (A) an assessment of the teacher's effectiveness – as measured through a performance assessment (based on the performance assessment measures described in Title II, Subpart 1, Section 2115) (B) a demonstration of the teacher's extensive content knowledge in the academic subject(s) in which the teacher teaches (C) all teachers obtaining HQT status
Performance Assessment and Teacher Mobility	Title II, Subpart 1, Section 2115 (new section) The current measures of HQT focus primarily on the teacher's content knowledge and do not adequately acknowledge the critical importance of a teacher's ability to effectively convey the content so that students learn. The proposed legislative language would create a pilot program for states to develop a performance assessment system that could be used to allow for a more agile and streamlined teacher	**`SEC. 2514. STUDY ON DEVELOPING A PORTABLE PERFORMANCE-BASED TEACHER ASSESSMENT and 10 STATE PILOT STUDIES.**  `(a) Study- `(1) IN GENERAL- The Secretary shall enter into an arrangement with an objective evaluation firm or research organization to conduct a study to assess the validity of any test used for teacher certification or licensure by multiple States, taking into account the passing scores adopted by multiple States. The study shall determine the following: `(A) The extent to which tests of content knowledge adequately represent subject mastery needed to teach the content at the relevant grade levels covered by the test. `(B) Whether tests of pedagogy reflect the latest research on teaching and learning. `(C) The relationship, if any, between teachers' scores on licensure and

	mobility system. The language on the portable performance-based teacher assessment is taken from the TEACH Act (S.1218 in the 109th) and modified	certification exams and other measures of teacher effectiveness, including learning gains achieved by the teachers' students. `(2) REPORT- The Secretary shall submit a report to the Congress on the results of the study conducted under this subsection. `(b) Grant to Create a Model Performance-based Assessment- `(1) GRANT- The Secretary may make 1 grant to an eligible partnership to create and pilot a model performance-based assessment of teaching skills that reliably evaluates teaching skills in practice and can be used to facilitate the portability of teacher credentials and licensing from one State to another. The performance-based assessment will measure the teacher's ability to teach subject matter content effectively and to work with diverse learners including English Language Learners and special education students It should assess standards and teaching practices that are associated with student learning and incorporate teacher contributions to student learning. `(2) CONSIDERATION OF STUDY- In creating a model performance-based assessment of teaching skills, the recipient of a grant under this section shall take into consideration the results of the study conducted under subsection (a). `(3) ELIGIBLE PARTNERSHIP- In this section, the term `eligible partnership' means a partnership of-- `(A) an independent professional organization; and `(B) an organization that represents administrators of State educational agencies.'.
Increase the diversity of the teacher workforce	Amend Title II, Section 2113, Use of State Funds, Subpart (c) State Activities (new use of fund)	(19) developing teacher diversity workforce initiatives that recruit minority students and men into educator preparation programs; support preparation programs at minority serving institutions; or that use funds for loan forgiveness and financial aid incentives to recruit diverse teacher candidates.
Recruiting teachers in the STEM and other shortage fields	Amend Title II, Section 2113, Use of State Funds, Subpart (c) State Activities (new use of fund)	(20) developing programs to recruit teacher candidates in the science, mathematics, engineering and technology disciplines as well as other shortage fields
Promoting school/university partnerships	Amend Title II, Section 2113, Use of State Funds, Subpart (c) State Activities (new use of fund)	(21) developing partnerships between P-12 schools and institutions of higher education to strengthen the clinical experiences of teacher candidates
Induction	Critical to the retention of teachers are strong induction programs that provide mentoring and professional	**Taken from the TEACH Act (S. 1218) in 109th**

	development to new teachers during their first years of teaching. The program described to the right would provide such support to new teachers. The language is taken from the TEACH Act (S.1218 in the 109th) and modified to ensure that LEAs and IHEs are partners in the induction program.	**SEC. 2511. ESTABLISHING STATE-OF-THE-ART TEACHER INDUCTION PROGRAMS.** `(a) Grants- The Secretary may make grants to States and eligible partnerships for the purpose of developing state-of-the-art teacher induction programs. `(b) Eligible Partnership- In this section, the term `eligible partnership' means-- `(1) a high-need local educational agency; and `(2) an institution of higher education and its division of teacher training (c ) Optional Partners may include (1) a teacher organization, or any other nonprofit education organization. `(c) Use of Funds- A State or an eligible partnership that receives a grant under subsection (a) shall use the funds made available through the grant to develop a state-of the-art teacher induction program that-- `(1) provides new teachers intensive, high-quality, comprehensive induction into the field of teaching; and `(2) includes-- `(A) structured mentoring from highly qualified master or mentor teachers who are certified, have teaching experience similar to the grade level or subject assignment of the new teacher, and are trained to mentor new teachers; `(B) at least 90 minutes each week of common meeting time for a new teacher to discuss student work and teaching under the direction of a master or mentor teacher; `(C) regular classroom observation in the new teacher's classroom; `(D) observation by the new teacher of the mentor teacher's classroom; `(E) intensive professional development activities for new teachers that result in improved teaching leading to student achievement, including lesson demonstration by master and mentor teachers in the classroom, observation, and feedback; `(F) training in effective instructional services and classroom management strategies for mainstream teachers serving students with disabilities and students with limited English proficiency; `(G) observation of teachers and feedback at least 4 times each school year by multiple evaluators, including master teachers and the principals, using research-validated benchmarks of teaching skills and standards that are developed with input from teachers; `(H) paid release time for the mentor teacher for mentoring, or salary supplements under section 2502, for mentoring new teachers at a ratio of one full-time mentor to every 12 new teachers; `(I) a transition year to the classroom that includes a reduced workload for beginning teachers; and `(J) a standards-based assessment of every beginning teacher to determine whether the teacher should move forward in the teaching profession, which assessment may include examination of practice and one or more measures of student learning progress. `(d) Additional Requirement- The Secretary shall commission an independent evaluation of

Deleted: local educational agencies

Deleted: Local Educational Agency

Deleted: local educational agency

Deleted: or

Deleted: a partnership of a high-need local educational agency and

Formatted: Indent: Left: 0"

Deleted: .

Deleted: local educational agency

Deleted: a minimum of 3 years of extensive

Deleted: or

Deleted: a

Deleted: of gains in

		state-of the-art teacher induction programs supported under this section in order to compare the design and outcome of various models of induction programs. (e) Authorization of Appropriations- To carry out this section, there is authorized to be appropriated $300,000,000 for fiscal year 2006 and such sums as may be necessary for each of the 5 succeeding fiscal years.
Eligibility for IHEs to partner	Title II, Section 2123, part (a) – Local Use of Funds	(a) IN GENERAL- A local educational agency that receives a subgrant under section 2121 shall use the funds made available through the subgrant to carry out one or more of the following activities, including carrying out the activities through a grant or contract with a for-profit, ~~or~~ nonprofit entity, or institution of higher education and the division of the institution that prepares teachers and principals:
Schools of education as partners	Title II, Section 2201, Mathematics and Science Partnerships Schools and divisions of education need to be required partnerships in the mathematics and science partnerships program. The ability to understand and teach the content in these disciplines are equally important, and thus, the participation of schools and divisions of teacher preparation need to be on equal footing with the mathematics, science and engineering departments in the institution of higher education.	(b) DEFINITIONS- In this part: (1) ELIGIBLE PARTNERSHIP- The term eligible partnership' means a partnership that — (A) shall include — (i) if grants are awarded under section 2202(a)(1), a State educational agency; (ii) an engineering, mathematics, or science department of an institution of higher education; and (iii) a high-need local educational agency; and (iv) the school or division of teacher preparation of an institution of higher education (B) may include — (i) another engineering, mathematics, science, or teacher training department of an institution of higher education;
P-16 Councils	Language around P-16 councils should be located in Title VI, Subpart 1 AACTE supports the creation of P-16 councils to identify and redress alignment gaps in the education pipeline	Faculty and or administrators from schools or divisions of education should be required members of P-16 councils

---

WHAT CAN THE FEDERAL GOVERNMENT DO?

A Marshall Plan for Teaching

Linda Darling Hammond, Professor, Stanford University

A strategic federal role is needed to create an infrastructure for strong teaching across the country. Individual innovative programs at the local level will not alone solve the problems we face. Federal strategies for enhancing the supply of teachers have precedents in the field of medicine as well as teaching. Since 1944, Washington has subsidized medical training to meet the needs of underserved populations, to fill shortages in particular fields, and to build teaching hospitals and training programs in high-need areas. This consistent commitment has contributed significantly to America's world-renowned system of medical training and care.

Intelligent, targeted subsidies for preparation coupled with stronger supports at entry and incentives for staying in high-need schools are needed to ensure that all

students have access to teachers who are indeed highly qualified. A serious national teacher quality and supply policy could be accomplished for $3 billion annually, less than 1% of the more than $300 billion spent thus far in Iraq, and, in a matter of only a few years, could build a strong teaching force that would last decades.

In the long run, these proposals would save far more than they would cost. The savings would include the more than $2 billion dollars now wasted annually because of high teacher turnover, plus the even higher costs of grade retention, summer school, remedial programs, lost wages and prison costs for dropouts[i] (increasingly tied to illiteracy and school failure)—all of which could be substantially lowered if we committed to ensuring strong teachers in the schools that most need them. Such a plan should focus on:

• Increasing the supply and quality of teachers targeted to high-need fields and locations through

1) Service scholarships for entering teachers, with special focus on high-need fields and locations (40,000 @ $25,000 each = $1 billion annually)

2) Recruitment incentives for expert, experienced teachers to teach in high-need schools (50,000 teachers x $10,000 stipends ($500 million) + $300 million to improve teaching conditions in high-need schools = $800 million)

3) Improved preparation for teaching high-need students and for programs in high-need areas ($500 million, including $200 million for state-of-the-art "teaching schools" partnered with universities in hard-to-staff communities)

• Improving retention and mobility of well-qualified teachers through

4) Mentoring for all beginning teachers through investments in state and district mentoring programs (150,000 @ $4000 each = $600 million)

5) A high-quality, nationally available teacher performance assessment to guide training, improve quality, and facilitate interstate mobility ($100 million)

Increasing Teacher Supply and Quality in High-Need Fields and Locations

While most states have long had surpluses of candidates in elementary education, English, and social studies, there are inadequate numbers of teachers trained in high-need areas like mathematics, physical science, special education, bilingual education and English as a Second Language (ESL), and there are problems getting well-prepared teachers to where they are most needed. Shortages in poor urban and rural schools are usually met by lowering standards—an especially dysfunctional response because the students in these schools need the most highly skilled teachers if they are to close the gap, and because high turnover rates for untrained teachers cost urban districts hundreds of millions of dollars in attrition costs. Because fully prepared beginning teachers are twice as likely to stay in teaching as those who enter without complete training, district shortages could be reduced rapidly if such districts could hire better prepared teachers (as fewer would need to be hired each year to replace those who left and a more adequate supply would be available). Two kinds of targeted incentives are needed to attract qualified teachers to schools and areas that historically have been underserved.

1) First, the federal government should maintain a substantial, sustained program of service scholarships that completely cover training costs in high-quality preservice or alternative programs at the undergraduate or graduate level for those who will teach in a high-need field or location for at least 4 years. (After three years, candidates are much more likely to remain in the profession and to make a difference for student achievement.) While some federal grants are currently available, there are too few of them and they are too small in scope to serve as an adequate incentive to candidates.

Service scholarships (as opposed to post hoc forgivable loans) can be targeted to high-ability candidates who might not otherwise enter teacher preparation. These incentives can be used proactively to recruit candidates to the fields and locations where they are needed. Nearly all of the vacancies currently filled with emergency teachers could be filled with talented, well-prepared teachers if 40,000 service scholarships of up to $25,000 each were offered annually. These should be designed to cover up to two years of undergraduate or graduate teacher education, including alternative programs for mid-career recruits, and should be:

• Allocated on the basis of academic merit and indicators of potential success in teaching, such as perseverance, capacity and commitment;

• Targeted especially to areas of teaching shortage as defined nationally and by individual states, and

• Awarded in exchange for teaching for four years in priority schools, defined on the basis of poverty rates and educational needs (e.g. language minority status).

(2) Second, recruitment incentives for high-need schools are also needed to attract and keep expert, experienced teachers in the schools where they are most needed, both to teach and to mentor other teachers. This requires a combination of salary

incentives and improvements in working conditions, including the redesign of dysfunctional school organizations to support smaller pupil loads, and time for teachers to work and plan together.

Federal matching grants to states and districts should provide incentives for the design of innovative approaches to attract and keep accomplished teachers in priority low-income schools, through compensation for accomplishment and for additional responsibilities, such as mentoring and coaching. $500 million would provide $10,000 in additional compensation for 50,000 teachers annually to be allocated to expert teachers in high-need schools through state- or locally-designed incentive systems, recognizing teacher expertise through such mechanisms as National Board Certification, state or local standards-based evaluations, and carefully assembled evidence of contributions to student learning. (Matched by state and local contributions, this program would provide incentives to attract 100,000 accomplished teachers to high-poverty schools.)

To keep high-quality teachers in high-poverty communities, schools need to offer working conditions that support teacher and student success. An additional $300 million should be allocated on a state / district matching grant basis to improve teaching conditions, including, as warranted, smaller classes and pupil loads, administrative supports for necessary materials and supplies, and time for teacher planning and professional development—all of which attract and keep teachers in schools.

3) Third, just as the federal government has undertaken in medicine, the Marshall plan should fund improved preparation for teaching high-need students and for programs in high-need areas. For this purpose, the plan would allocate $300 million to improve preparation for teaching reading and literacy skills at all grade levels, mathematics and science, special education, and English language learners.

An additional $200 million of these funds should be targeted for state-of-the-art teacher education programs in hard-to-staff communities that incorporate "teaching schools" partnered with universities, including urban teaching residencies and professional development school models. In these programs, candidates would take coursework focused on teaching challenging content to diverse learners while engaged in practice teaching in schools staffed by expert teachers and designed to model state-of-the-art practice. Since many teachers have a strong preference to teach close to where they grew up or went to school, this approach would also enhance the pool of local college graduates prepared to teach in their communities. Funding for 200 programs at $1,000,000 per year per program (for 5 years), each serving an average of 150 candidates annually, would supply 30,000 exceptionally well-prepared recruits to urban teaching each year who would provide long-term commitment and leadership in these districts.

Improving Teacher Retention and Mobility

Most of the teacher supply problem in the United States is actually a problem of retention. Attrition is highest in the early years of teaching: About one-third of new teachers leave within 5 years, and the rates are much higher for teachers who enter with less preparation and those who do not receive mentoring. Current estimates average about $15,000 per teacher who leaves, totaling at least $2 billion each year. Because beginning teachers are generally less effective than those with 3 or more years of experience, continual high turnover of beginning teachers also significantly reduces educational productivity. Stemming this attrition is critical, as recruitment efforts are otherwise like pouring water into a leaky bucket, rather than repairing it.

4) Providing mentoring for all beginning teachers would reduce attrition and increase competence. A matching grant program could ensure support for every new teacher in the nation through investments in state and district mentoring programs. Based on the funding model used in California's Beginning Teacher Support and Assessment Program, a federal allocation of $4000 for each beginning teacher, matched by states or local districts, would fund a mentor for every 10-15 beginning teachers. At 125,000 new teachers each year,[ii] an investment of $500 million could ensure that each novice is coached by a trained, accomplished mentor with expertise in the relevant teaching field.

5) Finally, this preparation and mentoring can be strengthened if they are guided by a high-quality, nationally-available teacher performance assessment, which measures actual teaching skill in the content areas, and which can facilitate interstate mobility. Current examinations used for licensing and for federal accountability typically measure basic skills and subject matter knowledge in paper-and-pencil tests that demonstrate little about teachers' abilities to practice effectively. Furthermore, in many cases these tests evaluate teacher knowledge before they

enter or complete teacher education, and hence are an inadequate tool for teacher education accountability.

The Interstate New Teacher Assessment and Support Consortium (INTASC), sponsored by the Council of Chief State School Officers, created teacher licensing standards adopted by most states and piloted performance assessments tied to the standards; several states, including Connecticut and California, have incorporated such performance assessments in the licensing process. These assessments have been found to be strong levers for improving preparation and mentoring, as well as determining teachers' competence. Federal support of $100 million for the development of a nationally available, performance assessment for licensing would not only provide a useful tool for accountability and improvement, but it would also facilitate teacher mobility across states, if it were part of an effort to unify the current medieval system of teacher testing that has resulted in 50 separate "fiefdoms" across the country. Because teacher supply and demand vary regionally, teachers need to get easily from states with surpluses to those with shortages, which requires license reciprocity.

With a purposeful focus, a Marshall Plan for Teaching could help ensure within only a few years that the U.S. has developed an infrastructure comparable to those in other countries for providing highly-qualified teachers to all children in all communities.

Chairman HINOJOSA. Dr. Wiley, you mentioned—by the way, I know that your teachers have a real challenge with students as you described in that Region One service area that you work.

You mentioned that many teachers graduated prior to No Child Left Behind, before State content standards and new technology played crucial roles in current education efforts. So how do you work with experienced teachers in this regard, and do you think Federal resources should also target experienced teachers with 10 years or more?

Ms. WILEY. Definitely I believe that it should target teachers, all teachers, because no matter what level, we all still have a lot to learn. And I believe that in our experienced teachers, many of them have served their students well, but as we have new expectations, and as States have developed the State standards, many of their courses are not aligned to those standards. And so we have done a lot of work in the Region One area to help teachers look at the curriculum that they are teaching to ensure that it helps the students meet the State standards, because many of the textbooks that teachers rely on only account for maybe 30 or 40 percent of the State standards and are not really aligned. They are aligned to a generic curriculum rather than the specific State expectations.

So when we work with our teachers, particularly in the math and science, and now the expectation is that all students will be taking higher-level courses, and being proficient, for example, at the high school level, when many of our experienced teachers began teaching algebra I, only top students took that course. Now all students are required to take algebra I, geometry and algebra II, and in Texas we have added a fourth year of math and science.

So to help teachers tailor—because one thing that teachers do express is they do not have enough time to teach all of the expectations, so we really have to target explicit knowledge that we want our students to have.

Chairman HINOJOSA. Thank you, Dr. Wiley.

I would like to yield time to my good friend Congressman Castle.

Mr. CASTLE. Thank you, Mr. Chairman, and thank all of you for your presentations, and I think I will start with you, Dr. Feistritzer.

You actually answered a lot of questions that I had, but one question I have is in this alternative routes to teaching, because it is more than one—I mean, I know some of them, and there are probably a lot others—but Teach for America for veterans coming in, and then different programs for people with experiences, and different levels of science or training and then coming into teaching. Is there any distinction amongst them in terms of the quality of the teachers we are getting? Is anyone looking at that; is you or anyone looking at it, as far as you know?

Ms. FEISTRITZER. Well, that is a very good question, because one of the recommendations that we make is that the Congress support some real resources to study more thoroughly what it is that makes for truly effective teachers.

So there is a lot of evidence in the alternative routes. And I would like to clarify a bit about Teach for America and the Troops to Teachers programs. Both of those programs are federally funded, not exclusively in Teach for America's case, but exclusively for Troops to Teachers. Those programs really are recruitment efforts to bring specific populations of people into teaching. They are not really alternate routes to teacher certification programs because they are not certification programs.

So when we talk about alternative routes to teacher certification, we are really talking about those State-created avenues whereby a person can get—a person who already has at least a baccalaureate degree can get into teaching in an expeditious manner besides just showing up in a classroom and fulfilling all of the requirements that they generally would need to take.

And there are variations on the theme of alternative routes around the country. There are some programs that have very rigorous criteria for entry, that have very rigorous criteria for getting out of the program, and there are some programs that do possibly allow some warm bodies into the school system who might not—whose skills might not be well served to have.

The balance of alternate routes, though, has emerged to be very selective about who they let into programs, and programs that don't do well—because, as I said in my formal remarks, the programs don't exist unless there is a need for teachers. These are very official——

Mr. CASTLE. Are the programs sufficiently rigorous enough, or are we dealing with something that is less than going through a teacher certification program?

Ms. FEISTRITZER. I think—and I have been tracking this issue since the early 1980s, and I know alternate routes, we have really gathered data on every alternate route program in the country, and I don't know of any alternate routes in this country that do not have rigorous entry requirements. You have to pass a test to get into one in practically every program in the country. You have to demonstrate knowledge of the subject matter that you are going to be teaching. They have interview processes whereby people have to really illustrate to interviewees that they have the competence and the desire and the basic qualifications to teach. There are interview programs set up now that can actually ascertain the likelihood that someone would be a good teacher, and the programs weed people

out early. So by the time you finish an alternate route program in this country today, you have got a pretty good teacher.

Mr. CASTLE. Let me go to Dr. Fallon. I know you to be extremely knowledgeable in this area, and I am just curious as to whether anyone is judging whether these alternative ways or the alternative routes to certification which we have just heard about, or alternative methodologies of teaching, Teach for America, the Troops to Teachers, are these programs really working? Are we getting people into the education profession? I don't think Teach for America has an intention of having people stay in it forever. Or are they rigorous enough, or are there problems with it? What is your view of those kind of programs?

Mr. FALLON. I think on the whole you can be comfortable that most of the programs that you mentioned and the ones that are well known are rigorous enough and of reasonable high quality. We support it with a grant, a major study of alternative certification that was done by SLI International, which I think came to the very sensible conclusion that—talking about how teachers get into classrooms as if there were something called alternative certification relative to something else is not a very sensible way of talking about that; that really what you ought to be talking about are pathways into teaching. People get into teaching in a variety of different ways, and as Emily pointed out, often you have recruitment programs such as Teach for America and others whose purpose it is ultimately to help those candidates get certificates.

The knowledge base, I think, as you know better than anyone else because you spent a career looking at these questions, is very thin because educational research is not very well developed or very well supported, but we have provided through our foundation support for a variety of research efforts aimed at exactly this question.

So we are, for example, providing support for a major study in New York City that looks at pupil learning gains of new teachers as a result of the pathway that took them into the classroom. The reason we are in New York City is because it is the largest school system in the United States. It educates more than 1.2 million students. There are more students in the New York City public schools than there are in 38 of the 50 States, and as a result they hire something like 6,000 new teachers every year. And so if you look at a little matrix of where these teachers come from and find the little box called Teach for America, it has got 400 teachers in it. So you can get reasonable estimates of teacher quality.

And what those findings show is that for novice teachers in their very first year of teaching, teachers who come out of college-recommended teacher-education programs, traditional teacher-education programs produce significantly greater value-added pupil learning growth than either Teach for America candidates or the New York City Teaching Fellows.

Those differences disappear after 3 years, so that after 3 years you find that they are all producing pupil learning growth, but it is also the case that after 3 years the Teach for America candidates and the New York City Teaching Fellows have gone through a certification program.

This study also does not control for differential attrition among the different groups, so there are some things that we don't quite know about it, but it does point in the direction of suggesting that clinical practice, that is student teaching, engaging in the classroom, is extremely important, because we know that is one of the major differences between, for example, Teach for America or similar kinds of programs and college-recommended teachers programs.

Chairman HINOJOSA. Thank you, Dr. Fallon.

I would like to recognize the gentleman from the State of New York, Congressman Tim Bishop.

Mr. BISHOP. Thank you, Mr. Chairman. Thank you very much for holding this hearing. And to the panel, thank you all. I have found your testimony to be very helpful.

Dr. Fallon, let me start with you. I found your suggestion that teacher education programs include a postbaccalaureate 2-year mentoring and supervisory component to be an intriguing idea, and I think a very good one. As a practical matter I can understand how it would work for gradates who are placed in reasonable proximity to their alma mater, but how do you see it working more broadly? Do you see a consortium of colleges of teacher education that would supervise people in a cooperative way in their regions, or do you see some network of supervising teachers? Just talk to us a little bit about that.

Mr. FALLON. We are experimenting with this in these 11 different institutions. In your packet each of you has a little laminated card that has on one side of it the listing of all of the institutions in Teachers for a New Era, and on the other side the design principles. In these 11 institutions we are experimenting with these notions.

The answer to your question is that every one of them have teachers who are in a local area and also teachers who go far away, and what they have been doing is experimenting with virtual mentoring sessions in which, for example, a teacher who is having a particular difficulty can go onto a secure Website and ask a question of somebody from the teacher education program, saying, I had a meltdown in the classroom this morning.

And I can't quite figure out what happened and these are what the circumstances were, and that teacher educator back at the university can provide in confidence to that teacher, in a way that doesn't in fact involve any employee of the school district, information about how to resolve that particular problem.

Mr. BISHOP. Quickly, if this idea were to be expanded, it would seem to me that some schools of education are well funded and would be able to accommodate the additional cost associated with providing the service. Others would not. Do you see this as a targeted place for Federal support to help less well-endowed schools of education?

Mr. FALLON. I personally think it is one of the strongest investments you can possibly make for a whole variety of reasons.

Mr. BISHOP. If I may, I am going to run out of time but I want to go on to Dr. Robinson. But thank you, Dr. Fallon.

You talked about State certification to include a performance assessment, again, I think an excellent idea. How do you see that playing out? Do you see the assessment being undertaken by the

supervising teacher for the student teacher placement or do you see it going forward in some other way?

Ms. ROBINSON. I see this assessment process beginning in the program. So the design of the performance assessment would be done in consultation perhaps with the leadership of the State to make certain that the requirements of licensure that the State would want would be fully reflected in the data collected by the performance assessment.

But it could begin in the program where the student becomes very accustomed to reflecting on practice, to reflecting on the impact that they make on students' learning, and in making changes in what they do. So the point is you want to be aware of what you are doing and be able to change based on that.

Mr. BISHOP. But do you see it—right now in many States certification is awarded upon graduation from a school of education. Do you see that as one of the minimum expectations for graduation to reach a certain level of competency in order to get the bachelor's degree?

Ms. ROBINSON. Well, the degree can be one thing but I think licensure should be conferred based on completing a clinical experience in which you are assessed, and not just what you know but what you are able to do can be documented. So the conferring the degree could be a decision quite apart from getting the license.

Mr. BISHOP. One last question and the issue of the Title II moneys in No Child Left Behind, I believe it is only 28 percent go to actual teacher improvement efforts and I think it is close to 50 percent go to reduction of class sizes. It seems to me that is a two-edged sword because certainly reasonable class size is a component of an attractive teaching environment and one of the ways that Dr. Hammond suggests that we incentivize people to go to high need districts.

Would you make a suggestion for us as we reauthorize No Child Left Behind in terms of proscribing a distribution of those funds, or should we leave it the way it is now?

Ms. ROBINSON. Well, I would ask this question. What is the investment quality? Perhaps there should be money that goes to relieving an immediate need, and maybe class size represents that immediate need.

But then the other funds must be given to creating a situation where this need gets ameliorated over time or you can stay in remediation forever. So I am concerned about how we are evaluating the impact of it.

Mr. BISHOP. Again let me sharpen the point a little bit. Do you see it as an issue in which the Federal Government would proscribe or do you see it as an issue that either the State or the local school system would make that judgment?

Ms. ROBINSON. I think the Federal Government can require reporting of results, documenting what happened based on the use of the money, so that you can say to the State while you used the money on class size but student achievement didn't really change, therefore, your class size reduction strategy wasn't productive, don't do that any more.

Mr. BISHOP. Thank you very much. Mr. Chairman, thank you.

Chairman HINOJOSA. Thank you. I now wish to recognize the Congressman from Massachusetts, Congressman Tierney.

Mr. TIERNEY. Thank you, Mr. Chairman. Thank you for having this hearing, for your leadership on these issues. Dr. Fallon, my query on this, I think the recommendations that you make are good. And we talked about this at length before. Don't our higher education institutions that are involved in preparing teachers for the classroom already have the ability to restructure their current systems to do the things that you are talking about?

Mr. FALLON. They do have the ability to do that. I think in many instances what you are looking for is investment capital to allow the institution to completely redo the structures internally that are necessary to get where they want to go. I don't think you need indefinite funding to do this. I think you need upfront funding. And I think part of the answer to the question to Mr. Bishop about the academy-based induction, what we have discovered is that the advantages of this are so profound that the school districts pick up the costs because it is in their best interests to do so. To get there initially is not something——

Mr. TIERNEY. It is also what you expect higher education institutions to do to prepare teachers. They are charging fair amounts of money for tuition, and this is their job.

Ms. Robinson, how do we get some of these institutions, and I know Mr. Fallon has listed here, some of these colleges are very wealthy colleges with sizeable endowments, Stamford, Boston College, whatever. How do we get them to participate in this program so that billions of dollars that are tied up earning interest and otherwise inactive are invested into these kinds of things? Again from my previous comments, it bothers me to sit there and look at Harvard, $39 billion more or less in an endowment fund, Stamford, $3 billion fundraising venture going on and things of that nature, while we are all struggling trying to get resources on the public side down here. How do we get them to loosen up to maybe put the money into infrastructure changes and sometimes maybe not just for just their own institutions but for a consortium of institutions that service an area?

Ms. ROBINSON. I wish I knew the answer to that.

Mr. TIERNEY. I do, too.

Ms. ROBINSON. I do think that we are relying on these institutions to provide leadership by demonstrating what is possible, so that we can hold up these examples as the model to be followed by others.

And then we are also undertaking important conversations within the higher education community so that institutions understand that investing in teacher education in order to support the more expensive clinical component will pay off handsomely for the university, for the community and for their students. So, we are hoping to cajole and provide leadership that drives people in the direction of the advanced model, if you will, the more modern way of getting this done.

Mr. TIERNEY. Do you agree with Dr. Fallon that the inhibition right now seems to be the lack of capital funding to make the transition structurally and that there need not be a programmatic funding that goes on and on and that most of these schools are en-

tirely capable of doing this kind of work but seem to have some sort of difficulty changing over, or do you think it is just stubbornness, they just want to stay the same way?

Ms. ROBINSON. Well, I don't think we see people rushing in the direct of rigorous clinical training because it is more expensive to do and many colleges of education are operating under a level budget if not a reduced budget. However, at the same time I point out that over 1,000 teacher professional development schools, which represent a much more rigorous partnership and enriched clinical training model, have been developed in the last 10 years.

Now we are talking about extending the reach of the school of education into at least, I would say, the first 3 years of practice, and schools of education are already starting to try to do this on their own, but it is going to be spotty unless there is some Federal investment that allows this to happen in a more uniform way.

Mr. TIERNEY. I am sort of bothered by especially the private institutions that charge so much and have such large endowments, why they would even think of coming with their hand out when this is their obligation, but to the other public institutions and others that aren't as well endowed I understand there is a need for that.

I yield back, Mr. Chairman. Too many questions, too little time.

Chairman HINOJOSA. Thank you. I want to acknowledge that we have been joined by the gentlewoman, Congresswoman from North Carolina, Virginia Foxx, and know that if you want to ask any questions or have a dialogue that I would recognize you.

Ms. FOXX. Thank you, Mr. Chairman. I am sorry that I was dealing with a situation where we have had a death in our district overseas, and I apologize but I was called out to do that.

I would make one quick comment, and I apologize that I wasn't able to hear all of the information. But I come from a background of education. I was 12 years on a school board, 15 years as an administrator and teacher at a university where I dealt with academic advising and orientation for new students and as a community college president and have worked with this issue of teacher recruitment and teacher retention over the years in North Carolina.

And I would say that I have often said that if we pay the teachers well and we give them the support that they need in the classroom, that we would be able to retain a lot more of our teachers and we would be able to recruit more people into the classroom. I was one of a few Republicans who early on in the North Carolina legislature supported a great increase in pay for teachers.

I think too often the schools, the universities are hide bound and don't make the adjustments they need to make quickly enough. I worked there for 15 years. I know.

I was attracted to the community colleges because community colleges generally will adapt quicker than universities do. I frankly would like to see more emphasis on helping community colleges provide as much of the educational preparation as we can for people.

I think we can—it is like nursing. In North Carolina if it weren't for the community colleges, we would have practically no nurses

because they are educating about 95 percent of the nurses that are serving.

And I think that we would be well served if we would look to the community colleges more, and I recommend that as a strategy. So just from my observation from those three perspectives, again I have been in all three of the areas, I think that would be something that would be well worth doing. So thank the panel and thank the chairman for recognizing me.

Chairman HINOJOSA. Thank you, Congresswoman Foxx. I would like to at this time recognize the Congresswoman from California, Congresswoman Susan Davis.

Mrs. DAVIS OF CALIFORNIA. Thank you, Mr. Chairman. Thank you, all of you, for being here, good to see you. I wanted to go back to the two areas that I think we have been focusing on a great deal. One is the need for reflective teaching on the part of teachers, but also getting the teachers who demonstrate those skills into the classrooms where they are needed the most, highest need. And I am wondering how do you see instances where the universities who have participated in some of the high quality programs have some incentives that they place there for teachers to actually go into those high needs schools?

Is there a role that the universities can play and is it—are we needing to help incentivize them to do that also? How can we make that work?

Ms. ROBINSON. It is interesting to note that as we have tried to catalog some of the uses of Title II higher education partnership funds, we find a number of partnerships focused at recruitment for hard-to-staff schools in urban and rural communities, and also there are a number of partnership programs that involve working with the community colleges. So I think that we have some examples here that are very, very informative. Additionally, there is——

Mrs. DAVIS OF CALIFORNIA. Could you share—are there specific strategies, whether it is loan forgiveness, whether you have to stay there for at least 3 to 5 years? What specifically could we look at?

Ms. ROBINSON. First of all, you are looking at specific recruitment which really does help letting these able students know that there are opportunities here that you may find very, very challenging. Then you are looking at loan forgivenesses, bonuses, you are looking at signing bonuses, unheard of means of using cash, if you will, in education, but you are also looking at offering these candidates a unique community. They are marketing themselves by saying you will join a team doing important work.

And I will be happy to provide an example that we actually catalogued in a publication that we did to illustrate the payoff for the Federal investment in higher education across a number of topics, and recruitment is one of them.

Additionally, we are finding that recognizing really star students and helping them position themselves early in the labor market is paying off. We are working in collaboration with Virginia, Delaware, D.C. And Maryland, to using a Web based tool to allow these candidates to put their names forward to recruiting school districts in hard-to-staff schools and say to these candidates, have we got a deal for you, to these students with very high TPAs and very good strong recommendations.

Mrs. DAVIS OF CALIFORNIA. I appreciate that. And I don't think, Dr. Fallon—in your work have you been able to track teachers from perhaps going from one school to the other and are the performance levels the same, and if I could quickly also with the question because the time is going to run out, if you can address national board certification. Some of the issues you have all been talking about would reflect that. Are there practices embedded within schools of higher education and teaching schools where you found that that is effective or are there some problems with reaching the larger number of teachers that we obviously want to attract that go for that certification?

Mr. FALLON. Let me just deal with several of the questions that you have asked in order. The first has to do with the question of the distribution of teachers in trying to find circumstances that will encourage teachers to go into high needs schools. We have been greatly impressed by the fact that providing for an academy-based induction program that in fact is focused on high needs schools produces teachers who really want to go into those schools.

One of the more dramatic examples, one of our institutions is Michigan State University, and they developed a program with inner city Detroit and they traditionally had not been providing teachers for inner city Detroit, and the teachers who have been involved in that program who have done their student teaching there and are engaged in the induction programs there are in fact excited about doing it. It has been one of the big growth areas at Michigan State.

Another quite interesting example to your point about is there anything in the institutions, the universities can do, Stanford wanted to find places where good teaching was being the model in particularly high needs schools, and what they did was to take advantage of the charter school legislation in California to create charter schools in high need areas where in fact the need for the teachers was great and good teaching did not exist. By doing that they created a pipeline for their own teachers, and these teachers are doing spectacular teaching in these situations. One of them at Summit Prep in Redwood, California, for example, is now listed as one of the top performing schools in California. So there are examples where this kind of strategy has worked.

On the question that you asked about do we know what it is about the performance——

Chairman HINOJOSA. Dr. Fallon, I am sorry to interrupt you. The bells are beginning to ring. We have a series of eight votes coming up, and I would like to give an opportunity to other members of the committee to ask some questions before we take that break to go vote. I am very pleased that Congressman Scott from Virginia was able to return to the hearing, and I would like to recognize him for a few minutes.

Mr. SCOTT. Thank you, Mr. Chairman. I wanted to follow up the last question and ask if there was a discipline in academia for urban education. You have elementary and secondary, but is there a discipline for urban education because there are certain skills that are needed there that you may not find elsewhere?

Mr. FALLON. Several teacher education units specialize in urban education and especially those who see that they have a particular

mission. Boston College with its Jesuit tradition for social justice, for example, located in Boston, is heavily focused on inner city Boston. University College in Milwaukee. Those are institutions, for example, where you have a natural connection with the local school district.

But let me take a case from Virginia, at the University of Virginia in Charlottesville, you don't think of the City of Charlottesville necessarily as a high needs urban district but it shows all the characteristics demographically of such a district, and of course a significant number of University of Virginia graduates go outside of Albemarle County or the City of Charlottesville. But increasingly because of the nature of that program and the particular emphasis within it on urban education and urban education issues, increasingly a number of these graduates from the University of Virginia are going to inner city Richmond, to inner city Norfolk and to similar types of place of where needs are very high, and in those instances we have found that the induction programs and other kinds of support programs we provide for the teachers make it possible for the teachers to stay and to do good work in those schools.

Mr. SCOTT. Let me just ask one other question, and I will defer to my colleagues. If a teacher is not being successful in teaching minority students and you see an achievement gap, a consistent achievement gap in the students, is there in-service professional development that can help cure that?

Ms. ROBINSON. Mr. Scott, there are many interventions that could cure it, and the most important is to recognize with any teacher that they are not producing learning gains with the students, so that the building administrator, working with—hopefully working in partnership with the university, can give a teacher the opportunity to design a professional development intervention.

But the important thing is to help teachers reflect on the impact they are having on students' learning and recognize where they are not having the desired result and give them opportunities to change.

Mr. SCOTT. Do those interventions work? Can you make a change?

Ms. ROBINSON. Sure, yes, you can make a change. Teaching is clinical work. It is work that where you bring what you know and are able to do to the benefit of the student. And what we need is more teachers who have more capacity to reflect on the impact of their work through data and through consultation with other colleagues and other practitioners.

We are seeing a lot of improvements in the learning of low-income students, students of English, who are not English speakers in the home and special education.

Mr. SCOTT. Out of respect to my colleagues I want to defer, but I want to follow up on that if we could. Thank you, Mr. Chairman. I yield back.

Chairman HINOJOSA. Thank you. I want to recognize the gentleman, Congressman John Yarmuth, from the State of Kentucky.

Mr. YARMUTH. Thank you, Mr. Chairman. I just have one question. If we believe all the studies that we read about United States students are way behind students in many other nations in performance, academic performance, do we know enough about how

other countries whose students are doing better than ours are doing, do we know enough about the way they train their teachers and school their teachers or are those lessons not particularly applicable to this culture? Just a fairly broad, but naive question. Dr. Robinson, do you want to attack that?

Ms. ROBINSON. Mr. Yarmuth, we know some things. We know a lot about the way other countries are credentialing their teachers, what the expectations are, and I will be happy to make some of those references available. The biggest thing we have to understand is that the training and placement of these teachers represents one important part of a complicated formula. There are other components such as compensation, the status of the work in the larger society, and so forth, but also I would say the importance of learning that is placed in the—that learning has in the culture plays a role here as well. So while we admit some of the results we see internationally, we also have to recognize that our students have a lot of distractions.

Mr. YARMUTH. Raw materials are a lot different there. Thank you.

VOICE. Can I testify? I am a former teacher. They do not teach to standardized tests. I will tell you that much.

Mr. HINOJOSA. Do you have any other questions? Thank you very much. I want to say that before I conclude we have seen different models that work and work very well throughout the country, and in an area that I represent we have been focusing a lot of efforts in the last 5 years in trying to recruit students in middle school to look at and consider the STEM fields and, Dr. Wiley, being that you represent that area, tell us what you are, the teachers are doing in that area, the schools, in collaboration with the University of Texas Pan American and the community college to be able to help us fill the pipeline with students towards those STEM careers.

Ms. WILEY. One of the ways we have been working with our universities in our districts is in order to recruit we may have a campaign in our area to recruit more of our high school, and starting with middle school, students into the teaching profession. And many of our high schools are designing themselves into smaller learning communities where they are focusing on the STEM content areas so that we can produce students who have a high quality of math and science degrees but who are also interested in going into the teaching profession.

And so through the center that we have and working with the university, we are also working with existing teachers to get Master's Degrees in those content fields, help pay for their tuition, so that we can better prepare the teachers who then can better prepare students in the STEM content areas.

One of the areas that the students themselves feel if you talk to students they say that the curriculum is not relevant. So one of the focus of the STEM center is to put more relevance into our curriculum so that students understand how the STEM content is applied not just learning it for the content's sake. And so that is the biggest effort that we are making.

Chairman HINOJOSA. Thank you. Thank you. I am going to go ahead and proceed with concluding remarks because I believe that

those eight votes are going to take quite a while and instead of recessing we are going to go ahead and try to conclude this.

So as previously ordered, I want to say that Members will have 14 days to submit additional materials for the hearing record.

Any Member who wishes to submit follow-up questions in writing to our witnesses should coordinate with majority staff within the requisite time.

Without objection, this hearing is adjourned.

[The Carnegie Report, submitted by Mr. Fallon, follows:]

Teachers for a New Era: A National Initiative to Improve the Quality of Teaching

Executive summary

Recent research based on thousands of pupil records in many different cities and states establishes beyond doubt that the quality of the teacher is the most important cause of student achievement. More than ever, the nation needs assurance that colleges and universities are educating prospective teachers of the highest quality possible. The knowledge base for teacher education is better understood today than in 1983, when an alarm was sounded by the Department of Education's report, A Nation at Risk. During the past generation, agreement among teacher educators has been growing on essential principles for excellence in the standard route by which students in higher education come to earn credentials enabling them to begin careers as teachers. A well supported, widely adopted, fully integrated approach, however, has been elusive.

Carnegie Corporation of New York and other funders are now undertaking an ambitious reform initiative, Teachers for a New Era, to stimulate construction of excellent teacher education programs at selected colleges and universities. Success will require radical change in allocation of resources, academic organization, criteria for evaluating participating faculty, internal accountability measures, and relationships with practicing schools. At the conclusion of the project, the selected institutions should be regarded by the nation as administering the best programs possible for the standard primary route to employment as a beginning professional teacher.

Teachers for a New Era is organized by three design principles described in detail in an announcement and prospectus. First, a teacher education program should be guided by a respect for evidence, including attention to pupil learning gains accomplished under the tutelage of teachers who are graduates of the program. Second, faculty in the disciplines of the arts and sciences should be fully engaged in the education of prospective teachers, especially in the areas of subject matter understanding and general and liberal education. Finally, education should be understood as an academically taught clinical practice profession, requiring close cooperation between colleges of education and actual practicing schools; master teachers as clinical faculty in the college of education; and residencies for beginning teachers during a two-year period of induction.

Participation in Teachers for a New Era will be by invitation. A national advisory panel will advise the funders, including Carnegie Corporation of New York, on institutions to be selected. Institutions that agree to the conditions specified in the prospectus will be awarded up to $5 million for a period of five years, to be matched by equal funds provided by the institution. At least six awards will be made, staggered over three years, beginning with two awards in the 2002 fiscal year. An independent research organization will assist the national advisory panel by providing descriptive and evaluative analysis as necessary.

Part One: Announcement

I. RATIONALE

New and convincing evidence that teaching is more important for schoolchildren than any other condition has been stunning in its clarity and exciting in its implications. Education leaders have always known that good teaching brings about learning by pupils. Now, recent research based upon thousands of pupil records in many different cities and states establishes beyond doubt that the quality of the teacher is the most important cause of pupil achievement. Excellent teachers can bring about remarkable increases in student learning even in the face of severe economic or social disadvantage. Such new knowledge puts teacher education squarely in the focus of efforts to improve the intellectual capacity of schoolchildren in the United

States. More than ever, the nation needs assurance that colleges and universities are educating prospective teachers of the highest quality possible.

Although many tools for significant improvement of teacher education are at hand, they have not yet been effectively assembled in widely used productive models. The knowledge base for teacher education is better understood today than in 1983, when an alarm was sounded through release by the Department of Education of its famous report, A Nation at Risk. During the past generation, agreement among teacher educators has been growing on essential principles for excellence in the standard route by which students in higher education come to earn credentials enabling them to begin careers as teachers. There is a remarkable convergence of design ideas among reform groups and professional associations.

Many essential elements have been put in place in a number of colleges and universities. These include reliance upon courses and majors in the arts and sciences, close coordination with practicing schools, and a focus on pupil learning accomplished under teacher tutelage. Where new design ideas have been applied they have been knit together with core elements of a good teacher education program in basic areas such as curriculum, assessment, developmental psychology, instructional methods, and classroom management. A well supported, widely adopted, fully integrated approach, however, has been elusive. What is needed is a thoroughgoing reform engaging institutions of higher education in all of the academic programs that contribute to the education of prospective teachers and achieving priority support and attention by institutional administrative leadership. This kind of reform will reinforce a growing coherent energizing vision of teaching as a vital profession, a vision that induces high academic standards.

II. GENERAL DESCRIPTION

Carnegie Corporation of New York and other foundations and funding sources now announce an ambitious reform initiative, Teachers for a New Era, to stimulate construction of excellent teacher education programs at selected colleges and universities. We seek a catalytic revision of teacher education led by colleges and universities committed to a new future for teaching and learning in the nation's schools.

Through this initiative, Teachers for a New Era, we expect outcomes implementing radical change. Among these will be different allocation of resources; academic organization; criteria for evaluating participating faculty; internal accountability measures; and relationships with practicing schools. The purpose of Teachers for a New Era is to assist cooperating institutions in constructing and securing exemplary programs of education for prospective teachers. At the conclusion of the project, each of these institutions should be regarded by the nation as the locus for one of the best programs possible for the standard primary route to employment as a beginning professional teacher. The benchmarks of success for this effort will be evident in the characteristics of the teachers who graduate from these programs. They will be competent, caring and qualified, will be actively sought by school districts and schools, and will be known for the learning gains made by their pupils. The quality of the teachers prepared is expected to encourage the crafting of supportive public policy in states and school districts and emulation of the programs by other institutions.

Teachers for a New Era is organized by three broad design principles, as described in detail in the attached prospectus. First, a teacher education program should be guided by a respect for evidence. A culture of research, inquiry, and data analysis should permeate the program. Among the features of this culture will be attention to pupil learning gains accomplished under the tutelage of teachers who are graduates of the program. Thus, pupil learning will become one measure of the effectiveness of a teacher education program. Second, faculty in the disciplines of the arts and sciences must be fully engaged in the education of prospective teachers, especially in the areas of subject matter understanding and general and liberal education. Finally, education should be understood as an academically taught clinical practice profession. That means that there will be close cooperation between colleges of education and actual practicing schools; master teachers in the schools will hold appropriate appointments as clinical faculty in the college of education; and graduates of teacher education programs will serve a residency under supervision of a mentor during a two-year period of induction into the teaching profession.

Participation in Teachers for a New Era will be by invitation. A panel of experts will advise funding agencies on institutions to be selected. Colleges and universities are expected to be invitees, but the initiative leaves open the possibility that special groupings, such as a consortium of smaller institutions, or a state system of higher education, or an entire state, might qualify under special conditions. Included in the full array selected during the course of this initiative will be differing kinds of insti-

tutions, representing the variety of teacher education programs in the nation. Institutions that agree to the conditions specified in this announcement and prospectus will be awarded up to $5 million for a period of five years, to be matched by equal funds provided by the institution. The Corporation expects to make six awards, staggered over three years, beginning with two awards in Spring, 2002. Other foundations and funding sources will also participate in this historic project and will thus provide awards to other institutions, expanding the number of participating institutions beyond six.

Teachers for a New Era is an initiative prepared in the belief that persuasive construction of high quality teacher education curricula will significantly improve the quality of teachers. In asserting that a well-developed program will address the design principles and issues described in the prospectus, it seeks to consolidate a consensus for the professional basis of teaching. It aims to acknowledge the rapidly changing conditions that support the education of prospective teachers and thus to look forward, anticipating trends and building the profession for the future. It will strengthen public confidence that academic institutions are exercising responsibility for quality education of prospective teachers.

III. SUPPORT BY FOUNDATIONS AND OTHER FUNDING SOURCES

In designing Teachers for a New Era, Carnegie Corporation of New York has reviewed research and consulted broadly with grant making colleagues, experts in teacher education, and policy analysts. In the course of these discussions, other foundations have joined this initiative and committed resources. Therefore, Teachers for a New Era will be financed by a coalition of funding agencies. Carnegie Corporation of New York, with its own resources, is committed to making six awards through this initiative. Other foundations or funding sources will provide additional awards and other support.

Because several foundations or funding sources are currently considering participation in this initiative in light of their priorities, commitments, and budgets, a complete listing of funding participants committed to the specific conditions and provisions of Teachers for a New Era is not fixed at this time. Carnegie Corporation of New York is acting as coordinator and informant. Where the term "funding agency" is used in this announcement and prospectus, it will refer either to Carnegie Corporation of New York or another foundation or funding source participating in this initiative.

The basic design principles put forward here are not proprietary. They are directed at the public interest and can be freely borrowed and modified by others, including legislative bodies and governmental agencies.

IV. SCOPE

There are many ways by which teachers acquire and sustain skills in teaching. Teachers for a New Era is explicitly focused on just one of these: the standard route by which students in higher education come to earn credentials enabling them to begin careers as teachers. This is often called the "preservice" teacher education curriculum. For purposes of this initiative, the conception includes "induction" as part of the standard route. Induction is a system of formal and informal support provided to licensed beginning teachers during their first exposure to full-time professional teaching.

Hardly any teacher education program is a single well-defined entity. Multiple programs, such as special education or early childhood education, as well as many different elementary and secondary education programs, may all be housed together in one large administrative home, but be organized in very different ways to produce specific educational outcomes. Because local forms of organization differ, it is customary, as in this initiative, to refer to them conveniently with a single term: the teacher education program. The basic design principles put forward in this prospectus, however, are meant to apply fully, as appropriate, to each of the many specialty subprograms serving the education of prospective teachers.

Two well-known forms of teacher education are not included in this request for proposals. The first is "alternative" certification, which provides specialized curricula for college graduates who enter the profession of teaching directly without having participated in the standard educational curriculum normally required for licensure. The second consists of professional development courses and activities for practicing teachers who need to sustain and render current their skills as teachers, often called the "inservice" teacher education curriculum. Both of these forms of teacher education are important and are subjects of philanthropic support through other venues. Neither, however, is a direct subject of Teachers for a New Era.

V. FUNDING STRATEGY

A. Base Awards

A small number of large awards will be made to selected institutions. The awards will be for an initial period of three years, with a contingent renewal for one additional two-year period. Thus, award funds could extend for program design and implementation over a period of five years. Each award will be for an amount up to one million dollars per year, to be matched on a 1:1 basis by the receiving institution. Matching funds may come from reallocations internal to the higher education institution's base budget or from newly raised private or public funds. "In-kind" resources, such as supplies, space, or temporarily apportioned personnel time are, of course, encouraged, but may not be used to meet the matching requirement.

Renewal awards will be made contingent primarily upon two satisfactory outcomes: (1) attaining 24-month milestone goals as described in the awardee's initial proposal; and (2) submission of a satisfactory plan for matching funds, describing commitments obtained and planned. At least thirty percent of all matching funds must be pledged to endowment for support of the new program. Thus, in the case of a maximum award, ten million dollars will be invested in the institution for purposes of design and implementation; at least 1.5 million dollars will consist of permanent endowment.

Invited applicants should presume that they would meet the contingency for renewal. Therefore, an invited proposal will be written as a five-year comprehensive effort with full engagement from its initiation. The institution's design will assume progressive and systematic implementation throughout five years.

B. Partner Support Awards

At the beginning of the third year of support up to $250,000 will be added to each institution's award budget to assist in the support of partners. Upon renewal, up to an additional $500,000 will be added for this purpose. These funds are in addition to the base award. The awardee institution will be responsible for disbursing these funds to partner institutions. Partners may be school districts; teacher education programs at other institutions that agree to adopt the basic design principles being implemented by the awardee institution; or other institutions selected by the awardee institution in consultation with the funding agency. Each award by an awardee institution to support a partner may not be less than $75,000, nor more than $200,000, and only one may be awarded to any particular partner institution. Funding strategies for partner support awards will be developed by the awardee institutions and implemented in consultation with the funding agency.

VI. SELECTION PROCEDURES AND CRITERIA

A panel of advisers will recommend to the funding agencies a set of institutions to be invited to submit proposals for funding under terms of the Teachers for aNew Era initiative. The members of the panel will use their best judgment to propose institutions for selection and ultimately to recommend specific institutions to be invited. The panel will be assisted in its work by a research organization under contract to the funding agencies, which will supply descriptive information, relevant data, and analytical reports. No particular extant program is a target for endorsement or exclusion in this initiative. The panel will consider the universe of all institutions that harbor teacher education programs. Programs limited to entry only by graduate students as well as those open to beginning undergraduates are equally eligible. Criteria for selection will include the following:

- The quality of the teacher education program currently in place at the institution
- The capacity of the institution to serve as an exemplar or model for other institutions
- The impact of the institution on the enterprise of teacher education
- The local or regional public policy environment that most directly affects the institution
- The capacity of the institution to engage in leadership activities to persuade other institutions to adopt successful features of the design principles
- The quality of the faculty and administration

Other criteria may emerge during the analysis that leads to selection of an institution invited to apply, but those listed here will be primary and dominant.

Part Two: Prospectus

I. DESIGN PRINCIPLES

Institutions invited to participate in Teachers for a New Era will be asked to submit a proposal in conformity with this design prospectus. The proposal will set forth how the institution will address the design principles described here, and how it will engage the specific issues enumerated in section II, below. The design principles and engagement issues arise from a process of induction. They have been shown in most cases by credible demonstration to contribute to increases in teaching effectiveness. Where the empirical evidence is weak, they represent consensus views of leading researchers and practitioners, based upon experience and reason, about a secure basis for building teaching effectiveness.

The principles and issues fit together comfortably and are not contradictory. In that sense, they are coherent. Indeed, their consistency is intended to convey a core understanding of normative best practice. They suggest a theory of action, as that phrase is commonly understood. It is that an inclusive academic culture of research, rigorous standards and respect for evidence provides for a self-correcting and continually improving teacher education program. Obviously, the word theory is not used here as the exacting canons of science define it. There is no fully constructed system. Instead, the coherence of the principles and issues, taken together, holds promise for perceiving elements of a general model that can readily be disseminated nationally and adopted generally by teacher education programs anywhere. The principles and issues provide considerable latitude for local circumstances, imaginative approaches, and the special strengths brought to the enterprise by any specific institution of higher education.

A. Decisions Driven by Evidence

A teacher education program should be evaluated against the most credible evidence of best practice. Although the qualitative, quantitative, and experimental research base for teacher education can be characterized as modest, it must nonetheless intelligently inform program design. For each key element, responsible faculty should ask, what evidence might be brought to bear upon a decision to include or exclude this element? Adjustments to the program should be regularly anticipated based upon reviews that confirm promising new findings.

1. Drawing Upon Research

An exemplary teacher education program should begin with a persuasive scholarly discussion of what constitutes excellence in teaching. It should be based upon credible evidence, which includes sound research as well as compelling experience. Flowing from this research-based treatment, a college or university based program of instruction can arise from consideration of the means by which teaching effectiveness can be increased. Of course, not every design decision can be justified by a specific research finding. No experiment is perfect. The best experiments point to new experiments that need to be done. Trying to rule out alternative explanations requires mental effort of the most demanding kind. Working continually with evidence and evaluations of research, however, is an efficient means for clarifying our observations and building our confidence in practice. It builds a culture that justifies ongoing redesign of work as the program learns from the very steps it takes to improve. Thus, research not only precedes and supports experimentation. It accompanies and reinforces it. The teacher education program should be informed by a broad-ranging understanding of ongoing local research practice, and what can be trusted from published results in the research literature.

2. The Role of Pupil Learning

A variety of teacher characteristics can be considered, on the basis of credible evidence, to constitute criteria for measuring success as a teacher. In every case, however, an essential criterion must be evidence for learning accomplished by pupils entrusted to the care of the teacher. Invited proposals will be considered only if they contain plans to evaluate the ongoing effectiveness of the teacher education program based in part on evidence of pupil learning that has occurred under the tutelage of teachers who are graduates of the program. This is understandably difficult to arrange, and few teacher education programs currently make good use of it.

Furthermore, if pupil learning is required as a measure of the effectiveness of teacher education, one has to allow enough time for a teacher candidate to complete a program and to practice for several years as a professional teacher. Therefore, it is not expected that proposals in this competition will be able to demonstrate the

effectiveness of their proposed design using measures of pupil learning during the period of grant support. It is required, however, that a successful proposal contain a method by which such measures will necessarily in due course assume their proper role in validating the design. It is expected that data will have begun to be collected before the period of grant support has terminated. In addition to this long-term consideration of the role of pupil learning, attention to the assessment and measurement of pupil learning will be an integral element of the teacher education program, especially gaining attention during the student teaching component.

B. Engagement with the Arts and Sciences

Faculty appointed within the disciplines of the arts and sciences must be fully and functionally engaged in the education of prospective teachers. Proposals must address the matter forthrightly, because there are few successful precedents of organizational structures to facilitate this process. The means by which this may be accomplished will reflect the particular strengths and traditions of the applicant institution.

Each proposal must, for example, describe how teacher candidates will encounter and surmount subject-matter understanding and general and liberal education, the domains of which lie principally within the core competencies of faculty in the arts and sciences. When conscientiously addressed in light of the requirements necessary to enfranchise a professional teacher, it is likely that fundamental questions will arise about the adequacy of design of academic major programs in the arts and sciences, or about the program of general and liberal education for all students. Such questions are important and cannot be ignored. At the same time, their complexity and difficulty must not block the development of a solution that is necessary for the education of teachers. Therefore, special solutions may be required for teacher candidates that may have the effect of requiring a particular kind of rigor for these students beyond that which is normally required for others.

Some faculty in the arts and sciences will be expected to participate in the supervision of teacher candidates in clinical settings, as the candidates learn to teach academic disciplines to pupils in schools. Further, faculty in the arts and sciences will be expected to join with their colleagues in professional education to address the engagement issues described in Part II of this prospectus. In short, significant effort on the part of arts and sciences faculty will be required to sustain an excellent program of teacher education. Each proposal must address how deans, department chairs, and colleagues in the disciplines will support this effort.

1. SUBJECT MATTER UNDERSTANDING

It is essential for every teacher candidate to possess an academic major in a discipline of the arts and sciences, but even this may be insufficient to acquire the content knowledge necessary for excellent teaching. An evidence driven program can ask, for example, what kind of synthetic understanding of a discipline a teacher should have in order to take advantage of the kind of simple questions raised by ordinary pupils in schools. In addition to specific content mastery, does the teacher candidate possess integrative knowledge of the nature of the discipline, its premises, modes of inquiry, and limits of understanding?

2. GENERAL AND LIBERAL EDUCATION

Teachers should be perceived as representatives of a profession. Their professional authority will rest in a significant extent upon their ability to demonstrate that they are themselves educated persons. Therefore, teacher candidates must be expected to know more in the way of subject matter than just what they are charged with teaching. Teacher candidates must command general education, liberal education, and the liberal arts. Goals in these areas should be clearly specified, perhaps in greater detail than for other postsecondary students, and their competencies should be assessed.

C. Teaching as an Academically Taught Clinical Practice Profession

Successful proposals will include plans to engage faculty in the disciplines of education functionally in the teacher education program. The means by which this may be accomplished will reflect the particular strengths and traditions of the applicant institution. Each proposal must, however, address the following concepts, whose domains lie principally within the core competencies of faculty in education. Teachers for a New Era assumes that pedagogy lies at the heart of education as an academic enterprise. Furthermore, it assumes that a well-designed teacher education program relies upon sound core principles in the teaching of pedagogy. It adds to this sound

core the implications of conceptualizing teaching as a clinical practice profession and requires that these become an integral part of the program design.

Excellent teaching is a clinical skill. It occurs principally with clients (pupils) in clinics (classrooms or laboratories) arranged to enhance its efficacy. Just as for any clinical practice profession, there is a knowledge base for teaching that is taught and learned in traditional academic settings. This usually includes, for example, historical, philosophical, sociological, and economic foundations of education. In addition to academic study, clinical practice in schools takes place in complex public environments and entails interaction with pupils, colleagues, administrators, families and communities. Clinical education is developmental in its conception, and is designed to teach clinicians not to act upon the client, but to assist the client's growth and development. Good clinical practice keeps the client's interests as a central focus at all times. Exemplary teacher education provides for clinical education in a clinical setting.

1. Pedagogy

Teacher education will equip professional teachers to assess what pupils already know and can do as the point of departure for new learning. Teacher candidates should know how to develop a rigorous curriculum that engages pupils, builds on their prior knowledge, and fosters deep understanding of content. Teacher candidates should demonstrate ability to collaborate with colleagues and families to ensure coherence and ongoing success with pupils. Teacher candidates will know how to observe and assess children's learning continuously in order to plan and implement responsive instruction. Teacher candidates will know how children develop into adults, physically and psychologically. A professional teacher's repertoire of teaching strategies will widen over time so that children with a range of learning styles, abilities, and cultural backgrounds will have effective access to schooling.

A proposal for Teachers for a New Era will include some means of measuring the learning of pedagogy accomplished by teacher candidates as a result of instruction provided within the teacher education program.

2. Schools as Clinics

An exemplary teacher education program will develop close functional relationships with a number of practicing schools. Superintendents, principals, and experienced teachers will have an appropriate role in advising and shaping the education of teacher candidates. Faculty from the university or college will be actively involved in arranging, supervising, and teaching teacher candidates in the clinical setting of the classrooms of the practicing schools. During periods of student teaching, teacher candidates will assess pupil learning that occurs under their tutelage.

3. Teachers on Faculty Appointment

Outstanding experienced teachers are skilled clinicians. They can contribute to the education of prospective teachers in formal ways in the higher education setting. Through some appropriate process of selection, experienced excellent teachers should be recognized as faculty colleagues along with other teacher educators in higher education. Some form of qualified faculty appointment may recognize their status, e.g., clinical faculty, professor of practice, or adjunct professor.

4. Residency (Induction)

The teacher education program will bring the teacher candidate to a point where the candidate receives an academic degree and a state sanctioned license to teach in a school. That has been the traditional endpoint for teacher education programs. An exemplary teacher education program, however, will consider the teacher candidate's first two years of full-time regular service in the teaching profession as a residency period requiring mentorship and supervision. During this induction period, faculty from the higher education institution, inclusive of arts and sciences faculty, will confer with the teacher on a regular basis, arrange for observation of the teacher's clinical practice, and provide guidance to improve practice. Successful completion of the formally structured induction program will be occasion for the teacher candidate to receive a final document acknowledging full completion of the program and recognition as a professional teacher.

The majority of teacher education programs in the United States educate candidates who become teachers within a nearby region, or within the same state as the teacher education program is located. There are highly regarded programs, however, the majority of whose candidates seek and find initial teaching positions

throughout the United States, and well beyond the borders of the state sheltering the teacher education program. Even those programs most of whose graduates work nearby also produce some graduates whose first position is in a setting remote from the locus of the program. Therefore, in designing a residency component, proposal writers will need to consider mechanisms for supervision during induction in locations far from the home of the teacher education faculty. This could include, for example, arrangements for supervision to be conducted at least in part by a corresponding institution near to the practicing teacher. Other solutions are possible. Distance learning technologies, structured email accounts, interactive software programs, special courses designed for the summer following the first year of teaching, and traveling faculty monitors are representative ideas that could be employed. Institutions are encouraged to seek designs for residency that provide capable regular clinical supervision, coaching, and assistance, while taking advantage of the special strengths and circumstances of the teacher education program.

5. Preparation of Candidates for Professional Growth

Professional growth begins in the earliest stages of a teacher education program with the cultivation of communities of colleagues sharing professional interests in teaching and in the intellectual exploration of subject matter domains. Teacher candidates should be encouraged to participate with peers from whom they can learn informally about professional advances, interesting ideas about subject matter, and how to improve their teaching. They should be taught how to join or construct informal support groups of colleague teachers in the school environments where they will be teaching. When the professional teacher has completed an exemplary teacher education program, the teacher will be well prepared to engage in regular professional development activities to sustain and develop further the skills of clinical practice. This could include such activities as embarking upon activities leading to certification by the National Board for Professional Teaching Standards, or applying for fellowship support for competitive programs of professional renewal, or designing a program for further graduate study, or participating regularly in workshops offered by the school district.

II. ISSUES TO BE ADDRESSED JOINTLY BY FACULTIES IN EDUCATION AND IN ARTS AND SCIENCES

Section I describes three basic design principles: reliance upon credible evidence; engagement with the arts and sciences; and teaching as an academically taught clinical practice profession. They cut across most elements of teacher education. Some issues should be specifically considered by faculties in education working jointly with faculties in arts and sciences in preparing a proposal for consideration in this competition.

A. Pedagogical Content Knowledge

There is a kind of knowledge essential to teaching that arises not from subject matter understanding alone, nor from pedagogy alone, but requires competence in both for its formation. This pedagogical content knowledge, or subject-specific pedagogy, must be treated as an integral part of an exemplary teacher education program, and it requires the joint effort of faculties in the arts and sciences and in education. A deep understanding of subject matter is necessary, enabling the teacher to develop a rich repertoire of metaphors, sufficient to reach pupils whose range of experience may be quite different than the teacher's. Fashioning effective metaphors permits the teacher to build a bridge between the knowledge possessed by the teacher and the implicit understandings brought into the learning situation by the pupil. Pedagogical content knowledge is more than the ability to find effective metaphors. It is a breadth, depth and flexibility of understanding in a field that allows a person to teach imaginatively and productively. It recognizes the cognitive world of the potential learner as a fundamental part of an equation for teaching, thus linking the learner to the subject-matter mastery of the teacher.

B. Literacy/Numeracy Skills

Essential requirements for effective citizenship remain the ability to read well, to write clearly, effectively, and in accord with conventional standards of grammar and spelling, and to perform simple arithmetic operations quickly and correctly. Many postsecondary students lack some or all of these skills. Teachers, however, must not only demonstrate mastery of them, but also be prepared to bring about mastery in the pupils they teach. An exemplary program of teacher education will, therefore, have some means to ensure that teacher candidates acquire and demonstrate mas-

tery of literacy/numeracy skills, and that they are prepared to teach them, irrespective of the level at which they will be teaching.

C. Elementary and Middle School Education

A broad consensus exists that teachers preparing to teach at the secondary level ought to possess an academic major in the discipline they intend to teach. There is no similar consensus, however, for the more complex and academically engaging question of what should be the appropriate academic major for a candidate preparing to teach at the elementary level. At present, plausible cases are made for arbitrary selection of any major in the arts and sciences, for a major in developmental psychology, for an interdisciplinary major in the arts and sciences, for a specialized curriculum in pedagogy, or for other possibilities.

The question of the academic concentration for a candidate intending to become an elementary school teacher deserves early attention in the construction of an exemplary program of teacher education. It should be addressed in a rigorous way, with close attention to credible evidence from the research literature, and in intensive discussion with faculty representing disciplines of the arts and sciences. How can elementary teachers learn the core structure of multiple disciplines so they are prepared to teach a wide variety of content knowledge? What is the core structure of disciplines central to an elementary teacher's ability to react to student understanding with agile manipulation of content in ways that make it understandable? How can an elementary teacher develop subject matter understanding that goes beyond the ability to recall information from introductory survey courses? How can synthetic understanding of a discipline be helpful to an elementary school teacher?

Similar concerns may also apply to the question of an appropriate academic major for a prospective middle-school teacher and should, therefore, also be directly addressed and resolved.

D. Technology

The basic processes of teaching and learning do not require much more than pupils and teachers. New technologies often appear, however, that can facilitate both teaching and learning, and historically excellent teachers have welcomed them. Knowing how to use facilitative technologies effectively is an essential skill in the teacher's repertoire. Our current era has placed enormous demands upon this requirement, however, because the economy is producing extraordinary new technologies at a very high rate. Potentially effective but unproven technologies exist along with excellent older ones, obsolete ones, and ineffective ones. An exemplary teacher education program will integrate instruction about technology throughout the program. It will be focused upon building the knowledge teachers need to evaluate which technologies have proven effective and how to use these technologies for teaching and for learning.

E. Cultural Considerations in Teaching and Learning

There are today in the United States more adherents of Islam than there are Episcopalians. More than 70 percent of the pupils in the Los Angeles unified school district are immigrants from Latin America, as are more than 50 percent of the pupils in Dodge City, Kansas. In many of the nation's largest cities, some districts are composed by majorities of more than 90 percent of pupils whose parents are Americans with family histories hundreds of years old on this continent and of African descent. In many communities Asian families form an imposing majority, and everywhere a current tide of immigration from throughout the world is affecting the makeup of the nation's classrooms. Given the current and projected future teaching force, the cultural composition of the body of teachers will continue to be very different from the cultural composition of pupils for the foreseeable future. To recognize the implicit understandings of the world brought into the classroom by the learner, teachers need to comprehend basic elements of the cultures in which the pupils live. An exemplary program of teacher education will devote attention to considerations of national culture, representative cultures, and how sensitivity to culture works as an ally to effective teaching. Curriculum materials and teaching strategies must aim at accuracy with respect to what accepted research findings have reported on differing cultural traditions and their effects upon learning.

F. Recruitment of Under-Represented Groups into Teaching

The national need for teachers of high quality is great. In many settings salaries are increasing and working conditions are good. Teacher candidates come from a variety of backgrounds and circumstances. There is an especially pressing need for teacher candidates who represent minority communities, for those who can teach science and mathematics, and for those who can develop the special skills to teach pupils who face unusual challenges to learning. Faculties in the arts and sciences

as well as in education should encourage and support postsecondary students who express an interest in teaching as a profession. Talented students should be especially encouraged.

G. Late Deciders in an Undergraduate Program

Many excellent teachers arrive at a decision to adopt the profession late in their undergraduate careers. Furthermore, many teacher candidates begin study at one institution and then transfer to another where they plan to continue. In many cases the point of entry is a two-year community college that provides the teacher candidate with subject matter instruction in key areas, such as mathematics and science. Late deciders and transfer students can pose problems for programs that admit teacher candidates as undergraduate students. An exemplary undergraduate program leading to primary certification will anticipate that some teacher candidates will seek to enter the program after the point that the program considers optimal for the ideal beginning candidate. Late deciders are often very strong candidates who can develop into excellent teachers. Therefore, specific provisions should be developed within the program to ease the entry of candidates who come to the program later than the normally indicated point of admission. Such candidates should not be penalized by undue delay in prospects for graduation, but rather should be given allowance appropriately for coursework already taken or knowledge gained outside the program. Proposal writers should not conceive this option as a form of alternative certification, but rather of late entry by qualified candidates into a program of primary certification.

III. ACCOUNTABILITY

A. Project Manager

The project manager for an award from Teachers for a New Era must be an officer within the office of the Chief Executive Officer or of the Chief Academic Officer of a college or university maintaining a program of teacher education. The award will not be made to a nested school or college, or to a dean, but only to an officer with administrative authority that extends throughout all academic units of the institution. The project manager will be accountable for implementing the initiative, managing its details, and bringing it to successful completion.

B. Approval by the Governing Board

After selection and submission of a proposal, upon notification by the funding agency of approval for an award, the Chief Executive Officer will be requested to take the proposal to the institution's governing board for its formal approval. Award of a grant under the conditions of Teachers for a New Era will be conditional upon approval of the final proposal by the governing board of the institution.

C. Coordinating Council

Proposals prepared for consideration under the conditions of Teachers for a New Era will be required to contain provision for a coordinating council. The purpose of the council will be to receive reports on the status of the teacher education redesign initiative, to monitor its ongoing progress, to facilitate its success, to publicize its achievements, and to offer advice. In order to perform these functions, the council will probably need to meet at least quarterly, and should be apprised of budgetary status and curricular developments. The council should be convened by the project manager, and chaired by the Chief Academic Officer. The proposing institution will design the composition and specific charge of the coordinating council. The following representatives, or their equivalents, may be considered appropriate: a school board member; a practicing teacher; a school principal; a superintendent; a representative from a professional association representing teachers; a representative from an appropriate community-based organization; a representative from local business or industry; a member of the State Board of Education; a faculty member from the School of Education; a faculty member from the Arts and Sciences; the Dean of Education, ex officio; and the Dean of Arts and Sciences, ex officio.

D. Dissemination

Institutions selected for awards under the conditions of Teachers for a New Era will be national exemplars of best practice in the field of teacher education. This imposes a responsibility for dissemination of lessons learned, successful innovations, and difficulties encountered. The funding agencies will undertake to bring the grant recipients together at least once annually for a participatory conference for as long as any grants are active. Proposal writers should describe efforts they plan to encourage other institutions to follow their lead. These could include, for example, residencies for teacher educators from other institutions; newsletters; plans for reg-

ular presentations at local, state, regional, and national conferences; and invitational conferences to other institutions to visit the grantee institution for discussions of teacher education. The partner support grant funds, which will become available in the third year of the award, will be helpful for this purpose. Proposal writers should also include budgeted amounts from the base grants to promote dissemination of successful design.

IV. PROPOSAL SPECIFICATIONS

A. Format

Proposals may be organized in any form that the writer feels will most effectively present the proposed ideas, subject only to the following constraints. The proposal should consist of a narrative, plus appendices. The total length of the narrative may not exceed 7,500 words, a measure that can be calibrated with most word processing programs. Each page should include a header that contains the name of the institution on whose behalf the proposal is submitted, in addition to the page number. The narrative should specify the current status of the teacher education program, which can be viewed as a baseline from which change will be measured. It should then include sections that address each of the lettered and numbered paragraphs described in section I (Design Principles) and section II (Issues to be Addressed Jointly) of this design prospectus, indicating how and where change is expected as a result of activities sponsored by the award. These may later be used as benchmarks for success. The first appendix should address each of the lettered paragraphs described in section III (Accountability). The second appendix should describe milestone goals that the awardee institution expects to meet by the end of the first 24 months of grant-supported activity. The degree of success in meeting these goals will be one of the criteria used for determining whether to award a renewal grant for an additional two years beyond the first three years of grant-supported activity. Other appendices may be included at the discretion of the writer, for informational purposes.

B. Budget

1. Foundation Funds

Although the design initiative is expected to extend over a five-year period, grants will be awarded first for a three-year period, with a contingent renewal possible for an additional two years. A detailed budget is required for the first three years of the proposed grant, and may not exceed $3 million from foundation funds for this period. A general outline of proposed expenditures for the two-year contingent renewal grant should be included as part of the proposal, in the context of an anticipated five-year grant period. Total expenditures from funds supplied by the funding agency may not exceed $5 million over five years. The budget can be presented in narrative form as a summary in a budget appendix, although the specific proposed spending plan for the first three years should be detailed in the standard budget request template supplied by Carnegie Corporation of New York or another funder. Guidelines, including limitations on indirect costs, are provided with the budget request template.

2. Matching Funds

It is expected that receipts and secure pledges for $5 million in matching funds will have been secured by the conclusion of an anticipated five-year grant period. At least 30 percent of the matching funds must be pledged to permanently endowed accounts. No matching funds are required in advance, and a detailed fundraising strategy is not required until the grantee submits a renewal proposal about 30 months after the start of grant-supported activity. At the time of submission of the renewal proposal, it is expected that substantial matching funds will have been received. The kinds of funds that can be considered as matching funds for purposes of this grant proposal are described in Part One, Announcement, section V (A) of this announcement and prospectus. Carnegie Corporation of New York will provide, upon request, limited assistance and advice to institutions seeking help in raising funds. The commitment to secure matching funds should be signed by the institution's chief executive officer and submitted with the initial three-year grant proposal. At the time of submission of the renewal proposal, a separate budget appendix will be required containing a brief narrative description of plans for the use of the matching funds, including the apportionment for endowment purposes.

C. External Evaluation

Each proposal must contain a provision, financed by grant-provided funds, for an evaluation of the conduct and success of the program. The evaluation should be conducted by an agency external to the teacher education program and contain provision both for formative evaluation and summative evaluation. The formative evaluation should begin with the initiation of grant-supported activity, providing for continuous improvement of the design initiatives as experience is gained from their implementation. The summative evaluation can begin before the cessation of grant-supported activity. Although the summative evaluation can conclude after expiration of the grant, the funding agency will expect to receive the final report of the evaluation.

D. Timeline, Submission, and Selection

Assisted by an independent research agency under contract to Carnegie Corporation of New York a panel of expert external evaluators will advise funding agencies of institutions to be invited to submit proposals for Teachers for a New Era. Once an institution has submitted a proposal, evaluation will begin immediately. Acting with benefit of advice from the panel, negotiations will be undertaken with the submitting institution aimed at strengthening the proposal. The Corporation plans to make the first two awards by May 1, 2002. The same cycle will be repeated for the following two years, until six awards have been made. Other funding agencies will be making awards on differing schedules in accordance with their own procedures and requirements.

GENERAL REFERENCES

Boston Public Schools. (1998). "High school restructuring." Newsletter, March 9, 1998.

Coleman, J. S., et al. (1996). Equality of educational opportunity. Washington, DC: Government Printing Office.

Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. Education policy analysis archives, 8(1), *http://epaa.asu.edu/epaa/*

Ferguson, R. F. (1998). Can schools narrow the black-white test score gap? In C. Jencks & M. Phillips (eds.), The black-white test score gap. Washington, DC: Brookings Institution.

Ferguson, R. F., & Ladd, H. F. (1996). How and why money matters: an analysis of Alabama schools. In H. F. Ladd (ed.), Holding schools accountable: performance-based reform in education. Washington, DC: Brookings Institution.

Goldhaber, D. D., & Brewer, D. J. (1997). Evaluating the effect of teacher degree level on educational performance. In W. J. Fowler (ed.), Developments in school finance, 1996. Washington, DC: National Center for Education Statistics.

Goldhaber, D. D., & Brewer, D. J. (1999). Teacher licensing and student achievement. In M. Kanstoroom & C. E. Finn (eds.), Better teachers, better schools. Washington, DC: Thomas B. Fordham Foundation.

Kain, J. F. (1998). The impact of individual teachers and peers on individual student achievement. Paper presented at the 20th annual research conference of the Association for Public

Policy Analysis and Management. New York City, October 31.

Monk, D. H. (1994). Subject area preparation of secondary math and science teachers and student achievement. Economics of education review, 13(2), 125-145.

Rivkin, S. G., Hanushek, E. A., & Kain,

J. F. (1998). Teachers, schools, and academic achievement. National bureau of economic research, working paper number 6691.

Sanders, W. L., & Rivers, J. C. (1996). Cumulative and residual effects of teachers on future academic achievement. Knoxville, TN: University of Tennessee Value-Added Research and Assessment Center.

Wilson, S. M., Floden, R. E., & Ferrini-Mundy, J. (2001). Teacher preparation research: Current knowledge, gaps, and recommendations (U.S. Department of Education Research Report Doc. R-01-3). Seattle, WA: Center for the Study of Teaching and Policy.

[Whereupon, at 11:30 p.m., the subcommittee was adjourned.]

○