

DOCUMENT RESUME

ED 464 907

SP 040 722

TITLE Flexibility for Quality Programs and Innovative Ideas for High Quality Teachers. Hearing before the Subcommittee on Postsecondary Education, Training and Life-Long Learning of the Committee on Education and the Workforce. House of Representatives, One Hundred Sixth Congress, First Session (Washington, DC, May 5, 1999).

INSTITUTION New Jersey Library Association.

REPORT NO House-Hrg-106-31

ISBN ISBN-0-16-059370-0

PUB DATE 1999-00-00

NOTE 115p.

AVAILABLE FROM U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402.

PUB TYPE Legal/Legislative/Regulatory Materials (090)

EDRS PRICE MF01/PC05 Plus Postage.

DESCRIPTORS *Educational Quality; Elementary Secondary Education; *Faculty Development; Federal Aid; Federal Government; *Government Role; Hearings; *Teacher Competencies; Teacher Improvement; *Teaching Skills

IDENTIFIERS Congress 106th; Dwight D Eisenhower Professional Development Prog

ABSTRACT

This hearing focused on issues related to teacher quality. It examined the role of the federal government in providing funds for professional development and looked at the largest federal program dedicated to this area, the Eisenhower Professional Development Program. After opening statements by Chairman Howard P. McKeon and Ranking Member Matthew Martinez, both of the Subcommittee on Postsecondary Education, Training and Lifelong Learning, Committee on Education and the Workforce, the hearing included statements from: Marnie S. Shaul, Associate Director, Education and Employment Issues, General Accounting Office, Washington, DC; Beatrice F. Birman, Director, National Evaluation of the Eisenhower Professional Development Program, American Institutes for Research, Washington, DC; David A. Bauman, Director, Capital Area Math/Science Alliance, Summerdale, PA; Colleen Seremet, Assistant Superintendent for Instruction, Board of Education of Dorchester County, Cambridge, MD; and Louisa Moats, Project Director, NICHD, University of Texas at Houston, Early Interventions Project, Washington, DC. The written opening statement and written testimonies are appended. (SM)

ED 404 507

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**FLEXIBILITY FOR QUALITY PROGRAMS AND
INNOVATIVE IDEAS FOR HIGH QUALITY
TEACHERS**

HEARING
BEFORE THE
SUBCOMMITTEE ON POSTSECONDARY EDUCATION,
TRAINING AND LIFE-LONG LEARNING
OF THE
COMMITTEE ON EDUCATION AND
THE WORKFORCE
HOUSE ON REPRESENTATIVES
ONE HUNDRED SIXTH CONGRESS
FIRST SESSION

HEARING HELD IN WASHINGTON, DC, MAY 5, 1999

Serial No. 106-31

Printed for the use of the Committee on Education and the Workforce



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**FLEXIBILITY FOR QUALITY PROGRAMS AND
INNOVATIVE IDEAS FOR HIGH QUALITY TEACHERS**

WEDNESDAY, MAY 5, 1999

**SUBCOMMITTEE ON POSTSECONDARY EDUCATION, TRAINING
AND LIFE-LONG LEARNING,
COMMITTEE ON EDUCATION AND THE WORKFORCE,
HOUSE OF REPRESENTATIVES,
WASHINGTON, D.C.**

The Subcommittee met, pursuant to call, at 10:30 a.m., in Room 2175, Rayburn House Office Building, Hon. Howard P. "Buck" McKeon [Chairman of the Subcommittee] presiding.

Present: Representatives Goodling, McKeon, Barrett, Deal, Ehlers, Isakson, Martinez, Owens, Tierney, and Kind.

Staff Present: Mary Clagett, Professional Staff Member; Victor Klatt, Education Policy Coordinator; Sally Lovejoy, Senior Education Policy Advisor; D'Arcy Philps, Professional Staff Member; Michael Reynard, Media Assistant; Shane Wright, Legislative Assistant; June Harris, Minority Education Coordinator; Marshall Grigsby, Minority Senior Legislative Associate/Education; Mary Ellen Ardouny, Minority Legislative Associate/Education; Marjan Ghafourpour, Minority Staff Assistant/Labor; and Shannon Gardner, Minority Receptionist.

**OPENING STATEMENT OF CHAIRMAN HOWARD P. "BUCK" McKEON,
SUBCOMMITTEE ON POSTSECONDARY EDUCATION, TRAINING AND
LIFE-LONG LEARNING, COMMITTEE ON EDUCATION AND THE
WORKFORCE, U.S. HOUSE OF REPRESENTATIVES, WASHINGTON, DC**

Chairman McKeon. Good morning. Welcome to this Subcommittee's second in a series of hearings focused on issues related to teacher quality. Let me begin by noting that this is Teacher Appreciation Week. I know that several of our witnesses are, or have been teachers; and I am sure we have at least a few teachers in our audience. To each of you, I thank you for your dedication to our Nation's children.

(1)

Yesterday, we passed a resolution supporting and commending our teachers, and there were a lot of good things said; and I am sure it was inadequate to really thank our teachers for what they do.

Last week, we heard from a broad spectrum of witnesses who all stated unequivocally that teacher quality is the most important factor in student achievement. A question perhaps far more difficult to answer is, how do we make sure that every teacher is of high quality? Although there are many views on this question, today we will take a close look at the role that professional development can play in making sure that all teachers at least have the necessary knowledge to be highly effective.

We will begin by examining the role of the Federal Government in providing funds for professional development. Additionally, we will take a much closer look at the largest Federal program dedicated to this area, the Eisenhower Professional Development Program. In focusing on this program, we will hopefully get a better understanding of its strengths and weaknesses from both a national as well as a local perspective.

However, the Eisenhower Program is often only a piece of a broad array of professional development programs administered by school districts. To learn more about how these, along with State and local programs, are coordinated and the difficulties in doing so, we have the opportunity to hear from an exemplary local school official.

Additionally, we will have the opportunity to hear the tremendous benefit that an effective professional development program can have upon both teachers and entire schools.

I wish to thank each of our witnesses for taking time to be with us, and I look forward to their testimonies.

At this time I yield to the Ranking Member, Mr. Martinez, for any statement that he might have.

WRITTEN OPENING STATEMENT OF CHAIRMAN HOWARD P. "BUCK" McKEON, SUBCOMMITTEE ON POSTSECONDARY EDUCATION, TRAINING AND LIFE-LONG LEARNING, COMMITTEE ON EDUCATION AND THE WORKFORCE, U.S. HOUSE OF REPRESENTATIVES, WASHINGTON, DC – SEE APPENDIX A

OPENING STATEMENT OF RANKING MEMBER MATTHEW MARTINEZ, SUBCOMMITTEE ON POSTSECONDARY EDUCATION, TRAINING AND LIFE-LONG LEARNING, U.S. HOUSE OF REPRESENTATIVES, WASHINGTON, DC

Mr. Martinez. Thank you, Mr. Chairman. As you said, this week is Teacher Appreciation Week. And yesterday we passed a resolution recognizing the important achievements of our Nation's teachers and urging all Americans to pay tribute to our

Nation's teachers.

Many Members came to the floor to share fond memories and express deep gratitude for a teacher or teachers who made a difference in their lives. My own perception of education was greatly impacted when my 6th grade teacher, Mrs. Cason, took the time to show me that I could learn once she got my attention.

However, I think that all of us who spoke yesterday realize that the very positive experiences we encountered in the classroom took place in a different era. Although, as many highly qualified and dedicated individuals enter the field of teaching today, they face different problems than they did 40 years ago. Today their talents are spread so thinly they cannot effectively address the needs of their students. Many become discouraged and leave the field after only a few short years.

Therefore, I believe it is incumbent upon us to provide incentives to these highly qualified and dedicated individuals to not only entice them into the classroom in the first place, but also to ensure that once they get there, they stay.

We must provide teachers with smaller classes so they can manage their students better and spend quality time with them. We must provide them with classrooms that are clean and safe. We must provide them with a curriculum that is current and technology so they can prepare our children for the 21st century.

Most of all, we must provide them with opportunities to continue their own educations so they may effectively pass this curriculum and those technological skills on to our children. In the words of the famous librarian, John Cotton Dana, "He who teaches must never cease to learn."

As such, we must ensure that our teachers have access to quality professional development that is intensive, sufficient in duration, and connected to the classroom.

This Subcommittee is currently in the process of drafting legislation that will provide such access to our Nation's teachers. We are seeking input from the community on this legislation, and we are very interested to hear your thoughts on professional development.

I look forward to your testimony, and I yield back the balance of my time.

Chairman McKeon. Thank you, Mr. Martinez.

We always make very careful plans, and we set up these uninterrupted sessions and then somebody else calls a vote, and that has now happened. We are in the middle of a vote. This is probably a good time to break, if we have to. We will run and vote and come right back and then introduce our witnesses and get right into your testimony. Thank you very much.

[Recess.]

Chairman McKeon. Well, they assured us that we have no more votes for an hour, for at least half an hour.

We have first Dr. Mamie Shaul, Associate Director of Education Workforce and Income Security Issues from the U.S. General Accounting Office in Washington, D.C. We have Dr. Bea Birman from the American Institute of Research, also in Washington, D.C. We have Dr. David Bauman, who the Chairman of the full Committee is going to introduce because you are from his State. Mr. Chairman.

Chairman Goodling. My extoicomometry, which I never heard of the word in my life, professor and chemistry professor as a freshman in college, which was Dr. Harry Bauman, had a son, David Bauman, and I had to go down and find out if Dr. Bauman was he. Of course, I was a country boy, and Dr. Bauman indicated about halfway through the first semester that if I really didn't get down to work, I didn't have a snowball's chance in Hades of passing through the course. So he was generous, however, by the time we got to the end of the semester.

I also, first of all, want to congratulate Dr. Moats, because I understand that the reading situation in D.C. is improving dramatically. And I am happy to hear that that's the case through your efforts.

I want to introduce Dr. Bauman, who is the Executive Director of the Capital Area Math/Science Alliance in the Capital Area Institute for Math and Science in Summerdale, PA, which is part of my Congressional district. The alliance and the institute provide long-term professional development and technical assistance to 24 school districts in Central Pennsylvania.

He has an extensive background in education and related fields. He was a teacher, principal, college professor, and taskforce leader of the writing committee to develop Pennsylvania's science and technology content standards. He is currently the Vice President of the Pennsylvania Science Teachers Association. I could go on with a list of accomplishments, but we will save the time for him rather than for me. Welcome.

Dr. Bauman. Thank you.

Chairman McKeon. Thank you. We have Dr. Colleen Seremet. Colleen Seremet, Assistant Superintendent for Instruction from the Board of Education of Dorchester County, Cambridge, Maryland. And Dr. Louisa Moats, who the chairman just referred to, Project Director of NICHHD, the University of Texas at Houston, Early Interventions Project here in Washington, D.C. And also Mr. Abdullah, a teacher in that program. My understanding is you will not be testifying, but you are available for questions.

Mr. Abdullah. Yes.

Chairman McKeon. I am correct. Great.

Let's begin with Dr. Shaul. You see that red light. You have each been notified you will have 5 minutes. You will start with a green light. When you have a minute left, the yellow light comes on, and just before the trapdoor opens, the red light comes on to give you a warning. Your full testimony and anything else you want to add will be placed in the written record.

And we are happy now to hear from Dr. Shaul.

**STATEMENT OF DR. MARNIE S. SHAUL, ASSOCIATE DIRECTOR,
EDUCATION AND EMPLOYMENT ISSUES, GENERAL ACCOUNTING
OFFICE, WASHINGTON, DC**

Dr. Shaul. Thank you, Mr. Chairman and Members of the Subcommittee. We appreciate the opportunity to discuss our ongoing work for the Subcommittee concerning federally funded teacher training programs. Two factors make today's hearing timely: one is the increased national attention on teacher quality and the other is the evolving implementation of the Results Act, which requires that agencies rethink how they manage programs and demonstrate professional development. Because teacher training plays a key role in education reform efforts, it is important to know the current level and range of Federal investment in these programs.

Today, I would first like to describe the number of agencies and the programs they administer that support teacher training, along with some general characteristics of the programs. Then I will discuss the funding provided for these programs.

I will also discuss some of the challenges in determining whether these programs are achieving desired outcomes. My statement is based on preliminary observations from our ongoing review. In summary, our preliminary results indicate that 13 agencies administer 87 programs which support teacher training to varying degrees. The Department of Education administers the majority of these programs. Federal funding for teacher training is estimated at about \$1.5 billion during fiscal year 1999.

The number of agencies and the number and diverse nature of the programs create challenges in determining whether programs are achieving national goals. I would like to elaborate briefly on each of these topics.

First, the extent to which the 87 programs support teacher training varies. While some programs were created specifically to support teacher training, many other support teacher training as a means of achieving other purposes. As part of our review, we asked agencies to classify their programs into three categories based on these differences.

Agencies responded as follows: 12 programs are designed only or exclusively to support teacher training. Education administers eight of these programs, including the Eisenhower State Grant Program, the largest teacher training program. Thirty-nine programs are designed to achieve purposes other than just teacher training but support a significant amount of teacher training.

These programs include, for example, education's title I program. Teacher training is only one of many ways title I funds can be used to help educate disadvantaged children. Thirty-six programs allow teacher training as an activity but do not provide a significant amount of teacher training.

Across all three categories, the majority of programs are designed to support training for teachers who already teach, rather than those preparing to become teachers. They do so by providing funds to pay for a variety of training-related expenses. The most frequently reported eligible use of funds was for materials, such as books on teaching strategies, travel, direct instruction, graduate credit.

Agency officials estimate that about \$1.5 billion will be used to support teacher training in fiscal year 1999. Education's programs account for about 87 percent of total funding. More than \$579 million will be provided by the 12 programs that agencies classified as focused exclusively on supporting teacher training. This is about 38 percent.

About 945 million will be provided by the 39 programs that agencies classified as supporting teacher training to a significant degree. This accounts for 62 percent of total funding. Because State and local officials have flexibility under these programs, the amount of funds spent on teacher training may vary from year to year.

Funding estimates are generally unavailable for programs where teacher training is an allowable, but not a significant, activity. As we have shown, the Federal Government will make a significant investment in a variety of programs that support teacher training, about \$1.5 billion. An investment of this magnitude makes knowing whether programs are achieving desired results important.

As part of our ongoing review, we plan to assess whether identified Federal programs are effectively configured to achieve national goals. One of the ways we will do this is by reviewing agencies' efforts under the Results Act.

This concludes my prepared statement. I would be happy to answer any questions you or Members of the Subcommittee might have. And did I miss the trapdoor?

Chairman McKeon. I saw that the trapdoor really had you worried.

[The statement of Dr. Shaul follows:]

WRITTEN TESTIMONY OF DR. MARNIE S. SHAUL, ASSOCIATE DIRECTOR,
EDUCATION AND EMPLOYMENT ISSUES, GENERAL ACCOUNTING OFFICE,
WASHINGTON, DC – SEE APPENDIX B

Chairman McKeon. Dr. Birman.

STATEMENT OF DR. BEATRICE F. BIRMAN, DIRECTOR, NATIONAL

EVALUATION OF THE EISENHOWER PROFESSIONAL DEVELOPMENT PROGRAM, AMERICAN INSTITUTES FOR RESEARCH, WASHINGTON, DC

Dr. Birman. Thank you, Mr. Chairman. I am pleased to be here today to discuss preliminary findings from the national evaluation of the Eisenhower Professional Development Program. And I am accompanied by Dr. Garet, the deputy director of the evaluation.

Professional development of teachers is a crucial element of the Nation's efforts to improve education. And as Dr. Shaul mentioned, the Eisenhower Program is the largest of the Department's efforts to develop teachers' competence. I will be talking about two aspects of the program today: one component which funds States and districts based on a formula, and then the 16 percent of the program that goes to the institutions of higher education and nonprofit organizations through a competitive State grant program.

The 1994 reauthorization of the Eisenhower Program really laid out four strategies that I will be discussing today. First, the program is aimed at supporting high-quality professional development activities; second, the program is aimed at including and targeting teachers of at-risk students; third, the reauthorization in 1994 intended the program to be integrated with other ongoing reform and professional development efforts; and, fourth and finally, the reauthorization intended that the program track progress by means of performance indicators.

I have details here in the testimony, which I won't go into it about the evaluation itself. But just in a word, we have conducted national samples of teachers who participated in the Eisenhower Program, coordinators of the program at the district level, project directors from the institutions of higher education. We have conducted case studies in 16 districts around the country. And we are currently in the middle. We are not finished with the evaluation.

We are conducting a longitudinal study of about 500 teachers at three points in time to get a more firm fix on the impact of the program on teacher practice. So those results I won't be talking about today, but I will be talking about the results from all of our national surveys and case studies.

The first area I wanted to address has to do with the contribution of the program to teaching practice. And I am focusing on the knowledge and skills of teachers, the knowledge and skills that teachers bring to the classroom. Preliminary analyses of our survey data indicates that there is a lot of variability in the reports of knowledge and skills that teachers gain from the Eisenhower Program. Some teachers report substantial enhancement of their knowledge and skills. Other teachers report much less.

On average, the higher education and nonprofit organization part of the program appears to be producing better results than the district-sponsored part of the program. One of the important aspects of our evaluation is to identify what are the features that account for this. And we identify six features.

One very important feature is the content focus of the professional development. I believe you mentioned this in your earlier remarks. The content focus in literature is

showing that that would have an effect on student achievement. Also professional development in particular content and how children learn that content appears to have a very important effect on teachers.

Second is opportunities for active learning, features such as being observed, sharing knowledge, evaluating student work; third, connection of the professional development to teachers other experiences; fourth, the amount of time, number of hours, and the time span of the professional development is an important feature; fifth, participating in professional development with other teachers from the same school, grade level, or subject area appears to be important; and finally, what we consider reform types of professional developments, study groups, networks and so forth, appear to be important because they have some of these other features as well. They go on for a long period of time as well.

What we found is that the IHE portion of the program, the Institution of Higher Education portion of the program, appeared to be better on many of these characteristics. And that explains why teachers appear to have better results from the professional development provided by the IHE portion of the program.

Is the trapdoor opening? I just have a few more remarks. A couple of other areas I just need to cover. I mentioned the importance of targeting of the program to teachers in high-poverty schools. We find that preliminary data shows that the program is not particularly doing a particularly good job in this area.

The proportion of teachers from high-poverty schools doesn't appear to be very different from the proportion in the Nation as a whole. And we attribute this from some of our case data to the fact that the Eisenhower Program, as most professional development, really focuses on recruiting volunteers for professional development. So that is at least one explanation.

With regard to fitting in with other professional development programs and activities, we find that the Eisenhower Program directors report that they align their activities with State and local standards and also participate in a lot of coordination, especially with activities funded by the National Science Foundation.

And this is in part or largely due to the fact that the Eisenhower Program, as you know, is a mathematics- and science-focused program. Most of the funding goes to professional development in mathematics and science; and, therefore, it is a logical connection to make with the NSF-funded programs.

We find also that there is a lot of cofunding of professional development activities with NSF programs. And this, in fact, helps districts to fund the types of professional development that appear to have the most effect on teachers.

I will skip my remarks about program indicators, but I will be glad to discuss them later with regard to the evaluation, how districts evaluate their activities. I just wanted to say about three things on implications for the program from our study from our preliminary findings.

First, we feel from our findings that the program should seek ways to encourage the use of all of the features of professional development that we have listed as related to

the teachers' knowledge and skills, with a particular emphasis on the content focus of the professional development.

Second, the program should place greater emphasis on targeting for teachers of high-poverty schools. If this is a priority for the Congress, then we feel that that doesn't seem to be happening, and it would be a good focus.

Third, the program should continue to emphasize alignment with standards and assessments and cofunding professional development with activities funded by other programs. This appears to give the districts the ability to pool resources and provide the kinds of long-term, in-depth professional development that teachers seem to benefit from.

And, finally, the Eisenhower Program has provided continuous support for professional development activities within the areas of mathematics and science. As I have said, the evaluation highlights the importance of a content focus and the Eisenhower Program has in many districts built capacity in those areas.

So if the Congress is considering expanding the program, it should consider creating analogous programs within content areas, rather than eliminating the content focus on math and science entirely. I would be glad to answer questions. I am sorry. I am glad you don't have a trapdoor actually.

Chairman McKeon. I was just getting ready.

[The statement of Dr. Birman follows:]

WRITTEN TESTIMONY OF DR. BEATRICE F. BIRMAN, DIRECTOR, NATIONAL EVALUATION OF THE EISENHOWER PROFESSIONAL DEVELOPMENT PROGRAM, AMERICAN INSTITUTES FOR RESEARCH, WASHINGTON, DC – SEE APPENDIX C

Chairman McKeon. Dr. Bauman.

STATEMENT OF DR. DAVID A. BAUMAN, DIRECTOR, CAPITAL AREA MATH/SCIENCE ALLIANCE, SUMMERDALE, PA

Dr. Bauman. First, I would like to thank Representative Goodling for inviting me here. It is an honor and privilege to come before you and talk about professional development. I would also like to thank Congress for their continued and ongoing support of the Eisenhower Professional Development Program. The Math/Science Alliance and Institute are projects of the Council of Public Education in Harrisburg, which is a nonprofit community-based program which receives its funding from private sources. However, we utilize professional development funds to leverage additional funds in our work.

For every dollar of Eisenhower funds that we use, we are able to leverage at minimum 10 additional dollars. We do not use any of the funds for administrative or operating expenses. Without the Eisenhower funds, our districts would not be able to send teachers to the institute and participate in professional development sessions. The changes in classrooms would not be occurring.

The alliance and institute are attempting an unprecedented approach in the Harrisburg region by addressing the entire educational system. Systemic reform is based on the assumption that all components complement and build on the strengths of each other; therefore, we don't focus on any one component, but are attempting to influence all components and build upon their interconnectedness. The key agent in math and science reform is the teacher.

Effective teaching is the heart of our efforts. Teachers who participate in the institute commit to complete over 125 hours of professional development over a 3-year period. We design the sessions to meet the needs of the classroom teachers as they implement a standards-based curriculum. It is imperative for these teachers to learn new content and how it applies in a real-world setting.

Are there significant changes due to this? Yes. Students of participating teachers are more motivated to learn math and are more self-confident. They are more involved in problem solving. They understand math concepts better. They are using manipulative layers and concrete experiences. Teachers are more aware of NCTM and State standards. The math is more focused.

Teachers are more confident. They have more opportunities to learn math and science content. Students are more involved in hands-on inquiry-based science. They understand science concepts better. And I can go on from what our data has shown.

The Pleiades Project is another project where seven districts have committed to work together to align and develop K12 science curricula with the standards, national and State. They are collaborating on in-service days, utilizing interdistrict communication via Internet, professional development for the proposed adopted curriculum.

Two of the superintendents have told me without these funds they would not be able to participate. Once again, professional development is the key to the success of this project. And Eisenhower funds have leveraged the additional dollars to make it possible. Given that materials appropriate for inquiry-based science teaching are central to achieving the educational goal set forth in the standards, it is critical that an effective infrastructure for material support be part of any science program.

Our materials resource center has over \$500,000 worth of materials and equipment utilized in classrooms across the region. All were purchased utilizing private donations and foundations. Private industry has donated funds towards specific items and projects, but want to see their funds leverage additional dollars. Again, the Eisenhower funds through our professional development program make these donations possible.

The Providers Network is an effort by the alliance to bring together and coordinate different initiatives in the Capital Area. A provider is an organization whose efforts impact math and science education for K through 12 students and is funded

through grants or donations.

This network meets regularly to collaborate with others to learn from the experience of others, identify needs within the region, strengthen programs and ideas and discuss possible future initiatives, and ultimately avoid duplication of efforts.

As a part of that, we are facilitating the building of local capacity. We focus the training session on alignment of materials and projects to standards. The Providers Network align their outreach to both national and State standards, as well as the curriculum of the individual districts. Therefore, even though these workshops are often short term or one-day events they are very focused on the curriculum and setting.

These providers are aligning their services with all efforts in the region to promote math and science reform. Eisenhower funds, again, enable each of these outreach programs to leverage additional dollars. Short-term professional development can be effective, if it is focused on identified needs and programs.

We are seeing the results. Our funders expect schools to match and contribute towards professional development programs. The Eisenhower funds are the means by which we are able to show a match; and more importantly, they provide the means to districts to release teachers to participate in our program.

The amount of money Eisenhower leverages is significantly more than the total amount of money we receive through Eisenhower. While our efforts have been visionary, a common thread throughout all of this, as you can tell, is the Eisenhower Professional Development Program. Thank you.

[The statement of Dr. Bauman follows:]

WRITTEN TESTIMONY OF DR. DAVID A. BAUMAN, DIRECTOR, CAPITAL AREA MATH/SCIENCE ALLIANCE, SUMMERDALE, PA – SEE APPENDIX D

Chairman McKeon. Thank you.

Dr. Seremet. Good morning.

Chairman McKeon. Good morning.

STATEMENT OF DR. COLLEEN SEREMET, ASSISTANT SUPERINTENDENT FOR INSTRUCTION, THE BOARD OF EDUCATION OF DORCHESTER COUNTY, CAMBRIDGE, MD

Dr. Seremet. I appreciate the opportunity to share our work on a systems approach to professional development and resource alignment. We have engaged in a partnership

with New American Schools and Policy Studies Associates, Incorporated, to develop a strong professional development system to ensure the best and lifelong learning for our teachers and the highest quality instructional programs.

We have learned three key lessons from our work: first, a comprehensive professional development system consists of four separate, but very interrelated domains, the individual career paths from new teacher induction to retirement; second, formal and informal professional development learnings, focused on student outcomes, including what we traditionally think of as professional development trainings and workshops, but also study groups, peer collaboration, and experimentation and reflection. Third, professional development policies in a district including teacher selection, rewards, incentives, governance and performance appraisals are important; and, fourth, the links to the key district priorities and operations, including the school improvement planning process and resource allocation.

School districts must develop programs and policies in all four of these domains to provide a quality professional development system.

Our second lesson. At the school and the district level, comprehensive planning guided by careful review of student outcomes and achievement needs with resources aligned to these outcomes is essential.

And third, a standards-driven continuum with flexibility in funding sources and requirements and accountability for student learning is needed to make sustained growth in teacher learning and is paramount to a successful instructional program.

Our journey into Dorchester County has been greatly identified by a professional development tool that new American Schools and Dr. Hasham at Policy Studies Associates have created. During the past year, our superintendent established a professional development council comprised of teachers, principals, parents, and central office administrators. Thus far the council's work has included collecting and reviewing data on our current programs and budgets in professional development, the writing of a professional development standards document for our district, which is being presented for adoption by our school board; and, third, we have begun work on a comprehensive evaluation system on our PD program.

In addition, we are currently concentrating on developing a school improvement plan resource guide for our teachers and principals, to use in allotting their student needs assessment, their instructional improvement initiatives, their school professional development plans, and their school budgets. The connections between a school improvement plan, the professional development plan, and budget are critical to help focus on improving student achievement.

At the same time, our district has been engaged in this professional development infrastructure work. The State of Maryland has initiated a new planning and budgeting process that we call comprehensive planning. This process has become pivotal in our district; indeed, we live and die by the red book in Cambridge. It allows us to proactively engage in using the Ed Flex options for coordinating program design and delivery across several Federal and State funding streams.

During the last fiscal year, Dorchester County initiated nine instructional improvement programs with funds from 16 different sources. These initiatives reflected funding support from Title I; Title II, Eisenhower; Title IV, SAFE and drug-free schools; Title VI, innovative programs; Goals 2000; Obey-Porter/Comprehensive School Reform; State compensatory education; targeted poverty grants; State monies for targeted improvement grants; limited English proficiency grants; early childhood education; a professional development project; child abuse, suicide and teen pregnancy-prevention monies.

When I arrived in the district 18 months ago, I found a report of 137 grants in a tangle of funding streams and programs which were very cumbersome and confusing. They all had different fiscal years and program formats.

By simplifying the planning process and allowing flexibility in the variety of grant sources, we have been able to focus on our students' and our teachers' needs and implement programs to address the kids' achievement needs.

We have in Maryland the School Performance Accountability Program, and that provides us with the standards and tools to measure student improvement. With that already in place, we found the flexibility of coordinating the funding sources, along with these clear accountability standards, to be especially helpful in our efforts to improve professional development for teachers.

We believe that development of an integrated professional development system and a coordinated approach to allocating resources across multiple funding streams has enabled our district to focus on our school improvement needs.

We sincerely appreciate the work of the Members of the House of Representatives in making professional development for educators, teachers, and administrators a substantive issue at the national policy level. Professional development is truly the cornerstone of school improvement. Thank you.

Chairman McKeon. Thank you.

[The statement of Dr. Seremet follows:]

WRITTEN TESTIMONY OF DR. COLLEEN SEREMET, ASSISTANT SUPERINTENDENT FOR INSTRUCTION, THE BOARD OF EDUCATION OF DORCHESTER COUNTY, CAMBRIDGE, MD – SEE APPENDIX E

Chairman McKeon. Dr. Moats.

**STATEMENT OF DR. LOUISA MOATS, PROJECT DIRECTOR, NICHD,
UNIVERSITY OF TEXAS AT HOUSTON, EARLY INTERVENTIONS PROJECT,
WASHINGTON, DC**

Dr. Moats. Good morning. It is a privilege to speak to you today, not only as a researcher, but as a former teacher and a current teacher of teachers. From any vantage point, the need to improve teacher quality is obvious and urgent. The question is how best shall this be done.

My comments today focus primarily on lessons learned from our professional development program in nine intervention and three comparison schools in the District of Columbia. Seven of the intervention schools targeted as assistance schools all have a high level of children in poverty.

Our goal is to enable teachers in the early grades to teach children to read. Success for us is measured by two criteria: one, teachers demonstrate the knowledge base and skills to accomplish the job at hand; and, two, the children in their classes achieve at grade level or better.

During the first year of our project, the 29 first grade classes as a whole raised their scores 25 percentile points on average to above the 51st percentile. We hope the results will be even better this year. The NICHD-funded research we conduct includes a strong emphasis on teacher course work, observation, consultation, and collaboration. To this end, our motto is, "Know your stuff, know who you are stuffing, and stuff children systematically at every moment possible."

The following principles appear to be those most influential in the successes we have achieved: Number one, professional development must be informed by a clear delineation of the content knowledge and procedural knowledge that expert teachers need. Effective teachers must know the essential components of instruction, why they are important, how these components are related to one another, and how to teach each one well.

We justify the practices we advocate with reference to research that represents the consensus findings of the field. It is essential to begin with a coherent advisory, as have the States of California, Illinois, Texas, and Virginia, and I am sure others, that defines the major findings of reading research and what they mean in practice.

With a clear definition of research-based practice, policymakers can adopt standards for teachers, students, and teacher-trainers and then proceed with the enterprise of instructional improvement. Without a core curriculum for teacher preparation, fads will come and go; and schools will continue to buy "edutainment" packages from workshop vendors that have minimal impact on teacher behavior.

Our teachers in D.C. like the fact that our courses teach a comprehensive framework for action within which the individual lessons and activities will fit. They expect, given the comprehensive agenda we have constructed, to work toward mastery in increments over the year and more.

Second, the content of the courses must be aligned with student performance standards, classroom curriculum and programs and student assessment. Our success with teachers varies in D.C. sometimes we are frustrated when there is no immediate carryover between what we teach the teachers and what they do in their classes.

We have learned that there must be direct continuity between what we teach them in class, and what their instructional materials ask them to do with their children. For example, we taught teachers about phonemic awareness during the first year of the study, but it was not until we gave teachers a supplementary program manual, a test that measured the skills taught and practiced carrying out specific activities, that the teachers were likely to apply what we had taught them.

If the teachers' job is to implement best, then best practice must be consistently defined, as it is in the California reading initiative, and must be consistently represented in instructional materials, curriculum standards, assessments, and teacher preparation courses. It is the confusion and discontinuity of past practice that has been very discouraging for teachers.

Third, there must be constant interplay between actual practice with children, and formal classroom study of psychology, pedagogy and content area knowledge.

Fourth, teachers need incentives, recognition, and rewards for doing well. Some of the incentives we have used are small stipends for afterhours course work, thanks to Congress, credits for participating in training, positive comments from the observers, visits to classes, citation of highly-successful teachers within our program group, the use of those teachers to mentor their peers, donations of free books and instructional materials for completion of tasks and positive verbal acknowledge for the efforts teachers are making.

In summary, quality professional development shall be one aspect of a system-wide program of change, class size reduction should be one dimension of systemic reform. Quality teacher preparation and professional development should be another. Training will most likely improve teaching and raise achievement if it is long term, comprehensive, continuous, aligned with research, aligned with standards and assessments, and if it teaches teachers to do specific things for which they have a purpose. Thank you.

[The statement of Dr. Moats follows:]

WRITTEN TESTIMONY OF DR. LOUISA MOATS, PROJECT DIRECTOR, NICHD, UNIVERSITY OF TEXAS AT HOUSTON, EARLY INTERVENTIONS PROJECT, WASHINGTON, DC – SEE APPENDIX F

Chairman McKeon. Thank you. This has been very enlightening. We had a hearing last week, and we asked all of the witnesses, what is the most important element in learning, and all of them agreed that the teacher was Number 1. Do any of you disagree with that? Yes, Doctor?

Dr. Bauman. If I could put a qualifier on that. Yes, with inquiry-based science and problem-solving mathematics, then the classroom becomes critical as far as how the children learn. I don't see the teacher necessarily being the conduit of knowledge, but being able to create a classroom environment where inquiry or problem solving can occur, so long as that doesn't mean that the teacher is the one that puts the knowledge in the kid's head that creates the environment for the learning to occur.

Chairman McKeon. You can lead a horse to water; you can't make him drink. But the right kind of teacher can make them want to drink, and the wrong kind of teacher can make them not want to drink. So we would agree on that.

And then the question is, how do you get all teachers to that achieve at that level? And that is like saying how do you get all policemen to be the best policemen, or how do you get all physicians to be the best? I think in all fields, we have different levels of competency. What we are trying to do with this is come up with some way to help to raise all teachers' competencies and professionalism.

Most of your testimony is directed towards in-service, which is teachers that are already practicing teachers. We will have another hearing where we will be looking for developing teachers that you will then take to another level. It sounds like the money's spent. The Eisenhower and the other programs are kind of evenly divided; some is spent.

How was that divided up, that \$1.5 billion?

Dr. Shaul. The \$1.5 billion was divided on a number of different dimensions: one, was between programs that focused exclusively on teacher training, that is, about 38 percent of the funds, with the remainder on programs that have broader purposes, but where teacher training represents a significant activity.

Chairman McKeon. But this is all for in-service; this is all teachers--

Dr. Shaul. To answer the in-service question, about 78 percent of the funds were devoted to in-service primarily. The agencies reported that about 6 percent of the funds were devoted primarily to preparing teachers, and then there was a mix. The remainder of the programs said there was sort of an equal amount between the preservice and in-service. I think that was about 16 percent of the funds. So the majority is for in-service.

Chairman McKeon. I forget who mentioned now, the criteria that you use in hiring teachers.

Dr. Seremet. That might have been me.

Chairman McKeon. What do you look for in hiring a teacher?

Dr. Seremet. We look for alignment of their training program with the Maryland State accountability standards. Have they received training on both content and pedagogy? Do they know what to teach and how to teach it? But, frankly, that is the second thing.

The first thing we look for is someone who is really passionate about working with children. We can teach the content and the pedagogy, we cannot teach that attitude.

Chairman McKeon. So whether or not they have the attitude is the number one characteristic you look for?

Dr. Seremet. That is number one. We would really like to have one and two as they come in with their transcript ready to be hired. But the reality for us is they do not have number two. And we have to do intensive beginning teacher training programs to transition from a college preparation program into practice in their first and second and third year of teaching.

Chairman McKeon. You find no teachers coming out of the university that are prepared?

Dr. Seremet. No, no; but there is certainly a gap between university training programs and current practice in the field in terms of the student outcomes and expectations, and accountability standards. It is particularly difficult in Maryland, where Maryland only trains about half of the teachers that she hires, which means we go to other States and other parts of the country to get them and they are obviously not being trained on Maryland accountability standards and content standards.

Chairman McKeon. Thank you.

Dr. Seremet. You are welcome.

Chairman McKeon. Mr. MartinezError! Bookmark not defined..

Mr. Martinez. Thank you, Mr. Chairman. I would like to expand on the last question that the Chairman asked, and that you responded to, because it is the second time this issue has come up -- the first time from somebody on the other side of the country, California -- that the field experiences that are provided to teacher candidates in colleges and institutions of higher education are not like situations that they would actually encounter in the classroom.

As a result, many teachers come to the classroom ill-prepared for what they encounter there, especially like in rural areas. And so, they get discouraged because they weren't expecting to encounter those kinds of situations, and they weren't taught how to

deal with them. They then either leave the teaching profession altogether, or they try to find a school district where they won't encounter those kinds of situations.

And sadly, I don't think there is any place you go today, even in the rural or suburban areas, where you will not encounter difficulties in the classroom. I believe we should prepare our teachers better.

However, you say that you have overcome this problem by providing in-house training when they come to you from these colleges. How does that work?

Dr. Seremet. I am not sure I would say we overcome that. I would say that is a major priority for us, that the transition period in the first two years for a teacher, from their college preparation program until they become a tenured teacher with us, is one of very intense training. We do summer programs and extended day programs for them. It is a critical transition for them.

The internship, the student teaching experience, most of our beginning teachers tell us isn't long enough for them, and they don't really have their own classroom. They come in; they work with a cooperating teacher, but things like parent conferencing and classroom management strategies, in addition to the content and pedagogy, are areas that they really need time on their own to learn those skills. It is not something that is learned in a classroom in isolation of the students.

Mr. Martinez. I have a question for the entire panel, while I don't expect an answer right now, I would like you to think about it. How can we, at the federal level, provide incentives for districts to provide quality teacher training? You might be able to help us with that.

Dr. Shaul, I was looking at appendix 2 of your report, the index of 40 programs that you categorize as receiving or providing significant teacher training. And I am wondering how you came up with this list -- when in some instances it says training obligations are unknown, or percentage of funds not available. So, how could you know what they were providing?

Then in one case you list a program as providing significant teacher training -- I am referring to the fund for the improvement of postsecondary education -- when only four percent of the funds are used for teacher training. How does that qualify as significant? I can see where Goals 2000 or local education systemic improvement grants, which dedicate 36 percent of their funds to teacher training, how I would consider that significant. But how do you compare 4 percent to 36 percent as significant?

Furthermore, there is one program here that you have listed as being one of the 40 programs that receives no funds for teacher training. The Ellender Fellowship receives no funds for teacher training, and it doesn't appear to have any training obligations. How can you list this as significant teacher training?

There are certainly some on this list that I agree with. For instance, the International Education Exchange at 60 percent and the Aerospace Education Program at 50 percent. But even with the aerospace program -- it is hard for me to imagine how you

lump it in with education programs, because it is specially dedicated to aerospace and it is part of that program exclusively.

But you do have some that I would consider very significant, like the Educational Exchange Teachers from secondary and postsecondary levels and the Fulbright program which provides 100 percent teacher training. 100 percent is significant. Forty-nine percent is significant. But how do you come to the conclusion that programs that receive no funding at all are significant?

Dr. Shaul. Let me try and answer that question. The methodology that we use to group the programs into three credit categories was one which we went through the catalogue for domestic assistance which describes programs. Then we sent surveys to each of the agencies and asked them about their programs.

We asked them to categorize whether their program in their opinion had as a focus, a significant focus, teacher training. Whether it was an exclusive, a significant focus or whether it was an allowable activity but that it was not significant from their perspective. They weren't necessarily making it on the determination of the percentage or the number of dollars.

For example, if you take Title I, the Education Department classifies that as an important program, a significant program for teacher training, but only 2.5 percent of that program is spent on teacher training, although it is \$190 million.

Now, the other point to mention is that many of these programs have local discretion, and so the decision in one year could be to devote most of the program to teacher training or 50 percent or 30 percent. In another year it could be zero. So this represents the fiscal year 1999 plan.

Mr. Martinez. You are telling me then, that your study is based on self-declared information. That reminds me of a story that is not related to this at all, but there is an analogy. When I first came to work here in Washington, D.C. and I hired all my staff people, a magazine reporter called my office and asked for the names of my employees. And based on the names of my employees, he determined what ethnicities were represented I had in my office.

Now, there was a woman by the name of Ms. Grant who happened to be a Native American. He listed her as anglo. There was a woman named Mrs. Bowman who happened to be black. He listed her as white. Because of the name Bowman, he assumed she was white. It is the same thing here.

Instead of self-declaration, the purpose of a study like this is to allow us to consolidate programs and eliminate those programs that aren't effective. However, I don't think, that based on this chart and information, that I am willing to do that. I think we need to use a different methodology in determining which are significant programs and which are not significant programs.

Dr. Shaul. If I might add, these are preliminary results, and we certainly intend to delve deeper into programs. This represents sort of the big map rather than the in-depth boring in on the individual.

Mr. Martinez. I am looking forward to a more definitive answer.

Dr. Shaul. Thank you.

Chairman McKeon. When will we have that report?

Dr. Shaul. Later this year. Where we are right now the next thing we would be providing under the update of the previous 1995 report would be something more specific on the purposes of these programs.

Our intent would be essentially a follow-the-dollars strategy where we would look first in our study at the 12 programs that are exclusively devoted to teacher training and then look at a fairly small number of programs in the significant list that have substantial numbers of dollars, to begin looking at those issues.

Chairman McKeon. Thank you very much. Mr. Ehlers.

Mr. Ehlers. Thank you, Mr. Chairman, and thank you to the panel. I appreciate your testimony and the broad spectrum of backgrounds represented on the panel. It is very helpful to us.

I am going to zero in on just one area, and that is math/ science education, but I will ask each of you to respond to these questions if it relates to your area of work.

Three questions. First one is, we spend a lot of money in the Federal Government on professional development and other activities, and yet our student performance in math and science has not been good. It has gone down in some places. It barely held its own in other places. Why? What's your opinion of why that is true?

Second question, of all the activities that you are aware of in the various departments, and there are quite a number of departments as we have seen from Dr. Shaul's report, how does the performance or the results of these various programs, activities, et cetera, compare to those from the National Science Foundation programs?

Now remember, we are restricting it just to math and science programs. In other words, all the Department of Education programs, health and human services, agriculture, all the various programs listed, what is the impact and the beneficial effect of those programs compared to the beneficial effect from the National Science Foundation programs?

And my final question, what is the best way, in your mind, in your professional judgment, to improve student performance in math and science? Are we taking the right track? For example, I noticed almost all the programs are in service training rather than preservice. Should we do much more with preservice training? I am just asking what in your mind, in your professional judgment, is the best way to improve student performance in math and science. I eagerly await your answers.

Dr. Bauman first.

Dr. Bauman. If I can jump in on that. I will try to answer them. First question, why isn't student achievement where we would like it to be? If we use the TIMS data, it shows that we start off pretty well and we kind of decline from there on out. We can use that data to look at different things that we are doing in the classrooms from the teaching and also from the curriculum standpoint.

In our work, we are really focusing on the areas that TIMS data shows where we are lacking, such as mathematics, geometry, becoming more focused; and a piece of our professional development is helping teachers become more focused on their teaching and what they are teaching so they go in greater depth without a Jeopardy trivia-type of rote answering of multiple topics so they go in depth on fewer topics. The professional development needs to coincide with that.

Two, of all the activities, how do results compare from like NSF projects? NSF projects tend to be fairly narrow in their focus and they also tend to focus on specific regions. In our area, we don't have NSF-funded projects.

We could be likened to what they do, but we use all private money. We don't have access to their funds right now. So, therefore, we can use the information learned from them and implement it in our region but also using additional dollars from the Federal Government, such as Eisenhower, which is very important. Had that not been there, I don't think we'd be doing what we are doing.

Best way to improve math and science, focus on content, curriculum, and the professional development to match it and the materials and equipment that go along with it. They all go hand in hand.

Mr. Ehlers. Thank you. Dr. Birman?

Dr. Birman. I can only elaborate on some of the points because I am in agreement with Dr. Bauman on many of them.

Why is student performance not good, again, echoing Dr. Bauman? The TIMS study indicates that there is a lot of repetition of fairly basic skills over the life of the student and not enough focus on depth knowledge of content area and, that is why we think that the performance of students goes down as the years progress.

Or in the data, fourth graders do better or eighth graders do better than twelfth graders in mathematics. We feel that one reason is that teachers don't have that depth of

content focus either and, therefore, cannot teach the students as well as they need to.

So one of the things that we found in our study is that focusing on content knowledge, not just the subject area but also how students learn the subject, how students think about mathematics or science, and what kinds of misconceptions students bring. That kind of very detailed professional development seems to be the best bet with regard to helping students to achieve better.

With regard to your second question comparing to NSF, there is very little actual information with regard to outcomes. In fact, we feel that our study is one of the first that deals on a national level with professional development looking at teachers' performance and outcomes.

There was a study not just of NSF but of many exemplary programs throughout the government, and we find that the IHE portion of the Eisenhower program, for example, does about as well with regard to reported teacher outcomes as those exemplary programs. The district part of the Eisenhower program doesn't do quite as well, though we are finding that there are some improvements in the district part of that program as well.

Regarding the best way to improve student performance: I think I would agree again that the focus on content would be key and then the professional development that would support that would have to occur over a long time frame to help teachers to engage with students or to actually look at what students are doing; professional development that links the learning of teachers to other activities to standards and assessments and so forth.

Those kinds of things we feel are the best ways to improve teaching and ultimately student performance. But frankly, there are very few studies. We conducted a literature review with regard to the effect of professional development on student performance and found virtually a handful of studies that looked at that issue.

Mr. Ehlers. Dr. Seremet, you look like you are eager to get in.

Dr. Seremet. I was just going to elaborate on your last question if I could. Regarding the best way to improve student learning, what we found in our district is that teachers need to see the direct connection between their student assessment results, how are the kids doing on unit tests and final exams and the State or the national standards, and that their professional development must be embedded in their daily work design for them to make that connection.

A summer workshop is an excellent beginning to getting strong content knowledge background, but embedded professional development has to be the instructional strategies, the appropriate use of materials and being able to engage in experimentation and reflection. Coaching with their principals needs to be embedded in day-to-day work so team planning time, before and after school time, use of monies and comprehensive school reform models where we don't separate curriculum from assessment from instructional strategies from grouping practices and school organization

practices.

Teachers live in the real world every day in their classrooms and need to have a holistic approach in their school building to their own professional development and the connections in seeing their students' results.

Mr. Ehlers. Thank you.

Chairman McKeon. Mr. Owens.

Mr. Owens. Thank you. I think you have touched on it already, but I would like to go a little further. Dr. Seremet, you said that many of your teachers don't come from Maryland. You implied that those who have been trained in Maryland and come out of the colleges are prepared adequately because you have certain kinds of standards. Did I hear you correctly?

Dr. Seremet. Actually, we are finding there is still some struggle there even for those trained in Maryland. Our partners in higher education at the university level are revising their curriculum and teaching strategies to make sure that Maryland teacher ed. candidates are receiving that training, but frankly it is not at all unusual for us to hire a new teacher who doesn't know the Maryland State Assessment Program, the accountability standards and practices.

Mr. Owens. In Maryland, you would say you are having considerable success in preparing teachers who can come out of the undergraduate education, go into the classroom, and work well in a short period of time?

Dr. Seremet. As long as we have the opportunity for that transition period during their beginning time.

Mr. Owens. I am asking because I have been on this Committee for 17 years, and I have been hearing over the 17 years that this is a case where undergraduate education just can't prepare you. Many people argue that you must have graduate education. Teachers need more time. They need to be professionally trained in much the same manner that doctors and lawyers are trained in order for them to really be able to carry out their duties and functions, and I thought you were saying that it can be done in a four-year program.

Dr. Seremet. It can be, especially if there is a good balance and practicum work as well as course work at the university level, the sooner the student teachers get into the schools and have an opportunity to observe and begin practice teaching in their sophomore and junior and senior years in college and not simply wait.

Mr. Owens. There is some kind of almost obvious thing that they are not doing that they should be doing. Like they obviously should provide more practical training in the undergraduate years than the senior year? They should do more than the practical training that they get now?

Dr. Seremet. And I think we are seeing movement in that area.

Mr. Owens. A simple low-cost solution like that has eluded them for 17 years? No, I am sorry. Dr. Birman, you said that there have been very few national studies of professional development. Can you elaborate on that a little bit?

Are you saying that we have a thrust where we are calling for national testing for students, national curriculum, national standards, but we have not really focused much on how to train teachers? The Federal Government needs to do more to encourage professional development, to encourage a better approach to professional development? We haven't done all we can do?

Dr. Birman. Well, certainly we don't know as much as we could know about the professional development of teachers nationwide. A lot of the information about professional development is in very small studies, some of them very useful but still studies of a few teachers or a few schools or even one or two school districts.

There is very little national information, say, from a national sample such as the data we collected; a national sample of teachers or a national sample of school districts where you could really get a picture across the country of how districts compare to one another, of how teachers' experiences compared to one another.

Mr. Owens. None of this has come out of the OERI-funded labs and centers over all these years we have funded those labs and centers? We don't have some good comprehensive national studies?

Dr. Birman. I don't know of one, though I could defer to Dr. Garet to see if he has anything to add.

Mr. Garet. I am Michael Garet, deputy director of the Eisenhower evaluation. What we really lack are studies that look at the link between professional development, teachers' teaching practices, and student achievement. That is probably the single lack, the greatest lack in the field of professional development.

These are not easy studies to do for reasons you can imagine. But studies that do that well within disciplines, within math, within science, within reading, there are studies.

Mr. Owens. Thank you. Dr. Bauman, you wanted to comment?

Dr. Shaul, you stated your study included programs that support teacher training in a variety of ways such as providing books and other supplies. I want to know how many of the 87 programs support professional development versus how many actually provide professional development. Some support is kind of vague, but how many actually would you say are doing professional development?

Dr. Shaul. Of the 87 programs that we looked at, there were a total of 51 that either had teacher training, professional development as their soul focus, or who said that that was an important or significant part of their activities.

I would say the 36 programs that simply allow for teacher training probably are not providing a great deal of professional development. They reported to us, although sometimes they didn't have data. The data that we do have would show that it is less than 1 percent of the total Federal investment.

Mr. Owens. The numbers, again, 51 you said out of the 87 provide actual professional development?

Dr. Shaul. Correct. That is right.

Mr. Owens. What's the other figure, 36?

Dr. Shaul. Thirty-six programs that we identified as possibly supporting teacher training reported that that was an allowable expense under their program but that it was not a significant activity, so I would count those 36 programs as providing a very, very, very small amount of professional development.

Mr. Owens. My time is up. Thank you, Mr. Chairman.

Chairman McKeon. Thank you. Chairman Goodling.

Chairman Goodling. This Committee has been pretty hard on teacher training institutions the last several years. We hope that you are all making them understand that they have to do a far better job preparing teachers for the 21st century. I don't know how much we can do, but obviously it is necessary.

Dr. Shaul, you don't know how much pain and suffering the General Accounting Office has caused me over 24 years: 700 education-related programs spread over every agency in downtown; 160 job training programs spread over 30 some agency departments; 13 agencies, 87 programs, some support for teacher training.

Unfortunately, we have what is called the pride of authorship, which is very important in the Congress of the United States, and we are having a difficult time

breaking that down. I have given up. I used to run over when I am sitting in my office listening to someone introduce a program on the floor, and I would run over and say I know you realize we already have that program on the books. The answer was always, well, one more won't hurt. And I guess one more won't hurt; but oh my, if we could ever get them coordinated, we could probably spend money far better. So you do your job well because I am pained and I am suffering.

Dr. Birman, I was glad to hear you talk about content focus. I have said many times I hired an awful lot of elementary teachers, many of which had very little math and science in high school and none in college, and they are expected to teach all subjects and somehow or another turn youngsters on to math and science at an early age when they've never been turned on themselves.

So we have been telling that to the teacher training institutions also, how important that is, particularly for those -- well, for all teachers. But if the elementary teacher has to teach all subjects, they should have something more than how to teach a course in math. It doesn't do you much good knowing how to teach if you don't know the content.

And Dr. Bauman, I was glad to hear your emphasis on the importance of Eisenhower for you to leverage other money. You said something about 125 hours, and I wasn't sure whether you were saying that in your programs that it is a 125-hour program.

I mention that primarily because I am always happy when I am down here on the day that my wife, who has been teaching for 40 years, is having an in-service day, because then I don't have to go home at night and hear, how could they ever take me away from my students and send me to something as stupid as that and as meaningless as that. Were you saying if you complete your program, it is 125 hours?

Dr. Bauman. Spread out over a three-year period, and that is summers and during the school year. We feel it is very important that there is continuity and building upon each additional session. So teachers are out of the classroom any way from two to four days during the school year, spend up to four or five days during the summer depending upon the cycle thereon within the institute.

Chairman Goodling. My experience, personally. And then what I hear from my wife is so many times it is three, four, five hours of something, whatever.

Dr. Bauman. These are full-day sessions with the teachers. Two weeks ago, one teacher as she was packing up her equipment and going back to the classroom told me that when she told her students she was leaving the next day, the response was, cool, does that mean you are coming back with more of that science stuff for us to do. So the students automatically are noting the connection to what she's doing as well.

Chairman Goodling. Dr. Seremet, I was glad to hear you indicate Ed Flex has helped you with your professional development.

Dr. Seremet. It has been essential for us.

Chairman Goodling. We hope that all States will take advantage of this new opportunity they will have.

Dr. Moats, I complimented you on what appears to be happening in D.C., the schools in which your project is included. I wanted to ask Mr. Abdullah what do you attribute that to, because as I look at the statistics the schools you are in and in relationship to the schools you are not in in D.C., there seems to be tremendous increase in scores as far as reading is concerned. What do you attribute that to?

Mr. Abdullah. We attribute it to the focus on teacher training and professional development. Our students are doing better on tests. My colleague at Garrison elementary school in Northwest, Mrs. Abney, a student scored above the national norm in reading last year. This was primarily do to the implementing of the NICHHD program which focuses on teacher training, professional development, and abundance of rich literature, mentoring, and tutoring support for our students.

Chairman Goodling. Are you finding that most of these teachers you are working with really had very little preparation in how to teach reading, for instance? Either Dr. Moats or Mr. Abdullah?

Mr. Abdullah. From my own personal perception, I had very little training in how to teach children how to read prior to the NICHHD program, and I expect most of our teachers receive very little teaching training in teaching children how to read also.

Chairman Goodling. We had a first grade teacher testify last year, and she said the only reading course she had in college was her professor said that if you can read, you can teach anybody to read. I thought boy, for 50 percent of the students that are going to be in front of her, she's going to find the shock of her life. Dr. Moats?

Dr. Moats. If I could explain why I invited Mr. Abdullah to come to this hearing. Not only has he weathered two years of our course work, but when we started, the first workshop we did it was Mr. Abdullah who came up to me tearfully saying Dr. Moats, if anybody had ever taught me these things about how to teach children to read, I know that the students I have been working with for the last three years would be achieving so much better than they did.

And he talked to me about his frustration not knowing what to do. And I think he is a completely transformed teacher. He was one of those who had been teaching and had all the right attitudes and commitment and dedication to his job, but he simply had not been given good training or materials and now the results are very different.

Chairman Goodling. Thank you.

Chairman McKeon. Thank you. Mr. Tierney.

Mr. Tierney. Thank you, Mr. Chairman. I want to thank all the members of the panel for sharing your thoughts with us and your testimony today.

Dr. Seremet, let me just ask. You mentioned the comprehensive school reform at the top. What have your observations been on the role that teacher development has made in most of the comprehensive school reform programs that you might have come across? Is that a large component of many of the programs?

Dr. Seremet. It is a large component. We are a school district of 12 schools. Six of our 12 schools are in comprehensive school reforms. Three are successes for all, and three are modern red schoolhouses; and for us as a district, the blessing of comprehensive school reform is that it comes as a package.

The curriculum, the assessment, the professional development, the grouping strategies, the leadership training, all of it comes as part of the best practices research base that Dr. Moats talked about, so that a busy, building school principal isn't having to pull all of the research and try to put the elements together. It has made a significant impact in our district.

Mr. Tierney. I'm glad to hear you say that. I think the only shame of that is that it hasn't gone from a demonstration program to implementation. We have to do something about that.

Dr. Moats, how important is it for a teacher seeking professional development to have connection to an academic institution? Is that a necessary part of the development?

Dr. Moats. No, I don't feel it is, especially with what is being offered through academic institutions at the present time. In fact, unfortunately, in the field of reading, some of the best training for teachers is available through private vendors, if you will, or just institutions that have perfected the art of teaching teachers how to teach children to read.

I think, in fact, it is the private sector and the consumers who are having an influence now on what universities are offering, and it has been the pressure from those who need to know and get the job done that has actually transformed teacher preparation in colleges.

Mr. Tierney. Who serves as a clearinghouse, or somebody, that can inform school districts of what is available out there? How does a principal know or a group of teachers know just what is available for professional development from time to time?

Dr. Moats. In my view, it is really haphazard, hit or miss; and there really is not a good mechanism for informing principals.

Mr. Tierney. Dr. Seremet, do you have any ideas how that might be improved somehow? I don't know if it is a role for us necessarily but what schools might do to enhance the objectives.

Dr. Seremet. I can tell you as a school district what we do is use the comprehensive school reform legislation that has nine key criteria for what quality programs look like, and we write our professional development strands in each school improvement plans.

So the principal and the teachers look at their student achievement needs and determine where the gaps of knowledge are for the students and then match to the research best practices what professional development would align with that.

Mr. Tierney. That professional best practice actually serves as a resource so that if you go to one of the programs, they'll know--

Dr. Seremet. If it is a comprehensive school reform model they will. Otherwise, we depend on our principals, and in our district five supervisors, to be screening the Internet and the professional journals to make sure we are matching truly what are research base best practices and not just the fad of the month.

Mr. Tierney. Did you want to say something?

Dr. Bauman. In our region for math and science education, three times a year we publish all of the different opportunities provided in our region for teachers in math and science. Those items must be aligned with the standards and must follow inquiry-based science. So the districts receive everything from higher ed, nonprofits, in one booklet three times a year of what is available for them.

Mr. Tierney. To whomever might want to answer this, what's the role of distance learning in this? Is there any role at all that you see coming into play here? Do you envision one for teachers to take advantage of their professional development through distance learning? Apparently it hasn't had a real big impact on anybody.

Dr. Seremet. It is sort of one in a menu of options for us.

Mr. Tierney. But it is out there? Do you have a feel of whether it is something that people are looking at favorably or unfavorably, something they're bashful about or shy of?

Dr. Seremet. Our folks are a little shy. Some of our adult learning theory and experiences are that people learn best in interactive kinds of settings and that is sometimes still to them a distance learning experience.

Mr. Tierney. Thank you very much, everybody. Thank you, Mr. Chairman.

Chairman McKeon. Thank you. Mr. Isakson.

Mr. Isakson. Mr. Chairman, I know we have to leave, and I wouldn't want these folks to come back just for my questions. I will make an observation, and Dr. Moats can tell me if I am right or wrong. When Congressman Owens made his comment about teacher preparation when he served for 17 years, I have become convinced that the single most important thing we can do to improve teacher training in public education would be to require every college of education and every professor in it to teach one out of every three or four years in the public schools of the United States of America.

There is a disconnect between theory and the applied technology of teaching children to which Dr. Moats' program is a specific example; and you tell me if I am wrong, Doctor, but there are three components you have in your program for reading. Number one, your college of education or your instructors at the University of Houston, yourself anyway, must have been involved in the D.C. schools by actually going into them and working with those teachers; is that correct?

Dr. Moats. Yes.

Mr. Isakson. Number two, the biggest deficiency in America in teaching reading is that there is not the option for our teachers to use phonics as well as whole language and other practices. And from reading what you have here, you introduced both those techniques and made them available as an optional best practice for the teachers; is that correct?

Dr. Moats. We are requiring that all the teachers know how to teach all of the components well including phonemic awareness and phonics. It is not an option for us. It is a necessity.

Mr. Isakson. That is the implication of what I meant. And third and last, Mr. Chairman, I only observed the most expensive Federal or State program in the United States of America and public education, which is reading recovery. The largest single contribution to school dropouts in America is the inability of a child to read, therefore bringing about low self-esteem and many of the other problems.

So I commend what you are doing. I hope you will make it available to others as we develop programs, one to get universities back in gauge with actually teaching in the classroom or observing it; and, two, focusing on reading. With that, Mr. Chairman, I

won't go any further so we can vote.

Chairman McKeon. Thank you, Mr. Isakson. I thank you on the panel for being here and as has already been said, we are again in the middle of another vote. Will you please watch what we are doing as we go through this process. If you think of something you didn't get a chance to say that you would like in the record, please get it to us. And if you see something that you would like to see that we are not doing, please get it to us so we can get that in the record of the bill that we are working on. Thank you very much.

[Whereupon, at 12:12 p.m., the Subcommittee was adjourned.]

**APPENDIX A - WRITTEN OPENING STATEMENT OF CHAIRMAN HOWARD
P. "BUCK" McKEON, SUBCOMMITTEE ON POSTSECONDARY
EDUCATION, TRAINING AND LIFE-LONG LEARNING, COMMITTEE ON
EDUCATION AND THE WORKFORCE, U.S. HOUSE OF REPRESENTATIVES,
WASHINGTON, DC**

Opening Statement of Chairman Buck McKeon (R-CA)

Hearing of the
Subcommittee on Post-secondary Education,
Training and Life-long Learning

2175 Rayburn House Office Building
Wednesday, May 5, 1999
10:30 a.m.

Ladies and Gentlemen:

Good morning, and welcome to this Subcommittee's second in a series of hearings focused on issues related to teacher quality.

Let me begin by noting that this is Teacher Appreciation Week. I know that several of our witnesses are, or have been, teachers and I'm sure we have at least a few teachers in our audience. To each of you, I thank you for your dedication to our nation's children.

(35)

Last week we heard from a broad spectrum of witnesses who all stated unequivocally, that teacher quality is the most important factor in student achievement. A question perhaps far more difficult to answer is, "how do we make sure that every teacher is of "high quality?" Although there are many views on this question, today we will take a close look at the role professional development can play in making sure that all teachers have the knowledge necessary to be highly effective.

We will begin by examining the role of the Federal government in providing funds for professional development. Additionally, we will take a much closer look at the largest federal program dedicated to this area -- the Eisenhower Professional Development Program. In focusing on this program we will hopefully get a better understanding of its' strengths and weaknesses from both a national as well as local perspective.

However, the Eisenhower Program is often only a piece of a broad array of professional development programs administered by school districts. To learn more about how these, along with state and local programs, are coordinated, and the difficulties in doing so, we have the opportunity to hear from an exemplary local school official.

Additionally, we will have the opportunity to hear the tremendous benefit that an effective professional development program can have upon both teachers and entire schools.

I wish to thank each of our witnesses for taking time to be with us and I look forward to their testimony.

At this time, I would yield to the ranking member for any statement that he might have.

**APPENDIX B - WRITTEN TESTIMONY OF DR. MARNIE S. SHAUL,
ASSOCIATE DIRECTOR, EDUCATION AND EMPLOYMENT ISSUES,
GENERAL ACCOUNTING OFFICE, WASHINGTON, DC**

GAO

United States General Accounting Office

Testimony

Before the Subcommittee on Postsecondary Education,
Training, and Life-Long Learning, Committee on Education
and the Workforce, House of Representatives

For Release on Delivery
Expected at 10:30 a.m.
Wednesday, May 5, 1999

TEACHER TRAINING

**Over \$1.5 Billion Federal
Funds Invested in Many
Programs**

Statement of Marnie S. Shaul, Associate Director
Education, Workforce, and Income Security Issues
Health, Education, and Human Services Division



GAO/T-HEHS-99-117

(41)

Teacher Training: Over \$1.5 Billion Federal Funds Invested in Many Programs

Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss our ongoing work for the Subcommittee concerning federally funded teacher training programs. Over the last few years, teacher training has been recognized as an important component of education reform in the United States. In 1994, the Congress passed the Goals 2000: Educate America Act, which established a national goal of providing teachers with access to programs to continually improve their teaching skills. To help achieve this goal for the 3 million elementary and secondary school teachers in the United States, an array of federal programs support teacher training. Some of these programs were established several years ago, and others more recently. In addition, the Administration is proposing new teacher training programs in its fiscal year 2000 budget request. In light of the role that teacher training has in education reform, it is important to know whether current programs are effectively configured to meet national goals and the extent to which they are achieving these goals.

Today, my testimony will focus on two main topics: (1) the number of agencies and the programs they administer that support teacher training, along with some general characteristics of these programs, and (2) the funding provided by these programs. I will also discuss some of the challenges posed by the number and diversity of programs in determining whether they are achieving desired outcomes. My statement is based on our preliminary observations from a study that we are conducting at your request.

For this study, we reviewed programs listed in the Catalog of Federal Domestic Assistance (CFDA) and sent a survey to agencies administering programs that support training for elementary and secondary school teachers. Our survey was designed to classify programs by the extent to which they supported teacher training and obtain information on the types of training and amount of funding they provided to support teacher training. The Department of Education is still reviewing funding data for a few programs included in our review.

In summary, our preliminary results indicate that 13 agencies administer 87 programs that support teacher training to varying degrees. The Department of Education administers the majority of these programs. The programs support training in a variety of ways, including paying for training-related materials, such as books on teaching strategies, and teachers' travel expenses associated with attending conferences.

Teacher Training: Over \$1.5 Billion Federal Funds Invested in Many Programs

Federal funding for teacher training is estimated to exceed \$1.5 billion during fiscal year 1999. Education's programs account for over 86 percent of total funding.

- Over \$579 million will be provided by programs that agencies classified as focusing exclusively on supporting teacher training.
- About \$933 million will be provided by programs that agencies classified as supporting teacher training to a significant degree. For example, according to the Department, teacher training is an important activity of the title I program, but the program's primary purpose is broader—to provide services to educationally disadvantaged children.
- Funding estimates are generally unavailable for programs where teacher training is an allowable but not a significant activity.

The number and diverse nature of programs—as well as the number of agencies responsible for administering them—create challenges in determining whether the programs are achieving national goals. Coordination among programs and agencies as well as the conduct of program evaluations are essential, given the diversity of existing programs. The Results Act can provide a structured approach to such coordination and evaluation activities and help measure progress toward achieving national goals. For example, agencies' annual performance plans can provide important information on how agencies are tracking and evaluating program results. We will be developing information in this area as we continue with our review.

Thirteen Agencies Administer 87 Programs That Support Teacher Training

Based on our survey, 13 agencies administer 87 programs that support teacher training. While some of these programs were created specifically for the purpose of supporting teacher training, many others support teacher training as a means of achieving other purposes. As a result, the extent to which the programs support training varies. We asked agencies to classify their programs into three categories based on these differences: (1) programs designed exclusively to support teacher training, (2) programs that support a significant amount of teacher training but also support other activities, and (3) programs that allow teacher training but such training is not significant compared to other program activities. Table 1 shows how agencies classified the 87 programs into these three categories.

Teacher Training: Over \$1.5 Billion Federal Funds Invested in Many Programs

Table 1: Classification of 87 Programs That Support Teacher Training, Based on Amount of Training Provided

Agency	Program supports training exclusively	Program supports a significant amount of training	Program allows training
Department of Education	8	28	26
Department of Agriculture	0	0	1
Department of Interior	0	0	2
Department of Health and Human Services	1	3	1
National Aeronautics and Space Administration	2	1	0
National Science Foundation	0	1	0
Corporation for National Service	0	1	1
Environmental Protection Agency	0	0	2
National Endowment for the Arts	0	0	2
National Endowment for the Humanities	0	2	0
United States Information Agency	0	3	0
James Madison Memorial Fellowship Foundation	1	0	0
United States Institute of Peace	0	0	1
Total	12	39	36

As shown in table 1, four agencies administer 12 programs that are designed only, or exclusively, to support teacher training. Education administers eight of these programs, which includes the Eisenhower State Grant program, the largest teacher training program. Under this program, most funds are allocated to school districts through states, while 15 percent is provided competitively through states to higher education institutions and nonprofit agencies. All of these funds are used to promote teacher training, primarily in math and science.

Seven agencies administer 39 programs that are designed to achieve purposes other than just teacher training but support a significant amount of teacher training, according to survey respondents. These programs include Education's title I program, which provides financial support to states and school districts for programs designed to address the needs of

educationally disadvantaged children, especially in high-poverty areas. Title I funds may be used for a variety of expenses to achieve program purposes, such as employee salaries and computer equipment, as well as for teacher training. Another example of a program in this category is the National Aeronautics and Space Administration's (NASA) Aerospace Education Services Program. The purpose of this program is to increase public awareness and understanding of scientific research and technological development. As a part of this program, NASA funds workshops for K-12 teachers intended to improve science teaching and learning and thus help achieve program purposes.

Finally, eight agencies administer 36 programs that allow teacher training as an activity but do not provide a significant amount of teacher training compared with other program activities. Education, for example, classified its Fund for the Improvement of Education Program in this category. Under this program, Education awards grants on a competitive basis to support a wide variety of activities intended to further education reform and improve teaching and learning. While the program may support teacher training, such training is only one of many activities funded under the program. Another example of a program in this category is the Environmental Protection Agency's (EPA) Environmental Education Grants Program. Under this program, EPA provides grants to educational institutions and nonprofit organizations to address a wide range of environmental issues. These organizations can use funds to study and assess specific environmental issues or problems. Grantees may also provide teacher training for K-12 teachers and other educators.

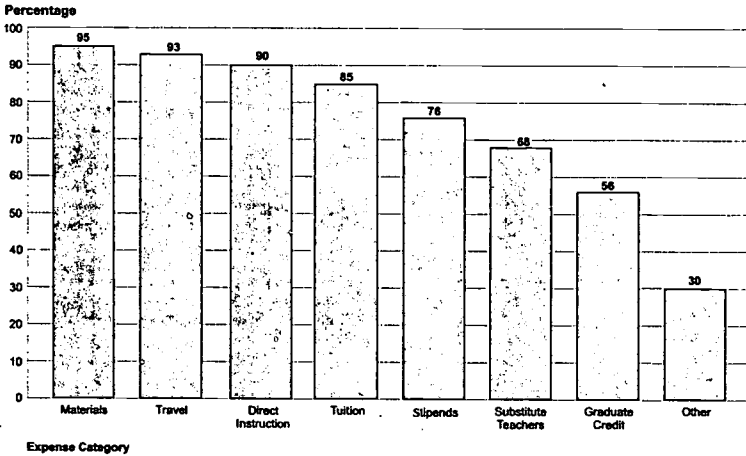
Across all three categories, the majority of programs are designed to support training for teachers who already teach (in-service training) rather than those preparing to become teachers (preservice training). Our survey indicated that of the 87 programs, 78 percent primarily support in-service training and 6 percent primarily support preservice training; 16 percent support both in-service and preservice training about equally. Appendixes I through III identify each agency's programs and the types of training supported, by program category, respectively.

In general, programs support teacher training by providing funds that can pay for a variety of training-related expenses. The most frequently reported eligible use of funds was for materials, such as books on teaching strategies (95 percent of programs), followed by travel, such as transportation and accommodation costs for attending conferences (93 percent of programs). Other uses included direct instruction, tuition,

Teacher Training: Over \$1.5 Billion Federal
Funds Invested in Many Programs

stipends, release time by paying for substitute teachers, and graduate credit. (See fig. 1.)

Figure 1: Percentage of Responses by Eligible Expense Category

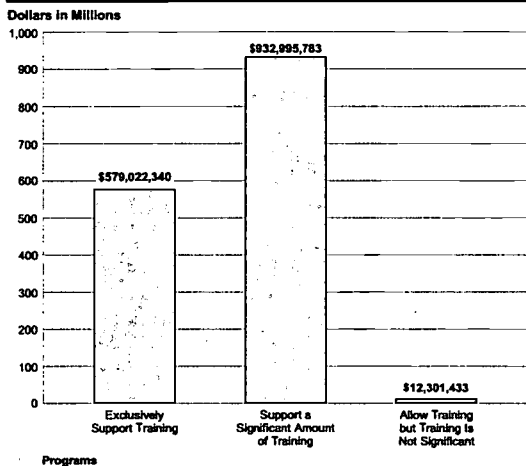


Over \$1.5 Billion Will Support Teacher Training in Fiscal Year 1999

Agency officials estimate that at least \$1.5 billion dollars will be used to support teacher training in fiscal year 1999. Education's programs account for over 86 percent of total funding. As figure 2 shows, programs that support teacher training exclusively account for 38 percent of total estimated funding. Programs that support a significant amount of teacher training account for over 61 percent of total estimated funding, while programs that allow teacher training account for less than 1 percent. However, officials for many programs—especially those that allow teacher training—were unable to estimate the amount of funds used to support teacher training.

Teacher Training: Over \$1.5 Billion Federal Funds Invested in Many Programs

Figure 2: Share of Estimated Fiscal Year 1999 Teacher Training Funding Contributed by Three Program Categories



Education Provides Nearly All the Funding for Programs That Exclusively Support Teacher Training

Funding for the 12 programs designed exclusively to support teacher training totals over \$579 million; Education's programs provide nearly all of these funds. Table 2 lists the number of programs and funding levels that exclusively support teacher training, by agency.

Teacher Training: Over \$1.5 Billion Federal
Funds Invested in Many Programs

Table 2: Number of Programs Administered and Estimated Funding Provided by Programs That Exclusively Support Teacher Training, by Agency

Agency	Number of programs	Estimated funding for teacher training	Share of total funding for category
Department of Education	8	\$574,365,000	99.2
Department of Health and Human Services	1	1,000,000	0.2
National Aeronautics and Space Administration	2	2,678,940	0.5
James Madison Memorial Fellowship Foundation	1	978,400	0.2
Total	12	\$579,022,340	100.1*

*Total does not add due to rounding.

Education's Eisenhower State Grant Program, funded at \$355 million for fiscal year 1999, accounts for over half of the total funding for programs in this category. Appendix I provides the funding levels for each of the 12 programs in this category.

Over Half of Total Estimated Funding Is Provided by Programs That Support Teacher Training to a Significant Extent

Programs that support teacher training to a significant extent—but are not designed exclusively to support teacher training—are estimated to provide almost \$933 million for training in fiscal year 1999. As shown in table 3, Education's programs provide about 79 percent of this funding.

Teacher Training: Over \$1.5 Billion Federal Funds Invested in Many Programs

Table 3: Number of Programs and Funding for Programs That Provide a Significant Amount of Support for Teacher Training, by Agency

Agency	Number of programs	Estimated funding for teacher training	Share of total funding for program category
Department of Education	28	\$735,925,452	78.9
National Science Foundation	1*	173,230,000	18.6
National Endowment for the Humanities	2	7,236,000	0.8
Department of Health and Human Services	3	5,552,303	0.6
United States Information Agency	3	4,547,528	0.5
National Aeronautics and Space Administration	1	3,324,500	0.4
Corporation for National Service	1	3,180,000	0.3
Total	39	\$932,895,783	100.1*

*The National Science Foundation reported information on two projects using a single survey because both projects are listed under one program listing in CFDA.

*Total does not add due to rounding.

Of the estimated \$933 million in teacher training funding from programs in this category, over 60 percent will be provided by four Education programs: title I (\$191 million); Goals 2000 (\$167 million); title VI, Innovative Education Program Strategies (\$43 million); and the Class-Size Reduction Program (\$180 million).¹

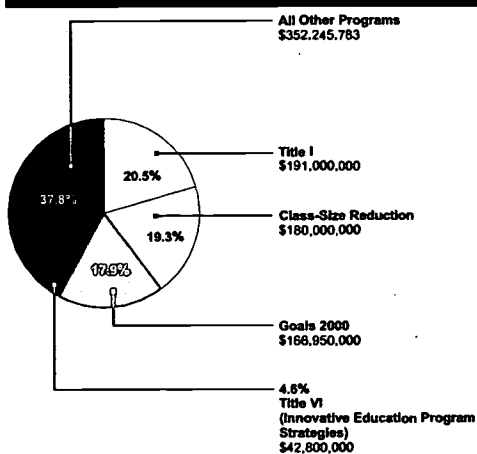
Total program funding and the proportion of program funds used for teacher training varies considerably among these four programs. For example, the estimated \$191 million of title I funds used to support teacher training represents less than 3 percent of the nearly \$8 billion program. On the other hand, the estimated \$167 million of Goals 2000 funds used to support teacher training represents about 36 percent of this program's total funding of \$491 million. While proportionally small, the amount of title I funds supporting teacher training (\$191 million) is significant compared to other programs, including the \$335 million Eisenhower State Grant program, the largest program designed exclusively to support teacher training.

¹The Class-Size Reduction Program allows up to 15 percent of funds to be used for teacher training. The program received \$1.2 billion for fiscal year 1999, the only year it has been funded. The Administration is requesting additional funding for fiscal year 2000.

Teacher Training: Over \$1.5 Billion Federal Funds Invested in Many Programs

Figure 3 shows the share of total estimated funding for this category of programs contributed by each of these four programs and all other programs.

Figure 3: Proportion of Funding Provided by Four Education Programs of Total Funding for Programs That Provide a Significant Amount of Teacher Training Support, Fiscal Year 1999



While these four programs contribute a significant amount of funds to support teacher training, the programs provide states and localities flexibility in how to use the funds, including whether to support teacher training or other activities. Consequently, overall funding used to support teacher training can vary from year to year. Under the Goals 2000 program for example, states in aggregate used about 37 percent of their fiscal year 1995 funds (about \$110 million) and about 44 percent of their fiscal year 1996 funds (about \$151 million) to support teacher training. In each of these 2 fiscal years, more than a dozen states used most of their Goals

Teacher Training: Over \$1.5 Billion Federal Funds Invested in Many Programs

2000 funding to support teacher training, while nearly as many states did not fund teacher training at all.² Appendix II provides the funding levels of programs that respondents classified in this program category.

Many Respondents Unable to Estimate Funding Amounts Provided by Programs That Allow but Do Not Significantly Support Teacher Training

Training-related funding estimates for programs that allow teacher training but do not provide a significant amount of training were generally unavailable. Because teacher training is not a significant focus of these programs, agency officials often do not collect such detailed data. Of the estimates provided by agency officials, amounts ranged from \$130,000 under the United States Institute of Peace's International Peace and Conflict Management Research and Education program to almost \$5,000,000 under the Corporation for National Service's Learn and Serve America Program—a school-and community-based program. Appendix III provides the funding levels, if available, for each program in this category.

Tracking Progress Toward National Teacher Training Goals Is as Important as It Is Challenging

As we have shown, during fiscal year 1999, the federal government will invest over \$1.5 billion in programs that provide or support teacher training. An investment of this magnitude makes it important to know whether programs are achieving desired results. However, such a determination is not easy because of the number of agencies and programs involved. It is made even more difficult because a significant portion of the federal investment is made through programs that have objectives broader than only supporting teacher training, such as Education's title I and Goals 2000 programs. Such programs may not be designed to measure performance in areas as specific as teacher training.

As part of our ongoing review, we plan to assess whether identified federal programs are effectively configured to achieve national goals. One vehicle for doing this is by reviewing agencies' efforts under the Government Performance and Results Act of 1993. The act's emphasis on results implies that federal programs contributing to the same or similar outcomes should be closely coordinated, consolidated, or streamlined, as appropriate, to ensure that goals are consistent and that program efforts are mutually reinforcing.

Annual performance plans, required under the act, are an appropriate place for agencies to identify multiple programs—within and outside the agency—that contribute to the same or similar goals and to describe their

²These data were obtained during a prior study that resulted in our report *Goals 2000: Flexible Funding Supports State and Local Education Reform* (GAO/HEHS-99-10; Nov. 18, 1998).

coordination efforts so that goals are consistent and program efforts are mutually reinforcing. Through a preliminary review of Education's fiscal year 2000 plan, we learned that the Department—which administers a majority of the programs and the funds that support teacher training—has taken steps to address this issue internally. For example, Education notes in its plan that it has created a cross-office "professional development team" to share information and strategies in an effort to coordinate the Department's teacher training programs. Education's plan also describes efforts to coordinate with other federal agencies, such as the National Science Foundation. We will review in more detail Education's and other agencies' efforts in this regard as we continue our work.

Other sources of information for assessing program effectiveness are agencies' strategic plans required under the Results Act. These plans are to include descriptions of program evaluations used to develop their plans and provide a schedule for future evaluations. Such evaluations can provide important information not only for tracking agencies' progress toward achieving their performance goals but also for identifying particularly effective program strategies or best practices. Based on our preliminary review of its plan and evaluation activities, Education has also taken steps in this regard. For example, Education is currently funding a 3-year national evaluation of its Eisenhower program that is expected to provide information that could be used to measure its progress toward achieving established performance goals. The study is designed to provide information such as (1) the types and quality of teacher training provided under the program, (2) the characteristics of teachers who participate in funded training, and (3) the contribution such training makes toward teachers' instructional practices.

In addition to providing information useful for managing the Eisenhower program, such an evaluation, combined with others, could be useful for informing an overall federal strategy. Evaluation results could be used to guide teacher training activities conducted under other programs, where such program evaluations might not normally be undertaken. For example, Education recently reported that few data are available concerning the quality of teacher training activities funded under its title I, Innovative Education Program Strategies (title VI), or Bilingual Education (title VII) programs. Given the size of the investment made in teacher training through these programs—over \$280 million during fiscal year 1999—it is important to ensure that teacher training funded under these programs use available resources effectively. We will also be reviewing these and similar issues as we proceed with our study.

Teacher Training: Over \$1.5 Billion Federal
Funds Invested in Many Programs

Mr. Chairman, this concludes my prepared statement. I would be happy to answer any questions that you or other Members of the Subcommittee may have.

Appendix I

Programs Classified by Agencies as Exclusive Teacher Training Programs, by Type of Service Provided and Estimated Fiscal Year 1999 Funding

CFDA number	Agency program	Primary training type			FY 1999 funding ^a
		Preservice	In-service	Both about equally	
Department of Education					
84.168	Eisenhower Professional Development— Federal Activities		X		\$23,300,000
84.195	Bilingual Education—Professional Development			X	50,000,000
84.281	Eisenhower Professional Development—State Grants		X		335,000,000
84.286	Telecommunications Demonstration Project for Mathematics		X		5,000,000
84.299	Indian Education—Professional Development			X	1,865,000
84.336	Teacher Quality Enhancement Grants	X			77,200,000
84.342	Preparing Tomorrow's Teachers to Use Technology	X			75,000,000
84.928	National Writing Project		X		7,000,000
Department of Health and Human Services, National Institutes of Health					
93.113	K-12 Teacher Enhancement and Development		X		1,000,000
James Madison Memorial Fellowship Foundation					
85.500	James Madison Memorial Fellowship Program			X	978,400 ^b
National Aeronautics and Space Administration					
None	NASA Educational Workshops		X		1,603,940
None	NASA Opportunity for Visionary Academics	X			1,075,000

^aFunding estimates are preliminary.

^bFunding represents the amount estimated for teacher training; program funding is derived from interest earned on U.S. securities.

Appendix II

Programs Classified by Agencies as Programs That Provide Significant Teacher Training, by Type of Service Provided and Estimated Fiscal Year 1999 Funding

CFDA number	Agency program	Primary training type			FY 1999 program funding ^a		
		Preservice	In-service	Both about equally	Total funding	Training obligations	Percent of funds
Corporation for National Service							
94.005	Learn and Serve America—Higher Education	X			\$10,750,000	\$3,180,000	29.6%
Department of Education							
84.002	Adult Education—State Grant Program		X		365,000,000	36,500,000	10.0
84.004	Civil Rights Training and Advisory Services		X		7,334,000	Unknown	NA
84.010	Title I Grants to Local Educational Agencies		X		7,676,020,000	191,000,000 ^b	2.5
84.013	Title I Program for Neglected and Delinquent Children		X		40,311,000	Unknown	NA
84.021	International: Overseas Group Projects Abroad		X		2,325,430	930,172	40.0
84.083	Women's Educational Equity Act Program		X		3,000,000	Unknown	NA
84.116	Fund for the Improvement of Postsecondary Education			X	50,000,000	500,000	1.0
84.203	Star Schools		X		45,000,000	22,500,000	50.0
84.206	Javits Gifted and Talented Students Education Grant Program		X		6,500,000	Unknown	NA
84.276	Goals 2000—State and Local Education Systemic Improvement Grants (Goals 2000 State Grants)		X		461,000,000	166,950,000 ^c	36.2
84.283	Comprehensive Regional Assistance Centers		X		28,000,000	Unknown	NA
84.289	Bilingual Education—Program Enhancement Grants		X		9,818,043	Unknown	NA
84.297	Native Hawaiian Curriculum Development, Teacher Training and Recruitment			X	4,800,000	500,000	10.4
84.298	Innovative Education Program Strategies		X		375,000,000	42,800,000 ^b	11.4
84.302	Regional Technical Support and Professional Development Consortia		X		10,000,000	8,500,000	85.0
84.303	Technology Innovation Challenge Grants		X		115,100,000	Unknown	NA
84.304	International Education Exchange		X		7,000,000	4,200,000	60.0

(continued)

Appendix II
 Programs Classified by Agencies as
 Programs That Provide Significant Teacher
 Training, by Type of Service Provided and
 Estimated Fiscal Year 1999 Funding

CFDA number	Agency program	Primary training type			FY 1999 program funding*		
		Preservice	In-service	Both about equally	Total funding	Training obligations	Percent of funds
84.318	Technology Literacy Challenge Fund Grants		X		425,000,000	Unknown	NA
84.319	Eisenhower Regional Mathematics and Science Education Consortia		X		15,000,000	11,800,000	78.7
84.320	Alaska Native Educational Planning, Curriculum Development, Teacher Training and Recruitment Program			X	5,030,000	327,780	6.5
84.323	Special Education—State Program Improvement Grants for Children With Disabilities			X	35,200,000	Unknown	NA
84.325	Special Education—Personnel Preparation to Improve Services and Results for Children With Disabilities	X			82,139,000	68,000,000	82.8
84.332	Comprehensive School Reform Demonstrations		X		145,000,000	Unknown	NA
84.338	Reading Excellence		X		260,000,000	Unknown	NA
84.340	Class-Size Reduction		X		1,200,000,000	180,000,000	15.0
84.929	Civic Education		X		7,500,000	1,417,500	18.9
None	Arts in Education		X		10,500,000	Unknown	NA
None	Elder Fellowships		X		1,500,000	0	0
Department of Health and Human Services, Centers for Disease Control and Prevention							
93.865	Cooperative Agreements to Support Comprehensive School Health Programs to Prevent the Spread of HIV and Other Important Health Problems		X		49,422,582	5,166,933	10.5
Department of Health and Human Services, National Institutes of Health							
93.279	Drug Abuse Research Programs		X		1,958,989	Unknown	NA
93.938	Early Interventions for Children With Reading Problems			X	2,154,334	385,370	17.9

(continued)

Appendix II
 Programs Classified by Agencies as
 Programs That Provide Significant Teacher
 Training, by Type of Service Provided and
 Estimated Fiscal Year 1999 Funding

CFDA number	Agency program	Primary training type			FY 1999 program funding ^a		
		Preservice	In-service	Both about equally	Total funding	Training obligations	Percent of funds
National Aeronautics and Space Administration							
43.001	Aerospace Education Services Program		X		6,649,000	3,324,500	50.0
National Endowment for the Humanities							
45.162	Promotion of the Humanities—Education Development and Demonstration		X		4,875,000	3,900,000	80.0
45.163	Promotion of the Humanities— Seminars and Institutes		X		6,465,000	3,336,000	51.6
National Science Foundation							
47.076	Education and Human Resources			X	662,000,000	173,230,000	26.2
United States Information Agency							
82.012	Teacher Exchange— New Independent State Partners in Education		X		1,550,000	930,000	60.0
82.013	Educational Exchange— Teacher From Secondary and Postsecondary Levels (Fulbright Programs)		X		3,117,528	3,117,528	100.0 ^d
82.034	Exchange—English Teaching Fellows			X	1,007,848	500,000	49.6

Note: "Unknown" denotes that survey respondents were unable to estimate the amount of funding dedicated to teacher training; "NA" denotes that a percent is not applicable.

^aFunding estimates are preliminary.

^bThe source of these estimates is Education's 1999 report *Federal Education Legislation Enacted in 1994: An Evaluation of Implementation and Impact*.

^cThis was the estimate provided in response to our survey. However, in its 1999 report, Education estimates that \$187 million will be used for teacher training.

^dAlthough 100 percent of program funding is used to support teacher training, at least 75 percent of funds are used for stipends to assist foreign teachers with living expenses in the United States.

Appendix III

Programs Classified by Agencies as Programs That Allow Teacher Training, by Type of Service Provided and Estimated Fiscal Year 1999 Funding

CFDA number	Agency program	Primary training type			FY 1999 program funding*		
		Preservice	In-service	Both about equally	Total funding	Training obligations	Percent of funds
Corporation for National Service							
94.004	Learn and Serve America—School- and Community-Based Programs		X		\$32,250,000	\$4,837,500	15.0%
Department of Agriculture, Food, and Nutrition Services							
10.574	Team Nutrition Grants		X		4,000,000	Unknown	NA
Department of Education							
84.011	Migrant Education—Basic State Grant Program		X		346,189,000	Unknown	NA
84.018	International: Overseas Seminars Abroad—Bilateral Projects		X		1,123,400	748,933	66.7
84.027	Special Education—Grants to States		X		4,310,700,000	Unknown	NA
84.048	Vocational Education—Basic Grants to States			X	1,013,128,950	Unknown	NA
84.051	Vocational Education—National Activities		X		13,497,000	3,660,000	27.1
84.060	Indian Education—Grants to Local Educational Agencies		X		62,000,000	Unknown	NA
84.144	Migrant Education—Coordination Program		X		8,500,000	Unknown	NA
84.162	Immigrant Education		X		150,000,000	Unknown	NA
84.173	Special Education Preschool Grants		X		373,985,000	Unknown	NA
84.184	Safe and Drug-Free Schools and Communities—National Programs		X		125,000,000	Unknown	NA
84.186	Safe and Drug-Free Schools and Communities—State Grants		X		441,000,000	Unknown	NA
84.196	Education for Homeless Children and Youth			X	28,800,000	Unknown	NA
84.210	Native Hawaiian Gifted and Talented			X	2,000,000	200,000	10.0
84.213	Even Start—State Educational Agencies		X		125,250,000	Unknown	NA
84.214	Even Start—Migrant Education		X		4,050,000	Unknown	NA
84.215	Fund for the Improvement of Education		X		147,000,000	Unknown	NA
84.229	Language Resource Centers		X		2,450,000	Unknown	NA

(continued)

Appendix III
 Programs Classified by Agencies as
 Programs That Allow Teacher Training, by
 Type of Service Provided and Estimated
 Fiscal Year 1999 Funding

CFDA number	Agency program	Primary training type			FY 1999 program funding*		
		Preservice	In-service	Both about equally	Total funding	Training obligations	Percent of funds
84.243	Tech-Prep Education		X		106,000,000	Unknown	NA
84.257	National Institute for Literacy			X	6,000,000	Unknown	NA
84.258	Even Start—Indian Tribes and Tribal Organizations		X		2,025,000	Unknown	NA
84.282	Charter Schools		X		100,000,000	Unknown	NA
84.288	Bilingual Education—Program Development and Implementation Grants		X		16,512,243	Unknown	NA
84.290	Bilingual Education—Comprehensive School Grants Program		X		90,624,010	Unknown	NA
84.291	Bilingual Education—Systemwide Improvement Grants		X		42,062,579	Unknown	NA
84.293	Foreign Language Assistance		X		6,000,000	Unknown	NA
84.995	School-to-Work National Activities		X		250,000,000	2,150,000	0.9
Department of Health and Human Services, National Institutes of Health							
93.389	Research Infrastructure		X		5,994,000	Unknown	NA
Department of Interior, Bureau of Indian Affairs							
15.042	Indian School Equalization Program		X		308,518,000	Unknown	NA
15.043	Indian Child and Family Education		X		5,513,000	Unknown	NA
Environmental Protection Agency							
66.950	Environmental Education and Training Program		X		1,625,000	Unknown	NA
66.951	Environmental Education Grants		X		2,470,000	575,000	23.3
National Endowment for the Arts							
45.024	Promotion of the Arts—Grants to Organizations and Individuals		X		38,770,480	Unknown	NA
45.025	Promotion of the Arts—Partnership Agreements		X		27,686,000	Unknown	NA
United States Institute of Peace							
91.001	International Peace and Conflict Management—Research and Education		X		13,506,000*	130,000	1.0

(Table notes on next page)

**Appendix III
Programs Classified by Agencies as
Programs That Allow Teacher Training, by
Type of Service Provided and Estimated
Fiscal Year 1999 Funding**

Note: "Unknown" denotes that survey respondents were unable to estimate the amount of funding dedicated to teacher training; "NA" denotes that a percent is not applicable.

*Funding estimates are preliminary.

†The Institute of Peace was unable to provide funding at the program level. The funding amount shown represents the total funding for the agency.

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**APPENDIX C - WRITTEN TESTIMONY OF DR. BEATRICE F. BIRMAN,
DIRECTOR, NATIONAL EVALUATION OF THE EISENHOWER
PROFESSIONAL DEVELOPMENT PROGRAM, AMERICAN INSTITUTES FOR
RESEARCH, WASHINGTON, DC**

**Testimony Before the Subcommittee on
Postsecondary Education, Training, and
Life-long Learning — Committee on Education
and the Workforce**

U.S. House of Representatives

**The Eisenhower Professional
Development Program:
Preliminary Findings from a
National Evaluation**

Statement of:

Beatrice F. Birman, Ph.D., Director
National Evaluation of the Eisenhower Professional Development Program
American Institutes for Research

Wednesday, May 5, 1999

(65)

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Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss preliminary findings from the National Evaluation of the Eisenhower Professional Development Program. I am Beatrice F. Birman, Director of the National Evaluation of the Eisenhower Professional Development Program (ESEA, Title II, Part B, State and Local Activities). I am accompanied by Michael S. Garet, the Deputy Director of the Evaluation. We both will be happy to answer any questions you may have after I present my testimony.

The professional development of teachers is a crucial element of the nation's efforts to improve education. Over the last decade, states and school districts have adopted high standards for student knowledge and performance.ⁱ National, state, and local reform efforts seek a fundamental shift in what students learn and how they are taught. None of these reforms will succeed without good teachers who are immersed in their subjects and who know how to foster both advanced thinking and problem solving among their students.ⁱⁱ

The Eisenhower program is the largest of the Department of Education's efforts to develop teachers' competence.ⁱⁱⁱ Part B, with a 1999 appropriation of about \$335 million, awards funds to states and districts on the basis of a formula and to institutions of higher education and nonprofit organizations through state-run competitive grant programs.^{iv} The funds are earmarked to provide teachers with opportunities to learn more about the content and processes of teaching mathematics and science, with allowable expenditures for work in other content areas when the total exceeds \$250 million.^v Allowable activities are wide-ranging and include workshops and conferences, study groups, professional networks and collaboratives, task force work, and peer coaching.

In its 1994 reauthorization of the program, the U.S. Congress makes explicit that Eisenhower-funded activities should be designed to improve teacher practice, and, ultimately, student performance. The law incorporates a number of strategies to achieve this overarching goal.

First, *the reauthorized Eisenhower program is aimed at supporting high-quality professional development activities*. Both the EPDP legislation and the program guidance published by the Department of Education emphasize that the Eisenhower program should fund professional development that is sustained, intensive, ongoing, and of high quality. Such professional development should reflect recent research on teaching and learning, and should provide teachers and other school staff with the knowledge and skills necessary to provide all students with the opportunity to meet challenging standards. Further, these provisions are reflected in ED's performance indicators for the Eisenhower program, which fulfill one of ED's requirements under the Government Performance and Results Act (GPRA).^{vi}

In addition to requiring that EPDP funds support sustained and intensive professional development activities, *the reauthorized Eisenhower program intends to ensure that professional development activities supported with Eisenhower funds include and target teachers of at-risk students*. Reflecting the strong emphasis in education reform efforts and in federal programs on increasing access to a high quality education for all students, the 1994 legislation states that state applications and local plans should take into account the educational needs of students from historically underrepresented populations. Furthermore, the Eisenhower legislation places special emphasis on addressing the needs of teachers in schools receiving Title I, Part A funds; generally these are schools that have higher rates of poverty than other schools in their districts.

Third, *the reauthorized Eisenhower program intends to integrate Eisenhower-funded activities with other reform efforts*, as reflected in the law, program guidance, and program indicators. Recent efforts to improve education have focused on ensuring that all aspects of the education system—including curriculum, assessments, teacher education—be consistent with one another and geared toward the same goals. Reflecting this focus, the law requires that Eisenhower-funded professional development activities be aligned with challenging state and local standards and coordinated with education reform and professional development efforts funded by federal, state, and

local governments and other public, private, and nonprofit organizations and associations. Such integration of EPDP-funded activities with other reform efforts would presumably strengthen the quality of those activities by gearing them to challenging standards and by allowing the combining of funds from several sources to support the design of higher-quality activities. The law's requirements for co-funding of professional development activities promote linkages between Eisenhower-funded activities and those funded from other sources.

Finally, *the reauthorized Eisenhower program contains provisions intended to foster ongoing tracking of progress by states and localities, supported by performance indicators.* A number of the law's requirements encourage state education agencies (SEAs) and local education agencies (LEAs) to engage in a continuous improvement process, grounded in careful goal-setting and in monitoring progress. The 1994 law establishes detailed requirements for state and local planning under the Title II program. A key aspect of state and local plans is the requirement that states and districts that receive Eisenhower funds establish performance indicators—a requirement that echoes the requirement in GPRA that ED establish performance indicators for all of its programs. In both GPRA and the ESEA, indicators based on results are used to facilitate more data-driven planning, evaluation, and program management.

In February 1997, the U.S. Department of Education's Planning and Evaluation Service commissioned the American Institutes for Research (AIR) to conduct a three-year evaluation of Part B of the Eisenhower Professional Development Program. The evaluation was designed to: (1) *Describe Eisenhower-funded activities and evaluate their effects,* and (2) *Provide information related to performance indicators that ED developed for the program in response to GPRA requirements.* GPRA requires ED to determine the program's performance in relation to its goals and objectives.

This national evaluation is using a multiple-method strategy to collect quantitative and qualitative data about Eisenhower-funded activities. The data come from a variety of sources—state and district officials, directors of grants awarded to institutions of higher education and non profit

organizations, and teachers. The evaluation is designed to obtain national data about program-funded activities, to obtain a deeper understanding of how the program works in selected locations, as well as to collect information about how professional development activities affect teacher practice. The study involves three key strands of data collection.

The first strand, a *National Profile*, provides information about program goals, strategies, operations, and activities nationwide. During the 1997-98 school year, we conducted telephone interviews with a nationally representative sample of Eisenhower coordinators in 363 school districts and project directors in 92 institutions of higher education or nonprofit organizations (IHE/NPOs).^{vii} We also collected data from a mail survey of a national probability sample of 1025 teachers who participated in 657 Eisenhower-funded activities.^{viii} These Teacher Activity Survey data describe the types of professional development supported with Eisenhower funds and compare activities sponsored by school districts to those sponsored by higher education institutions and nonprofits.

The second strand of data, a set of *In-depth Case Studies*, provides detailed information on how the EPDP operates in selected states, school districts, and schools. AIR staff visited 10 school districts—two school districts in each of five states: Kentucky, New York, Ohio, Texas, and Washington. The districts were selected to represent a diversity of region, urbanicity, and ethnic composition. The sites also were selected to represent innovative approaches to professional development. Through site visits to the In-depth Case Study districts during the 1997-98 school year, we explored how decisions are made about the use of program funds, and the reasons for variations in goals, operations, and activities across states and districts. The case studies have been a critical source of information about how Eisenhower-funded activities relate to other professional development and education reform efforts, and the degree of coherence and consistency of these efforts. The information they provide expands upon information we obtained during the 1996-97 school year in a set of six exploratory case studies.

The third strand of this evaluation, a *Longitudinal Study of Teacher Change*, examines the effects of Eisenhower-funded and other professional development on teacher practice in mathematics and science. In each of the In-depth case study districts, we interviewed and observed teachers in three schools—an elementary, middle, and high school. We also surveyed all teachers who teach mathematics or science in those schools. During the 1997-98 school year, we conducted two of the three waves of the Longitudinal Study of Teacher Change. During the current school year, the third wave of data from this study is being collected. We also are conducting observations of professional development activities. Our focus on mathematics and science instruction in this phase of the study enabled us to collect valid data about classroom teaching practice, while minimizing the burden on respondents. The Longitudinal Study of Teacher Change will enable this evaluation to examine the extent to which teachers' participation in Eisenhower-funded and other professional development activities changes instruction over time.

The first report of the evaluation, based on exploratory case studies in six school districts, was issued last year. I have brought copies of that report for your information. We are currently preparing the second report of the national evaluation, which is scheduled to be submitted to ED later this month.

Today, I will highlight preliminary findings from the evaluation. I have organized these findings to address some of the research questions with which we began this study.

Do teachers' experiences in Eisenhower-supported professional development activities, in the context of other professional development activities, contribute to teaching practice?

The primary goal of the Eisenhower program is to fund professional development activities that will improve teacher practice. Improved teacher practice rests, in part, on the knowledge and skills that teachers bring to the classroom.

Preliminary analyses of survey data from teachers, collected for the National Evaluation of the Eisenhower Professional Development Program, show that Eisenhower-assisted activities vary in the effects they have on enhancing teacher knowledge and skills. Some teachers report substantial enhancement in their knowledge and skills, while others report much less. On average, the higher education and nonprofit organization part of Eisenhower is producing better results than the district-sponsored part of the Eisenhower program. Sixty-six percent of teachers participating in Eisenhower-assisted activities funded under the district component of the program reported that the activities enhanced their knowledge and skills in instructional methods; 58 percent reported that participation enhanced their knowledge and skills in curriculum content; and 49 percent of participants in district-level Eisenhower activities reported that the professional development deepened their knowledge of math or science content. For the IHE/NPO component of the program, the proportions of teachers reporting enhanced knowledge and skills in these areas were 77 percent, 65 percent and 75 percent, respectively.

I must emphasize that these results are based on teacher self-reported data collected at one point in time, and it is possible that teachers may overstate the degree to which professional development has enhanced their knowledge and skills. The national evaluation of the Eisenhower Program is also collecting longitudinal data on classroom teaching practices for a sample of teachers. When these data are analyzed, they will permit a more rigorous assessment of the extent to which participation in professional development has enhanced teaching skills. Results from this longitudinal study will be available early in 2000.

An important aspect of this national evaluation is that it has attempted to bring to light the features of professional development activities that are related to enhanced teacher knowledge and skills, and changes in teacher practice. These features help to explain why the activities sponsored by institutions of higher education and nonprofits appear more effective than those sponsored by school districts. We found six features of Eisenhower-funded professional development activities

that explain enhanced teacher knowledge and skills, which, in turn, influence changes in teaching practice.

First, a *focus on content knowledge* in Eisenhower-funded professional development activities is directly related to teacher reports that the activities enhanced their knowledge and skills. This finding is consistent with the literature on professional development for teachers that has emphasized the importance of professional development focusing on content knowledge and how children learn that content.^{ix} A recent research synthesis of professional development in mathematics and science conducted for this national evaluation, as well as a study of professional development and student mathematics achievement in California, indicate that professional development that focuses on subject-matter content and how children learn it is more effective in boosting student achievement than professional development that focuses on general classroom practices.^x Case study data indicate that the Eisenhower Program, because of its continued focus on mathematics and science, has played a role in building the capacity of districts to provide professional development activities that focus on subject-matter content in mathematics and science.

Second, Eisenhower-funded professional development that provides teachers with *opportunities for active learning* also is very strongly related to teacher reports that professional development enhanced their knowledge and skills. Features of active learning, such as being observed, sharing knowledge, and evaluating student work, played a key role in fostering learning, according to teachers. Thus, our data are consistent with the literature that teachers benefit from professional development opportunities that go beyond the superficial awareness of new content that they might obtain in short workshops or conferences. Teachers benefit from opportunities to develop, practice, and reflect upon their new knowledge.

Third, Eisenhower-funded professional development activities that are *connected to teachers' other experiences* also are strongly related to enhanced teacher knowledge and skills, and, therefore, to changes in classroom practice, according to teachers. Continuity with teachers' learning goals or

previous learning experiences, and alignment with state and district standards and assessments are critical features of professional development activities that are connected to teachers' other experiences.

Fourth, the *amount of time* (i.e., *number of hours*) that teachers spend in professional development and the *span of time* over which the activity occurs are important features of professional development activities. The literature and the current Eisenhower legislation place a great deal of emphasis on promoting "sustained" and "intensive" professional development activities. However, these features are important for teacher learning primarily because they make it possible for professional development to focus more on content knowledge, opportunities for active learning, linkages with teachers' other learning experiences and goals, and state and district standards and assessments. Time itself is a valuable feature of professional development activities, but only if it is well spent.

Fifth, the *participation in professional development of teachers who teach in the same school, grade, or subject area departments* enhances teacher knowledge and skills, and change in classroom practice. Such collective participation helps support improved teaching because it facilitates active learning, and linkages of the professional development activity with other teacher experiences. The Eisenhower legislation and recent literature on professional development emphasize the importance of school-based professional development, where all teachers in a school are exposed to the same learning activities, and presumably are then able to provide more consistent learning opportunities for children. Our data indicate that school-based participation, and participation of teachers in the same grade or who teach the same subjects, are indeed important in enhancing teachers' reported knowledge and skill, though indirectly.

Finally, *reform types* of Eisenhower-funded professional development activities, such as study groups, teacher networks, or mentoring or coaching activities, tend to produce more positive teacher outcomes than traditional types, like workshops and conferences. This is because reform

types tend to involve more hours and occur over a longer time span than traditional workshops, conferences or courses. One surprise in our analysis is that the “type” of professional development had only a weak direct relationship with teachers’ reports of enhanced knowledge and skills. Whether professional development takes the form of traditional courses or workshops, or more “reform” types of activities, such as study groups or mentoring programs, appears less important than other features of the professional development activities. Reform types of professional development activities are associated with teacher outcomes primarily because they are likely to involve more hours and occur over a longer time span. The duration of the activity in turn affords greater opportunities for focusing on content knowledge, active learning and connections to the teachers’ other learning experiences. However, traditional types of professional development also can occur over a long time span, and involve more hours. If they do, they are likely to be associated with positive teacher outcomes.

What types of professional development activities does the Eisenhower program make available to teachers, and to what extent do these activities represent best practices?

Knowing the features of professional development activities that teachers say are associated with enhanced teacher knowledge and skills enables this evaluation to ask a key question: Do Eisenhower-funded activities have the features that are most likely to enhance the knowledge and skills, and classroom practice of teachers? Our preliminary analyses suggest that Eisenhower activities funded through institutions of higher education and nonprofits are more effective than district-sponsored activities because the IHE/NPO activities are more likely to focus on content, to provide more opportunities for active learning, to be more connected to teachers’ other experiences, to involve a greater number of hours, and to occur over a longer time span.

Teachers who participated in IHE/NPO-sponsored professional development activities are more likely to say that these activities focus on content knowledge than are teachers in district-sponsored activities. Approximately 50 percent of teachers participating in district activities reported

that the Eisenhower-assisted activities placed a major emphasis on content knowledge, and 67 percent of teachers participating in activities sponsored by institutions of higher education and nonprofits reported a major emphasis on content knowledge. The institutions of higher education and nonprofits component of the program also tends to provide more extensive opportunities for active learning, including, for example, opportunities for teachers to practice new methods, according to participants in Eisenhower-funded activities.

The national evaluation also asked teachers about the extent to which Eisenhower-assisted activities were connected to teachers' other experiences. For example, about 54 percent of teachers who participated in district Eisenhower-assisted activities reported that the activities were followed up with other professional development. The latter differs substantially between institutions of higher education and nonprofits, and districts: about 69 percent of teachers in activities sponsored by institutions of higher education and nonprofits reported follow-up professional development.

Finally, the IHE/NPO part of the program also does better with regard to another feature of professional development that is associated indirectly with teacher outcomes, the time span of the activity. About 31 percent of teachers participating in district Eisenhower-assisted activities reported that the activity extended more than one month, while about 61 percent of activities sponsored by institutions of higher education and nonprofits extended for more than one month. Similar differences between district activities and those sponsored by institutions of higher education and nonprofits can also be observed in the total number of hours of instruction provided. *During the 1997-98 school year, district Eisenhower-assisted activities lasted an average of 27.4 hours, while activities sponsored by institutions of higher education and nonprofits lasted an average of 59.2 hours.*

To sum up, the IHE/NPO component of the Eisenhower program appears to be more effective than the district component of the program. This is because IHE-sponsored professional development activities are more likely to reflect best practices, such as greater content focus, more

active learning, connection to teachers' other experiences, increased time span, and number of hours. These findings suggest that districts too could improve the effectiveness of their Eisenhower-supported activities by moving in these directions. In fact, districts appear to have improved the quality of professional development activities since the last evaluation of the Eisenhower Program, at least with regard to the duration of the activities that they support. The number of hours of instruction provided as part of district-level, Eisenhower-assisted activities appears to have more than doubled since 1988-89, when an earlier evaluation of the Eisenhower program was conducted.⁴¹

While on average, districts may have improved some features of their professional development activities since the last reauthorization, the national evaluation's survey of district Eisenhower coordinators indicates that the features of Eisenhower-funded professional development activities vary substantially across districts. For example, while, on average, districts report that 18 percent of participations are in Eisenhower-funded in-district workshops and institutes that last for less than four hours, some districts use all of their Eisenhower funds for short workshops, while other districts do not spend any of their Eisenhower funds in this way. Similarly, virtually all districts use their Eisenhower funds for traditional types of professional development, such as workshops, institutes, and conference attendance; however, some districts manage to use all of their Eisenhower funds for reform types of activities, such as study groups or teacher networks, that are likely to be of longer duration, and have a stronger relationship to teacher outcomes.

Large and high poverty districts are more likely to support activities that have features of high quality. This may be because these districts have more resources. Large districts receive a "critical mass" of Eisenhower funds, and high-poverty districts receive a higher amount of Eisenhower funding per capita. Case data suggest that these resources allow such districts to fund activities that have features of high quality. Resources also help explain why IHE/NPOs can support professional development activities that are longer in duration and have other features of high quality. IHE/NPOs spend over twice as much per participating teacher as districts do. Based on

available national data from annual performance reports, we estimate that IHEs spend about \$512 per participation per year, compared to \$195 for districts.

Who participates in Eisenhower-supported professional development activities?

A major focus of the Eisenhower legislation is on targeting teachers in high-poverty schools. This is because high-poverty schools still have a lower percentage of highly qualified staff than wealthier schools. For example, in 1993-94, teachers lacking a major in their primary assignment taught almost a quarter of the classes offered to students in high-poverty schools, compared with less than 15 percent of classes in low-poverty schools.^{xii} The Eisenhower legislation recognized this need in a number of provisions that encourage districts to make special efforts to provide Eisenhower activities to teachers from high-poverty schools. Data from the national evaluation's survey of district Eisenhower coordinators indicate that 40 percent of teachers are in districts that strongly emphasize recruiting teachers of low-income students, and about 18 percent of teachers are in districts that give some emphasis to recruiting those teachers. Approximately 30 percent of teachers are in districts that strongly emphasize recruiting teachers from Title I schools, and 28 percent of teachers are in districts that place some emphasis on recruiting teachers from Title I schools.

However, preliminary analyses of survey data show that Eisenhower professional development activities are not especially targeted to teachers from high-poverty schools, despite reports of district coordinators. The proportion of district-level Eisenhower participations from high-poverty schools is not much higher than the proportion of teachers across the nation who teach in such schools. Twenty-three percent of Eisenhower district-level participations are from high-poverty schools, and 21 percent of teachers across the nation teach in such schools. Eisenhower-assisted activities sponsored by institutions of higher education and nonprofit organizations are even less targeted to teachers who work in high-poverty schools. Only 13 percent of the participations in the Eisenhower activities sponsored by IHEs and NPOs are from high-poverty schools.

Thus, while such targeting is a good idea, it is not being implemented effectively. While district coordinators report efforts to recruit teachers, tailor professional development activities to their needs, and provide incentives for them to attend professional development activities, they generally do not require that teachers attend professional development activities. Most teachers who participate in Eisenhower-funded activities are volunteers. While volunteering for professional development activities reflects professional development in school districts generally, it does not appear to promote targeting of Eisenhower-funded activities on teachers in high-poverty schools.

As designed, planned, and implemented at the state, district, and school levels, how does the Eisenhower program fit into the mosaic of professional development and other systemic reform activities?

Several provisions of the Eisenhower legislation stipulate that Eisenhower funds should be an integral part of state and district strategies to transform education. The law states that districts must use their Eisenhower funds to provide professional development activities that are aligned with challenging state and local standards. Furthermore, the Eisenhower legislation requires that district Eisenhower-funded activities be coordinated with other sources of funding for professional development, as appropriate. Our data provide support for several key features of the legislation that intend to foster connections between Eisenhower-funded professional development activities and other state and district reform and professional development activities.

Most of the nation's teachers are in districts where Eisenhower coordinators report substantial alignment of Eisenhower-funded activities with state and district standards and assessments. However, case studies illustrate that professional development activities that are aligned with standards and assessments can take many forms. Some can be short activities that heighten awareness of standards and assessments. Others can be more in-depth activities aimed at deepening content knowledge.

Furthermore, most teachers are in districts where coordinators report working with administrators of other federal programs, especially those funded by NSF. For example, among teachers who are in districts that receive both Eisenhower funds and funds from an NSF Urban Systemic Initiative (USI), 86 percent are in districts where the Eisenhower coordinators report that they work closely with USI staff; 86 percent also are in districts where the Eisenhower coordinators report that they co-fund professional development activities with the USI. More than 80 percent of teachers in districts that receive NSF Local Systemic Change funds report coordination among activities supported by Eisenhower and these NSF projects.

To a lesser extent, Eisenhower coordinators also report working with administrators of ED-funded programs, such as Title I, Part A. Overall, among teachers who work in districts that receive both Eisenhower and Title I funds, more than 80 percent are in districts where the Eisenhower coordinators report that they work closely with the Title I staff. However, 50 percent work in districts where Eisenhower coordinators report that they have co-funded activities with Title I. Among teachers who work in districts that receive both Eisenhower and Title III, VI, VII, or Goals 2000 funds, 60 to 80 percent are in districts that report coordination among activities sponsored by Title II and these programs. However, a much smaller proportion of teachers, 28 to 48 percent, are in districts where Eisenhower coordinators report that they have co-funded activities with these programs.

Thus, our data indicate that there is more coordination and co-funding of Eisenhower-funded activities with those of other mathematics and science-oriented initiatives, in comparison with initiatives that do not focus on these subjects. Some ED-funded programs such as Title I, for example, appear likely to focus their professional development efforts on improving reading instruction. This may explain the lower degree of coordination between the Eisenhower-funded professional development activities and those funded by other ED programs.

These findings regarding co-funding of professional development activities are important because districts that report co-funding Eisenhower-supported professional development activities with those of other programs are more likely than other districts to have professional development activities that have features of high quality. Eisenhower-funded activities in these districts tend to have longer duration, offer greater opportunities for collective participation and active learning, and are more likely to be reform types of professional development activities. Such districts also are more likely to report targeting their professional development activities on high-poverty schools. Similarly, districts that report higher levels of alignment with state and district standards and assessments also report more reform types of Eisenhower-funded professional development activities, which tend to be of longer average duration.

Thus, the national evaluation provides support for some key features of the Eisenhower legislation—alignment with standards and assessments and coordination and co-funding with other programs. However, while districts report a “large extent” of alignment between Eisenhower-funded activities and state and district standards and assessments, and that they are likely to coordinate their professional development activities by “working with” other programs, they are less likely to co-fund activities with other programs. Co-funding across programs that fund professional development activities could be related to high-quality professional development because it provides districts with resources that they need to support longer or more intensive professional development activities.

How is the Eisenhower program evaluated?

A group of provisions in the Eisenhower legislation incorporates the federal government's emphasis on program performance and results. These procedures are grounded in a “continuous improvement” approach that has permeated all federal programs in recent years, spurred by the Government Performance and Results Act of 1993. The Eisenhower Program requires that districts set performance indicators for improving teaching and learning through professional development.

Despite these requirements, less than one-third of teachers are in districts with Title II projects that have developed performance indicators. In addition, only about 19 percent of teachers work in districts that are collecting data for Eisenhower performance indicators. It appears that many districts are unaware of the requirement that they do so. Furthermore, case data indicate that for many of those districts that have them, indicators seem to be a perfunctory response to federal and state requirements, not a commitment to data-based decision-making. One reason for this may be a lack of capacity in school districts to collect and analyze the types of data that would make using indicators meaningful. Districts do report providing guidance and overseeing schools and providers of professional development in a variety of ways, from visiting classrooms, interpreting rules, and helping to develop plans for professional development activities. But of all the types of guidance that districts provide, those that involve collecting and using data, such as requiring evaluations or developing indicators, are among the least likely.

Implications for the Eisenhower Professional Development Program

These preliminary findings of the National Evaluation of the Eisenhower Professional Development Program have a number of implications for future legislation and program operations.

First, the program should seek ways to encourage the use of all features of professional development that appear related to teacher knowledge skills and change in practice. The program should continue emphasizing "sustained, intensive" professional development activities, as well as collective participation of teachers in professional development activities. In addition, this evaluation suggests that focusing on deepening teachers' content knowledge, opportunities for active learning, and connections to teachers' other experiences are the most important aspects of professional development.

Second, the program should place greater emphasis on targeting teachers in high-poverty schools. While this is an important goal of the legislation, current approaches appear to be insufficient to achieve this goal.

Third, the program should continue to emphasize alignment with standards and assessments, and co-funding with professional development activities funded by other programs. Such connections with other school reform and professional development activities appear to foster high-quality professional development activities in school districts.

Fourth, the program should pay attention to building district capacity to foster continuous improvement efforts. If using data to make decisions is a serious endeavor, then districts may need assistance in determining the types of data that would be useful, and interpreting them.

Finally, the Eisenhower Professional Development Program has provided continuous support for professional development activities within mathematics and science. This evaluation highlights the importance of the content focus of professional development activities and the role that the Eisenhower program has played in building capacity in these subjects in school districts. Generic professional development that focuses on teaching techniques without a content focus does not appear to be effective. If the Congress is considering expanding the program, it should consider creating analogous programs in other subject areas, rather than eliminating the content focus on mathematics and science.

This evaluation provides a start to understanding the dynamics of professional development. However, the evaluation is only a start. While we have collected detailed information on the planning and implementation of Eisenhower-supported activities, very little information exists about how professional development activities, in general, are planned and implemented in the nation's school districts. Even less is known about the relationship among professional development activities, teacher practice, and the ultimate goal of these activities—student achievement. Future evaluations will have to tackle these issues.

Thank you for the opportunity to testify before your subcommittee. We are currently completing the second report of this evaluation and would be happy to provide you with more information from the evaluation when the report has been completed. I and Dr. Garett would be pleased to answer any questions that you might have.

Endnotes

- ⁱ Bybee, R.W. (1993). *Reforming science education: Social perspectives and personal reflections*. New York: Teachers College Press; National Council of Teachers of Mathematics. (1991). *Professional standards for teaching mathematics*. Reston, VA: Author; National Research Council. (1996). *National science education standards*. Washington, DC: National Academy Press; and Webb, N.L. & Romberg, T.A. (1994). *Reforming mathematics education in America's cities: The urban mathematics collaborative project*. New York: Teachers College Press.
- ⁱⁱ Brophy, J.E. & Good, T.L. (1986). Teacher behavior and student achievement. In M.C. Wittrock (Ed.), *Handbook of research on teaching* (pp. 328-375). New York: Macmillan; Good, T.L. & Brophy, J.E. (1997). *Looking into classrooms* (7th ed.). New York: Addison-Wesley Educational Publishers Inc.; and National Commission on Teaching and America's Future. (1996). *What matters most: Teaching for America's future*. New York: Teachers College Press.
- ⁱⁱⁱ Birman, B.F.; Reeve A. & Sattler, C. (1998). The Eisenhower Professional Development Program: Emerging themes from six districts.
- ^{iv} Eighty-four percent of allocated Part B funds are distributed to state education agencies, which distribute 90 percent of these funds to school districts, by a formula that weights equally the number of children in the state between the ages of five and 17, and the state's allocation under Title I, Part A of the Elementary and Secondary Education Act (ESEA). Sixteen percent of allocated Part B funds are distributed to state agencies for higher education, which distribute at least 95 percent of these funds through competitive grants to institutions of higher education or nonprofit organizations.
- ^v States and districts may apply to the federal government for waivers from most ESEA provisions, including the requirement that the grantee's share of the first \$250 million be spent on math and science professional development.
- ^{vi} GPRA requires ED to establish annual, quantifiable performance goals and indicators for ED programs as part of a strategic planning process.
- ^{vii} The telephone interviews of 363 district coordinators represent a response rate of 88% of sampled coordinators ; the telephone interviews with IHE/NPO project directors represent a response rate of 87% of sampled project directors. Details regarding sampling are in Appendix.
- ^{viii} The mail survey of teachers represent a response rate of 73% of sampled teachers. Details regarding sampling are in Appendix.
- ^{ix} Loucks-Horsley, S., Hewson, P.W., Love, N. & Stiles, K.E. (1997). *Designing professional development for teachers of science and mathematics*. Washington, DC: The Network, Inc.
- ^x See Mary Kennedy. (1998). *Form and Substance in Inservice Teacher Education*. National Institute for Science Education. Research Monograph No. 13. University of Wisconsin; and David K. Cohen and Heather C. Hill. (1998). *Instructional Policy and Classroom Performance: The Mathematics Reform in California*. Consortium for Policy Research in Education. CPRE Report Series RR-39. University of Pennsylvania.
- ^{xi} The 1988-89 evaluation collected data on duration from districts rather than teachers, so a comparison of results from the 1988-89 and 1997-98 years should be interpreted as providing an indication of the general magnitude of the change in hours of instruction rather than a precise numerical estimate. The 1988-89 evaluation reported that, in the median district, activities supported by Eisenhower funds provided an average of six hours of instruction per participant. Preliminary data from the current evaluation indicate that the median duration of Eisenhower-supported activities was about 14 hours in 1997-98. The average of 27.4 hours reported in the text is a mean. (See Knapp, Michael S.; Zucker, Andrew A.; Adelman, Nancy E.; and St. John, Mark. (1991). *The Eisenhower Mathematics and Science Education Program: An Enabling Resource for Reform*. U.S. Department of Education. Page 109).
- ^{xii} Kati Haycock, "Good Teaching Matters: How Well-Qualified Teachers Can Close the Gap," *Thinking K-16*, 3, Issue 2, (1998, Summer): 7-9.

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Education

- Ph.D. 1976, Stanford University, Sociology of Education.
 M.A. 1975, Stanford University, Sociology.
 M.A. 1972, Stanford University, Counseling Psychology.
 A.B. 1969, Barnard College, Sociology.

Employment History

- 1996–present Managing Associate, Pelavin Research Center of the American Institutes for Research, Washington, DC
 1991–1996 Assistant Director, Education and Employment, U.S. General Accounting Office, Washington, DC
 1988–1991 Chief, Research and Development Projects Branch, Office of Special Education Programs, U.S. Department of Education, Washington, DC
 1984–1988 Deputy Director and Director, National Assessment of Chapter 1, Office of Education Research and Improvement, U.S. Department of Education, Washington, DC
 1979–1984 Program Analyst, Office of the Deputy Under Secretary for Planning Budget, and Evaluation, Division of Planning and Technical Support, U.S. Department of Education, Washington, DC
 1977–1979 Policy Analyst, Educational Policy Research Center, SRI International, Menlo Park, CA
 1976–1977 Acting Assistant Professor, School of Education, Stanford University, Stanford, CA
 1969–1971 Research Assistant, Division of Epidemiology, School of Public Health, Columbia University

Selected Papers and Publications

- The Eisenhower Professional Development Program: Emerging Themes From Six Districts (With Alison L. Reeve, Cheryl L. Sattler)*, Prepared for the Planning and Evaluation Service, U.S. Department of Education, 1998.

"Policies for Teacher Learning: Implications of a National Evaluation," paper presented at the annual meeting of the American Educational Research Association, April, 1999.

Formative Evaluation of the Technology Innovation Challenge Grant Program: Case Study Findings (With Bradford Hesse et al.) Prepared for the Office of Educational Research and Improvement, U.S. Department of Education, April 1999.

Toward Assessing the Effectiveness of Using Technology in K-12 Education (With Douglas Levin, Maria Stephens, Rita Kirshstein), Prepared for the Office of Educational Research and Improvement, U.S. Department of Education, March 1999.

The First-Year Implementation of the Technology Literacy Challenge Fund in Five States (With Rita Kirshstein, Sherri Quinones, Douglas Levin, and Maria Stephens), Prepared for the Office of Educational Research and Improvement, U.S. Department of Education, February 1999.

Education Reform: School-Based Management Results in Changes in Instruction and Budgeting (Report, 8/23/94, GAO/HEHS-93-5, with others).

School-Age Children: Poverty and Diversity Challenge Schools Nationwide (Report, 4/29/94, GAO/HEHS-94-132, with others). Testimony on same topic (3/16/94, GAO/T-HEHS-94-25).

Regulatory Flexibility in Schools: What Happens When Schools Are Allowed to Change the Rules (Report, 4/29/94, GAO/HEHS-94-102, with others).

Elementary School Children: Many Change Schools Frequently, Harming Their Education (Report, 2/4/94, GAO/HEHS-94-45, with others).

"The Politics of the National Assessment of Chapter 1 (with Mary M. Kennedy)," *Journal of Policy Analysis and Management*, Vol.8, No.4, 613-632 (1989).

"How to Improve a Successful Program: A Report on the National Assessment of Chapter 1" *American Educator*, Vol.12, No.1, Spring, 1988.

"The Current Operation of the Chapter 1 Program", presentation to the annual meeting of the American Educational Research Association, Washington, DC April 1987.

The Effectiveness of Chapter 1 Services (with Mary M. Kennedy and Randy E. Demaline). Second Interim Report of the National Assessment of Chapter 1, Office of Educational Research and Improvement, U.S. Department of Education, July 1986.

Committee on Education and the Workforce
Witness Disclosure Requirement - "Truth in Testimony"
Required by House Rule XI, Clause 2(g)

Your Name: Beatrice F. Birman		
1. Are you testifying on behalf of a Federal, State, or Local Governmental entity?	Yes	No X
2. Are you testifying on behalf of an entity other than a Governmental entity?	Yes X	No
3. Please list any federal grants or contracts (including subgrants or subcontracts) which <u>you have received</u> since October 1, 1996.		
None.		
4. Other than yourself, please list what entity or entities you are representing:		
American Institutes for Research (AIR) 333 K Street, NW Washington DC 20007 (202) 944-5300		
5. If your answer to question number 2 is yes, please list any offices or elected positions held or briefly describe your representational capacity with the entities disclosed in question number 4:		
Dr. Birman holds the position of Managing Associate at the Pelavin Research Center of the American Institutes for Research.		
6. If your answer to question number 2 is yes, do any of the entities disclosed in question number 4 have parent organizations, subsidiaries, or partnerships to the entities for whom you are not representing?	Yes	No X
7. If the answer to question number 2 is yes, please list any federal grants or contracts (including subgrants or subcontracts) which were received by the entities listed under question 4 since October 1, 1995, including the source and amount of each grant or contract:		
Available upon request from committee.		

Signature: Beatrice F. Birman Date: May 4, 1999



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Customer Name	Prime Contact Id	Funding Source	Project Value
US NAVY	N00600-95-C-2815	US DEPT OF DEFENSE	\$2,450,422.37
US DEPT OF EDUCATION	EA95013001	US DEPT OF EDUCATION	\$695,613.00
US DEPT OF EDUCATION	H159G20002-95	DEPT OF EDUCATION	\$1,100,000.00
US POSTAL SERVICE	102590-96-X-0368	U.S. POSTAL SERVICE	\$3,500.00
DMJM/HTB	#E-4768-4-00-82-10	DOL	\$53,000.00
SUPPORT SERVICES INT'L	K00135101	BUREAU OF INDIAN AFFAIRS	\$197,324.00
CIA	SEE F140800 00	CIA	\$0.00
STATE OF CALIFORNIA	5249	CALIFORNIA DEPT OF EDUCATION	\$88,215.45
THE URBAN INSTITUTE	HHS-100-95-0021	U.S. DEPARTMENT OF EDUCATION	\$10,923.00
US NAVY	N00600-96-M-1415	U.S. NAVY	\$48,891.00
US DEPT OF JUSTICE	636197	US DEPT OF JUSTICE	\$7,364.10
A. EMILIO SENDIM MARQUES	LTR AGMT DTD 2-13-96	NORTHEAS BASIC ED PROJECT	\$114,681.00
SYNECTICS FOR MGMT DEC	HHS-100-93-0003	DHHS	\$1,212,303.88
US NAVY	N00600-96-C-1875	DOD - U.S. NAVY	\$15,943,598.54
ORG FOR ECON COOP DEV		LTR AGMT DTD 2-28-96	\$15,600.00
FUNDEP	Ltr agt dtd 12/30/96	FUNDEP	\$65,000.00
US NAVY	N00600-96-M-1825	FISC WASHINGTON; US NAVY	\$29,995.00
BUREAU OF PRISONS		FEDERAL BUREAU OF PRISONS	\$8,143.00
THE MCKENZIE GROUP, INC		THE MCKENZIE GROUP/NSF	\$1,200.00
WBGH		WASHINGTON BUSINESS GROUP	\$25,000.00
PRICE WATERHOUSE LLP	LF95006002	PRICE WATERHOUSE/DEPT OF ED	\$24,505.48
U.S. AIR FORCE	F4165096M0388	U.S. AIR FORCE	\$1,996.29
SOCIAL SECURITY ADMIN.	600-96-25678	SOCIAL SECURITY ADMINISTRATION	\$179,524.00
ARTHUR ANDERSON & CO., SC	GS-22F-0093B	INTERNAL REVENUE SERVICE	\$268,308.39
WESTAT, INC.	J-9J-5-0026	DEPT. OF LABOR	\$398,202.00
THE WORLD BANK	TO BE DETERMINED	THE WORLD BANK	\$14,109.00
NAT'L INST. OF HEALTH	1-R03-MH56567-01	NAT'L INSTITUTE OF MENTAL HLTH	\$39,380.00
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SRA CORPORATION		SRA CORPORATION	\$2,749.00
US DEPT OF EDUCATION	H159H60002	U.S. DEPT OF EDUCATION	\$899,126.00
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US DEPT OF EDUCATION	H237760005	U.S. DEPT OF EDUCATION	\$2,360,597.00
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US ARMY	DAAL01-97-P-0065	ARMY RESEARCH LAB	\$8,600.00
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WESTAT, INC.	HS92035001	US DEPT OF EDUCATION	\$5,000.00
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U.S. AIR FORCE	F4165097M0061	US AIR FORCE	\$1,235.12
ACTR * ACCELS			\$352.00
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EDS	97-M394400-000	CI/VEDS	\$2,195,473.00
MD PROCUREMENT OFFICE	MDA904-97-C-0505	MARYLAND PROCUREMENT OFFICE	\$2,658,628.00
UNIV. OF MASSACHUSETTS	LTR AGMT DTD 1/30/97	UNIV OF MASSUSSETTS	\$7,000.00
US DEPT OF EDUCATION	EA97001001	U.S. DEPT OF EDUCATION	\$2,244,041.00
ARMY RESEARCH INST	DAAL01-97-P-0648	ARMY RESEARCH INSTITUTE	\$800.00
COUNTY OF SANTA CLARA	LTR AGMT DTD 3-6-97	COUNTY OF SANTA CLARA	\$5,000.00
HRSA	97-0118P-8PHC	DHHS	\$99,924.00
U.S. DEPARTMENT OF STATE	S-OPRAQ-97-C-0045	U.S. DEPT OF STATE	\$1,397,308.00

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US DEPT OF JUSTICE	7Z-CIV-P-67224	U.S. DEPT. OF JUSTICE	\$24,899.54
US DEPT OF EDUCATION	R902A70012	U.S. DEPT. OF EDUCATION	\$149,790.00
COUNTY OF FAIRFAX, VA	CHECK DATED 03/31/97	COUNTY OF FAIRFAX, VA	\$2,500.00
DHHS	HHS-100-97-0006	DHHS	\$566,154.00
HEALTH PROMOTION SERV INC	2 R44 HL53842	DHHS	\$35,000.00
INDIANAPOLIS PUBLIC SCH	AGMT DTD 05/27/97	INDIANAPOLIS PUBLIC SCHOOLS	\$9,900.00
US DEPT OF EDUCATION	EA970960	DEPT. OF EDUCATION	\$23,990.00
HUMAN TECHNOLOGY, INC.	OPM-97-TM0106	OFFICE OF PERSONNEL MGMT	\$389,740.00
THE RAND CORPORATION		DHHS	\$82,470.00
DHHS		DHHS/FDA	\$15,000.00
ETS	R999G50001	DEPT. OF EDUCATION	\$403,700.00
STATE OF CALIFORNIA	6364	STATE OF CALIFORNIA	\$406,303.49
SJVHC, INC.		CALIFORNIA ENDOWMENT	\$23,333.00
THE LEARNING GROUP	OPM-91-2963	THE LEARNING GROUP (OPM)	\$408,499.00
DHHS	ORDER #ACF-970217	DHHS	\$29,882.00
DHHS	240-97-0007	DHHS	\$125,235.00
CONTRACT CLAIMS BRANCH	97-I-176000-000	CIA	\$589,291.00
GEORGIA STATE UNIVERSITY	1 R01 NR04431	DHHS/PHS/NIH/NIHNR	\$15,194.00
CHILDRENS HOSP & HLTH CTR		DHHS	\$5,000.00
STATE OF OHIO	AGMT SIGNED 7/25/97	STATE OF OHIO	\$45,000.00
THE WORLD BANK	NONE @ 08/05/97	DEPARTMENT OF STATE	\$11,882.00
SAN FRANCISCO STATE UNIV	H024K0001-96	U.S. DEPT. OF EDUCATION	\$35,000.00
U.S. AIR FORCE	F19628-97-M-0158	USAF	\$2,040.00
NATIONAL ASSESSMENT	RJ97153001	U.S. DEPT. OF EDUCATION	\$2,230,983.00
US DEPT OF EDUCATION	PM9703301	U.S. DEPT. OF EDUCATION	\$929,675.00
THE GALLUP ORGANIZATION	RN97002001	U.S. DEPT. OF EDUCATION	\$275,360.00
US DEPT OF JUSTICE	YREGDOC 701143080	U.S. DEPT. OF JUSTICE	\$23,394.00
DEPT OF VETERANS AFFAIRS	101-Y77218	U.S. DEPT. OF VETERANS AFFAIRS	\$35,000.00

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OFFICE OF CONTRACTS AND GRANTS

FEDERAL CONTRACTS AND GRANTS
10/D1/95 TO PRESENT

Date: 05/04/1999
Time: 02:43PM

Customer Name	Prime Contact Id	Funding Source	Project Value
STATE OF FLORIDA		STATE OF FLORIDA	\$1,500.00
WESTAT, INC.	HS92035001	U.S. DEPT. OF EDUCATION	\$3,000.00
FERC FINANCIAL SERV DIV	FERC98-S-80226	FEDERAL ENERGY REG COMM	\$101,232.30
US DEPT OF EDUCATION	VN97012001	US DEPT OF EDUCATION	\$905,000.00
US DEPT OF EDUCATION	EA97013001	DEPT. OF EDUCATION	\$1,718,121.00
DHHS	240-97-0040	DHHS	\$447,931.00
SOCIAL SECURITY ADMIN.	600-97-32018	SOCIAL SECURITY ADMINISTRATION	\$6,401,919.00
US DEPT OF EDUCATION	HS97016001	U.S. DEPT. OF EDUCATION	\$2,805,250.00
NATIONAL COMMISSION ON	NCCEH-009	DEPT. OF EDUCATION	\$238,434.00
US DEPT OF EDUCATION	HS97017002	U.S. DEPT. OF EDUCATION	\$1,550,422.00
US DEPT OF JUSTICE		U.S. DEPT. OF JUSTICE	\$930.00
THE GALLUP ORGANIZATION	SRS-9732169	NATIONAL SCIENCE FOUNDATION	\$311,881.00
NATIONAL ASSESSMENT	RJ97153001	U.S. DEPT. OF EDUCATION	\$133,213.00
PROF & SCIENTIFIC ASSOC.		U.S. DEPT. OF EDUC.	\$12,400.00
THE RAND CORPORATION	R305F70079	U.S. DEPT. OF EDUCATION	\$120,072.00
SKILLSNET CORPORATION	LTR AGMT 11/25/97	U.S. DEPT. OF AGRICULTURE	\$20,000.00
STATE OF MINNESOTA	LTR AGMT - 11/13/97	STATE OF MINNESOTA	\$75,000.00
CALIBER ASSOCIATES	DTFA01-95-C-00052	FEDERAL AVIATION ADMIN.	\$18,000.00
MACRO INTERNATIONAL, INC.		CDC	\$500.00
WESTAT, INC.	EA94052001	U.S. DEPT. OF EDUCATION	\$63,011.00
HARCOURT BRACE			\$473,000.00
JUDICIAL COUNCIL OF CA	992464	JUDICIAL COUNCIL OF CALIFORNIA	\$15,000.00
STATE OF CALIFORNIA	LCB #4740	STATE OF CA - LEGISLATURE	\$198,987.00
STATE OF CALIFORNIA	LCB #4739	STATE OF CA - LEGISLATURE	\$99,657.00
UNIV OF CA - BERKLEY	NCC5-253	NASA/UNIV OF CA-BERKELEY	\$20,000.00
US DEPT OF EDUCATION	TO BE DETERMINED	DEPT OF EDUCATION	\$0.00
RESEARCH ASSESSMENT MGMT	CONS AGMT - 12/23/97	DHHS	\$962.50
U.S. AIR FORCE	F19628-98-M-0021	U.S. AIR FORCE	\$24,995.00

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Date: 05/04/1999

Time: 02:43PM

FEDERAL CONTRACTS AND GRANTS
10/01/95 TO PRESENT

Customer Name	Prime Contact Id	Funding Source	Project Value
STATE OF CALIFORNIA	7254	STATE OF CALIFORNIA	\$298,156.00
NATIONAL ASSESSMENT	RJ97153001	U.S. DEPT. OF EDUCATION	\$10,031,122.00
CORD	PHONE CALL - 2/19/98	CORD/U.S. DEPT. OF EDUC.	\$21,419.00
NATIONAL SAFETY COUNCIL	DTNH22-97-H-05278	DOT/NHTSA	\$19,500.00
AUTOMATED FUNCTIONS, INC.	HRD-9712608	NSF/AUTOMATED FUNCTIONS, INC.	\$75,034.46
US DEPT OF JUSTICE	YREGDOC 98-01-115057	U.S. DEPT OF JUSTICE	\$41,278.00
INFOEDGE TECHNOLOGY, INC.		NAVY/INFOEDGE TECHNOLOGY, INC.	\$1,500.00
WASH METRO AREA TRANSIT		WASH METRO AREA TRANS AUTH	\$5,000.00
DIA	MDA908-98-C-0010	DIA	\$964,790.21
US DEPT OF EDUCATION	VARIOUS	U.S. DEPT. OF EDUCATION	\$23,000.00
STANFORD UNIV MED CTR	2HNN627	DHHS/STANFORD UNIV MED CTR	\$10,000.00
DHHS		DHHS	\$9,238.00
WESTAT, INC.		U.S. DEPT. OF EDUC/WESTAT	\$45,000.00
DHHS	282-98-0029	DHHS	\$6,755,838.45
DHHS		DHHS	\$8,466.00
STATE OF CALIFORNIA	7347	STATE OF CALIFORNIA	\$2,199,220.00
DESA, INC.	LTR AGMT 05/11/98	DHHS/CDC	\$9,990.96
US DEPT OF EDUCATION	ED-98-PO-2232	U.S. DEPT. OF EDUC.	\$9,400.00
US DEPT OF EDUCATION		U.S. DEPT. OF EDUCATION	\$22,355.00
STATE OF CALIFORNIA	7394	STATE OF CALIFORNIA	\$459,376.00
US DEPT OF EDUCATION	R902B980004	U.S. DEPT. OF EDUCATION	\$99,963.00
SAN JOSE STATE UNIV FOUND	ESI-9731384	NATIONAL SCIENCE FOUNDATION	\$25,000.00
STATE OF CALIFORNIA	7401	CA DEPT. OF EDUCATION	\$1,117,493.00
NASA	NCC 2-1084	NASA	\$191,194.00
CONTRACTING OFFICER	981*177800*000	CIA	\$694,680.00
NATIONAL SAFETY COUNCIL		NATL HWY TRAFFIC SAFETY ADMIN	\$24,998.00
C2 MULTIMEDIA, INC.	OPM #97-009	OPM	\$5,000.00
US DEPT OF JUSTICE	YREGDOC 8 01 107206	U.S. DEPT OF JUSTICE	\$26,111.00

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Date: 05/04/1999
Time: 02:43PM

FEDERAL CONTRACTS AND GRANTS
10/01/95 TO PRESENT

Customer Name	Prime Contact Id	Funding Source	Project Value
US DEPT OF JUSTICE	YREGDOC 8 01 107189	U.S. DEPT. OF JUSTICE	\$15,684.66
ECONOMIC SYSTEMS, INC.		U.S. DEPT. OF EDUC.	\$22,230.00
INST BEHAVIORAL CHANGE	AGMT DTD 08/10/98	DISTRICT OF COLUMBIA	\$27,423.00
EDUCATIONAL SERVICES, INC	CHECK #12137	U.S. DEPT. OF EDUC.	\$450.00
STATE OF MINNESOTA	ORDER #20938	STATE OF MINNESOTA	\$135,614.98
ETS	NONE @ 09/16/98	DEPT. OF EDUCATION / ETS	\$5,698,506.00
DHHS	98M00287701R	DHHS	\$10,000.00
U.S. MARINE CORPS	M00027-98-C-0002	DOD/U.S. MARINE CORPS	\$500,000.00
US DEPT OF EDUCATION	ED-98-CO-0067	U.S. DEPT. OF EDUCATION	\$2,577,592.00
HEALTH PROMOTION SERV INC	1 R43 CA79353-02	DHHS/HEALTH PROMOTION SERVICE	\$8,021.00
CASTILLEJA SCHOOL	CK DTD 09/25/98	CASTILLEJA SCHOOL	\$6,050.00
U.S. AIR FORCE	F19628-99-M-0007	U.S. AIR FORCE	\$24,995.00
HUMRRO	M67004-96-D-0009	DEFENSE MANPOWER DATA CENTER	\$48,104.00
APPLIED PERF. STRATEGIES	AGMT DTD 12/14/98	NASA	\$27,116.00
MPR ASSOCIATES	ED-98-CO-0023 / CC1	U.S. DEPT. OF EDUCATION	\$57,876.74
NATIONAL SAFETY COUNCIL	LTR AGMT 12/15/98	NAT'L HWY TRAFFIC SAFETY ADMIN	\$18,500.00
IQ SOLUTIONS, INC.		DHHS/I.Q. SOLUTIONS	\$14,741.00
PACER	H326A980004	U.S. DEPT. OF EDUCATION/PACER	\$15,000.00
WESTAT, INC.	ED-99-CO-0089	DEPT. OF EDUC./WESTAT	\$1,319,300.00
POLICY STUDY ASSOCIATES	VERBAL - D.KASERZYK	DEPT. OF EDUC./PSA	\$500.00
THE LEADS CORPORATION	GS-22F-0066B	THE LEADS CORPORATION	\$7,200.00
STATE OF CALIFORNIA	LTR DTD 02/11/99	STATE OF CALIFORNIA	\$2,490.00
SCH DIST OF PHILADELPHIA	TO BE NEGOTIATED	SCH DISTRICT OF PHILADELPHIA	\$5,461,408.00
UNIVERSITY OF OREGON	LTR DTD 01/29/99	OR DEPT OF EDUC/UNIV OF OR	\$9,808.00
US DEPT OF EDUCATION	ED-99-CO-0091	U.S. DEPT OF EDUCATION	\$4,502,267.00
WEST CONTRA COSTA UNIFIED	TO BE DETERMINED	WEST CONTRA COSTA UNIFIED SCH	\$125,000.00
U.S. AIR FORCE	NONE @ 04/22/99	U.S. AIR FORCE	\$40,344.00
STATE OF ALABAMA	3184602	STATE OF ALABAMA/DEPT OF EDUC	\$89,155.00

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AMERICAN INSTITUTES FOR RESEARCH
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Date: 05/04/1999
Time: 02:43PM

FEDERAL CONTRACTS AND GRANTS
10/01/95 TO PRESENT

Customer Name	Prime Contact Id	Funding Source	Project Value
ACADEMY FOR EDUC. DEV.	212221-9P-1874	USAID/AED	\$23,400.00
CTR FOR APPLIED LINGUISTI	ED-99-CO-0102	DEPT. OF EDUCATION/NAGB	\$280,293.00
U.S. AIR FORCE	F41624-96-C-5015	US AIR FORCE	\$73,097.00

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**APPENDIX D - WRITTEN TESTIMONY OF DR. DAVID A. BAUMAN,
DIRECTOR, CAPITAL AREA MATH/SCIENCE ALLIANCE, SUMMERDALE,
PA**

TESTIMONY

**U.S. House of Representatives
Education and Workforce Committee
Hearing on Flexibility for Quality Programs and Innovative Ideas
for High Quality Teachers
May 5, 1999**

**David A. Bauman, Ed.D.
Director
Capital Area Math/Science Alliance
Capital Area Institute for Mathematics and Science**

(97)

It is an honor and privilege to come before you to discuss professional development and its impact on the classroom. I am currently Director of the Capital Area Math/Science Alliance and the Capital Area Institute for Mathematics and Science. We are a non-profit, community based program, which receives its funding from private sources. However, we utilize Eisenhower Professional Development funds to leverage additional dollars for use in our work. In our region, the school districts maximize their resources by forming a consortia to pool Eisenhower monies to leverage additional resources. The common thread to my statement is the Eisenhower Professional Development funds. Through these funds, additional funds have been leveraged and significant impact has occurred.

Across the country and within our community, we continue to hear the call for students who are flexible problem solvers, are able to work together in teams, and who achieve high levels of mathematics and science literacy. The approaches to attaining such goals have primarily been focused on singular strategies, such as implementing standards, changing requirements, or changing the decision making in schools. All too often, these strategies are attempted in isolation of each other.

The Alliance and Institute are attempting an unprecedented approach in the Harrisburg, PA region by addressing the entire educational system. Systemic reform is based on the assumption that all components complement and build on the strengths of each other. Therefore, we are not focusing on any one component, but are attempting to influence all components and build upon their interconnectedness. For example, if we are to focus on student achievement, we must address curricula aligned with high standards, long term professional development for classroom teachers, up-to-date equipment and materials for students, accountability, community involvement and support, along with teacher preparation. All items are interconnected, and addressing only one issue will not produce long term results. However, we have found that the common element for significant change is through professional development.

No organization or initiative can work solely by itself and expect to accomplish a sweeping change. Nor can there be one focus one year, and another focus another year. All must be in harmony. Imagine us attempting to improve airlines by merely focusing on pilot training. While important, we also need to ensure quality airplanes, mechanics to service the airplanes, air traffic controllers, runways, and airports. They all work hand-in-hand. The same is true for schooling as well. The key is for everyone to be involved to maximize our efforts and thus, reach our goal. Our focus cannot be on one single component, but the entire system.

I will focus on our efforts in addressing multiple components -- curriculum development, professional development, resources and materials, coordination of services, and building local capacity -- necessary to achieve real change in our classrooms.

The key agent in mathematics and science reform is the teacher. Our mission is to support educators to help all Capital Area students attain high levels of mathematical power and scientific literacy. Whatever curricular changes occur in schools, it is through the teacher that the programs will be adapted and translated into learning experiences for students. Effective teaching is at the heart of the Institute's activities. All sessions focus on Standards, content, and the curriculum that is implemented in the classroom. Sessions are not held in isolation of needs of the teacher.

The funding for the professional development component is through private sources which is leveraged by the Eisenhower funds. For every dollar of Eisenhower money, a minimum of \$10 is supplied by local sources which include businesses, industry, individuals, and foundations. The majority of these funds do not pass through our organization, but go directly to the professional development of teachers. We do not use any of the funds for administrative or operating expenses. Without the Eisenhower funds, our districts would not be able to send teachers to the Institute and participate in professional development sessions.

Teachers participating in the Institute have committed to complete over 125 hours of professional development during a three-year period. The challenge of professional development is to create optimal learning situations in which the best sources of expertise are linked with the experiences and current needs of teachers. We design sessions to meet the needs of classroom teachers as they implement a standards-based curriculum. The Institute utilizes current research which shows that all sessions must model good mathematics and science teaching. In an era where knowledge is increasing at an exponential rate, it is imperative for teachers to learn new content and how it applies in a real world setting.

All teachers participating in the sessions utilize a self-assessment instrument to focus their work in both professional development and teaching in the classroom. Institute teachers take an active role in their own professional development as they reflect on their own instructional strategies.

Are there significant changes due to professional development? Yes. We can say unequivocally that there are changes in teacher behaviors, the content taught, student participation, and ultimately, student learning. Professional development in our region, plays an essential role in science and mathematics education reform. We have found:

- Students of participating teachers are more motivated to learn math and are more self-confident in doing math.
- Students are involved in more problem solving activities.
- Students are understanding math concepts better.
- Students are using more manipulatives/concrete materials.
- Teachers are more aware of NCTM Standards.
- The mathematics taught has become more focused.

- Teachers are more confident teaching mathematics and are becoming effective leaders among other math teachers.
- Teachers have more opportunities to learn new mathematical content.
- Students are more involved with hands-on science activities.
- Students are more motivated and more confident in doing science.
- Students are understanding science concepts better.
- Teachers are more aware of the National Science Education Standards.
- The science taught in the classroom has become more focused.
- Teachers are asserting themselves more about improving their science instruction.
- Teachers' science teaching skills have improved.
- Teachers have more opportunities to learn new scientific knowledge and techniques
- Teachers are more confident as science teachers and are becoming more effective leaders with other teachers

Building and utilizing local expertise in our mathematics and science programs are priorities of the Alliance. Therefore, by providing numerous workshops, conferences, and professional development sessions, the Institute is identifying leaders to share their expertise with others from within the region. For the Institute to succeed in its effort to continually improve math and science education, we must build upon the expertise of individuals within our region. This also includes working side-by-side with other initiatives that share common goals with the Institute and Alliance.

The Pleiades Project is a consortia of seven school districts who have committed to work together and develop K-12 science curricula which is aligned with the Standards. These districts will collaborate on common inservice days for curriculum development, utilize inter-district communication via Internet, record their progress on the Pleiades Project home page, and professional development for implementation of the adopted curricula.

As an outcome of the project, we envision a model to guide the development of both mathematics and science curricula with additional districts during the following year. Through this project, funded privately, but matched through Eisenhower funds, we anticipate:

- An aligned, coherent, Standards based, K-12 science curriculum
- Selection and implementation of exemplary standards based programs aligned with the curriculum
- Support from informal science and mathematics outreach programs
- Communication between teachers and districts via a web based approach
- Professional development for teachers aligned with the program and curriculum
- Inter-district communication regarding best practices and science education
- Development and identification of leaders to implement and support the model with additional districts

Once again, the only programs we will promote through this process are standards based, high quality programs. The Pleiades Project is privately funded, but required matching funds from school districts to demonstrate commitment to the project. Two of the superintendents have stated the only means for them to participate is the utilization of the Eisenhower funds. Without these funds, these districts could not participate.

Given that materials appropriate for inquiry-based science teaching are central to achieving the educational goals set forth in the Standards, it is critical that an effective infrastructure for material support be part of any science program.

Our Materials Resource Center contains over \$500,000 worth of materials and equipment that is utilized by students in classrooms throughout our region. All of these materials were purchased utilizing private donations and foundations. The professional development necessary for teachers to implement hands-on, inquiry based science programs was made possible through Eisenhower funds. Implementation and utilization of math/science equipment goes hand-in-hand with professional development. Private industry has donated funds towards specific items and projects, but want to see their money leverage additional funds. The Eisenhower funds make these donations possible. If you want to see impact on students, I invite you to visit the classrooms of our teachers.

The Math/Science Alliance Materials Resource Center houses materials and equipment that have been identified as exemplary. These resources include over 600 Full Option Science System (FOSS) and Science and Technology for Children (STC) kits. Topic specific mathematics kits, classroom sets of graphing calculators, and K'NEX sets are also a part of the Resource Center. These materials are available to teachers who participate in the Institute's professional development program.

Many of these materials are consumable and must be replenished regularly. The Institute refurbishes each kit and makes the kits available to schools on a quarterly basis. Each kit is used by four classroom teachers a year, thereby reducing the cost of purchasing a kit for each classroom. The Capital Area Intermediate Unit provides space and transportation for the kits, which also reduces costs to individual districts. Providing such an infrastructure frees teachers' time for more appropriate tasks and ensures that the necessary materials are available when needed.

The Institute is adapting these materials to ensure alignment with the National Science Education Standards and the Pennsylvania Science & Technology Standards. The professional development that accompanies implementation of these programs ensures that students are actively involved with inquiry-based learning. All kits used in classrooms are being used by students who are actively engaged in hands-on science instruction.

The Providers Network is an effort by the Math/Science Alliance to bring together and

coordinate different initiatives within the Capital Area. A Provider is an organization whose efforts impact mathematics and science education for kindergarten through twelfth grade students and is funded through grants or donations. This Network meets regularly and provides an opportunity to:

- Collaborate with others on projects
- Learn from the experiences of others
- Identify needs within the region
- Strengthen programs and new ideas
- Discuss possibilities of future initiatives within the region
- Avoid duplication of efforts

As part of the Providers Network and to facilitate building local capacity, the Alliance sponsored a training session which focused on the alignment of materials and projects to Standards. Through the Providers Network, we have commitments from the Providers to align their outreach to both National and State Standards as well as the curriculum of individual districts. Therefore, even though the workshops are often short term or one day events, they are focused on the teachers' curriculum and setting. These providers are aligning their services with all efforts in our region to promote mathematics and science education reform. Eisenhower funds enable each of these outreach programs to leverage additional dollars in our community. Short term professional development can be very effective, if it is focused on identified needs and programs.

While the Eisenhower monies do not flow through our organization, they total approximately 15% of our budget. Our funders expect schools to match and contribute towards the professional development programs. The Eisenhower funds are the means by which we are able to show a match, and more importantly, they provide the means to districts to release the teachers to participate in our program. The amount of money Eisenhower leverages is significantly more than the total amount of money we receive through Eisenhower. While our efforts have been visionary, a common thread throughout our efforts has been the Eisenhower Professional Development Program.

**Committee on Education and the Workforce
Witness Disclosure Requirement in Truth in Testimony
Required by House Rule XI, Clause 2(g)**

Your Name: David A. Bauman, Ed.D.

1. Will you be representing a federal, State, or local government entity? (If the answer is yes please contact the Committee). No.
2. Please list any federal grants or contracts (including subgrants or subcontracts) which you have received since October 1, 1997:

We (Capital Area Math/Science Alliance) currently have a contract with the Pennsylvania Department of Education, which is utilizing Eisenhower funds for the implementation of professional development for teachers of science. The grant totals \$50,000 from September 1, 1998 through June 30, 1999 to expedite implementation of programs with teachers.

3. Will you be representing an entity other than a Government entity?
Yes.

4. Other than yourself, please list what entity or entities you will be representing:

- Capital Area Math/Science Alliance and Institute, projects of the Council for Public Education, Harrisburg, Pennsylvania
- National Science Teachers Association

5. Please list any offices or elected positions held or briefly describe your representational capacity with each of the entities you listed in response to question 4:

I am currently:

- Director of the Capital Area Math/Science Alliance and Institute.
- Vice-President of the Pennsylvania Science Teachers Association, an affiliate of NSTA

6. Please list any federal grants or contracts (including subgrants or subcontracts) received by the entities you listed in response to question 4 since October 1, 1997, including the source and amount of each grant or contract:

I am unaware of any federal contracts received other than that which is mentioned in item #2.

7. Are there parent organizations, subsidiaries, or partnerships to the entities you disclosed in response to question number 4 that you will not be representing? No

Signature: _____ Date: _____

Please attach this sheet to your written testimony.

**APPENDIX E - WRITTEN TESTIMONY OF DR. COLLEEN SEREMET,
ASSISTANT SUPERINTENDENT FOR INSTRUCTION, THE BOARD OF
EDUCATION OF DORCHESTER COUNTY, CAMBRIDGE, MD**

**Committee on Education and the Workforce
United States House of Representatives**

**Professional Development and Resource Alignment
Lessons Learned and Considerations for Federal Support**

Testimony of

**Colleen Seremet, Ed. D.
Assistant Superintendent for Instruction
Dorchester County Public Schools
P. O. Box 619
Cambridge, Maryland 21613
Telephone: 410-221-5265
Fax: 410-228-1847
Email: astsuper@dmv.com**

May 5, 1999

(107)

I appreciate the opportunity to share our work on a systems approach to professional development and resource alignment. We have engaged in a partnership with New American Schools and Policy Studies Associates, Inc. to develop a strong professional development system to ensure the best in lifelong learning for our teachers and the highest quality instructional programs. We have learned three key lessons from our work.

- (1) A *comprehensive professional development system* consists of four separate but interrelated domains:
 - (a) Individual career paths from new teacher induction to retirement at the end of career service
 - (b) Formal and informal professional learning focused on student outcomes, including workshops and training, individual and collaborative study, and experimentation and reflection
 - (c) Professional development policies, including teacher selection, rewards and incentives, governance, and performance appraisals
 - (d) Links to key district functions and operations, including school improvement planning and resource allocation

We believe school districts must develop programs and policies in all 4 domains to provide a quality system of professional development.

- (2) At the school and district level, *comprehensive planning* guided by careful review of student outcomes and achievement needs with resources aligned to those outcomes is essential.
- (3) A standards-driven continuum of *flexibility* in funding requirements and *accountability* is needed to make sustained growth in teacher learning (and thus student learning) and is paramount to a successful instructional program.

We have been greatly assisted in our work by this tool (*How to Rebuild a local Professional Development Infrastructure* by Bruce Haslam). During the past year, our superintendent established a Professional Development Council comprised of teachers, principals, parents and central office administrators. Thus far, the Council's work has (1) collected and reviewed data on current professional development programs, activities and budgets; (2) developed a set of professional development standards to be submitted for approval by our school board; and (3) begun work on a comprehensive evaluation system for professional development activities in the district. In addition, we are currently concentrating on developing a School Improvement Plan Resource Guide for our school improvement teams to use in aligning their student needs assessment, instructional

improvement initiatives, professional development plans and budgets. The connections between a school improvement plan, professional development plan and budget are critical to helping focus on improving student achievement.

At the same time our district has been engaged in this professional development infrastructure work, the state of Maryland has initiated a planning and budgeting process we call SAFE (School Accountability Funding for Excellence) /Comprehensive Planning. This process has become pivotal for our district in proactively engaging the Ed Flex options for coordinating program design and delivery across several federal and state funding sources.

During the last fiscal year, Dorchester County addressed nine instructional improvement initiatives with funds from 16 different sources. These initiatives reflect funding support from Titles I, II, IV, VI, Goals 2000, Obey-Porter/Comprehensive School Reform, State Compensatory Education, Targeted Poverty grants, State monies for targeted improvement grants, limited English proficiency, early childhood education, professional development, disruptive youth and child abuse, suicide and teen pregnancy prevention monies. When I arrived in the district 18 months ago, I found the 137 grants a tangle of funding streams and programs with different formats and fiscal years. Coordination of programs was cumbersome and confusing. By simplifying the planning process and allowing flexibility in uses of the various grant sources, we have been able to focus on our students and teachers needs and implement programs to meet those needs.

The Maryland School Performance Assessment Program, which is our state's well-articulated accountability system, provides the standards and tools to measure student improvement was already in place. We have found the flexibility of coordinating funding sources, along with a clear set of accountability standards, to be especially helpful in our efforts to improve our professional development for teachers and positively impact student learning.

We believe the development of an integrated professional development system and the coordinated approach to allocating resources across multiple funding sources has enabled our district to focus on our school improvement needs.

We appreciate the work of the members of the House of Representatives in making professional development for educators a substantive issue at the national policy level. Your efforts in providing flexibility in use of funding for professional development and quality instructional programs is most helpful. For us, professional development is the cornerstone of school improvement.

**APPENDIX F - WRITTEN TESTIMONY OF DR. LOUISA MOATS, PROJECT
DIRECTOR, NICHD, UNIVERSITY OF TEXAS AT HOUSTON, EARLY
INTERVENTIONS PROJECT, WASHINGTON, DC**

**Committee on Education and the Workforce
United States House of Representatives**

**What Kind of Professional Development Programs
Should We Support?**

Testimony of

**Louisa C. Moats, Ed.D.
Project Director
NICHD Early Interventions Project
825 North Capitol Street, NE, 6th Floor
Washington, DC 20002
202-442-5088
202-442-5092 (fax)
lmoats@ped1.med.uth.tmc.edu**

May 5, 1999

(118)

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Moats Testimony, 5/5/99.

Good morning. It is a privilege to speak to you today not only as a researcher, but as a former teacher and a current teacher of teachers. From any vantage point, the need to improve teacher quality is obvious and urgent. The question is, how best shall this be done? My comments today focus primarily on lessons learned from our professional development program in nine intervention and three comparison schools in the District of Columbia. Seven of the intervention schools are targeted assistance schools; all have high percentages of children in poverty.

Our goal is to enable teachers in the early grades to teach children to read. Success for us is measured by two criteria: a) teachers demonstrate the knowledge base and skills to accomplish the job at hand, and b) their classes achieve at grade level or better. During the first year of our project, the twenty-nine first grade classes as a whole raised their scores about 25% points to slightly above the 51st %ile. We hope the results will be even better this year. The NICHD-funded research we conduct includes a strong emphasis on teacher coursework, observation, consultation, and collaboration. To this end, our motto is, "Know your stuff, know who you are stuffing, and stuff children systematically at every moment possible." The following principles appear to be those most influential in the successes we have achieved:

1. Professional development must be informed by a clear delineation of the content knowledge and procedural knowledge that expert teachers need. Effective teachers must know the essential components of instruction, why they are important, how those components are related to one another, and how to teach each one well. We justify the practices we advocate with reference to research that represents the consensus findings of the field. It is essential to begin with a coherent advisory, as have the states of

Moats Testimony, 5/5/99.

California, Illinois, Texas, and Virginia, that defines the major findings of reading research and what they mean in practice. With a clear definition of research-based practice, policy makers can adopt standards for teachers, students, and teacher trainers, and then proceed with the enterprise of instructional improvement. Without a core curriculum for teacher preparation, fads will come and go, and schools will continue to buy "edutainment" packages from workshop vendors that have minimal impact on teacher behavior. Our teachers in D.C. like the fact that our courses teach a comprehensive framework for action, within which the individual lessons and activities will fit. They expect, given the comprehensive agenda we have constructed, to work toward mastery in increments, over the year and more.

2. The content of courses must be aligned with student performance standards, classroom curriculum and programs, and student assessment. Our success with teachers varies in D.C.; sometimes we are frustrated when there is no immediate carry-over between what we teach the teachers and what they do in their classes. We have learned that there must be direct continuity between what we teach them in class and what their instructional materials ask them to do with their children. For example, we taught teachers about phonemic awareness during the first year of the study, but it was not until we gave teachers a supplementary program manual, a test that measured the skills taught, and practice carrying out specific activities that the teachers were likely to apply what we had taught them. If the teacher's job is to implement best practice, then best practice must be consistently defined, as it is in the California reading initiative, and must be consistently represented in instructional materials, curriculum guidelines, standards,

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assessments, and teacher preparation courses. It is the confusion and discontinuity of past practice that has been very discouraging for teachers.

3. There must be constant interplay between actual practice with children and formal classroom study of psychology, pedagogy, and content area knowledge. It is one thing to know what should be done; it is another to do it well. Although more research is necessary to understand the best approach for combining direct experience with formal study, good programs seek to ground teachers in instructional problem-solving right from the beginning. Student teachers should watch many capable teachers at work. Their initial teaching efforts should be supervised and assisted. Teachers in our D.C. project observe consultants, peers, and teachers on videotape, and engage in classroom role-playing to hone their skills.

4. Finally, teachers need incentives, recognition, and rewards for doing well. The ultimate reward for good teaching is success with children, and that in itself is the most powerful reinforcement for teachers. Some additional incentives we have used are small stipends for after-hours course work; credits for participating in training; positive comments from the observers' visits to classes; citation of highly successful teachers within our program group, and use of those teachers to mentor their peers; donations of free books and instructional materials for completion of specific tasks; and positive verbal acknowledgement for the efforts teachers are making. Teachers want, and will work for, higher pay and better working conditions, but we have little control over those variables. We hope at least to create a climate of reflection on one's practice, professional pride, and investment in personal growth. Our efforts are also supported by a

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new teacher evaluation system put in place this year by the District that will recognize and reward competence.

In summary, quality professional development should be one aspect of a system-wide program of change. Class size reduction should be one dimension of systemic reform. Quality teacher preparation and professional development should be another. Training will be most likely to improve teaching and raise achievement if it is long-term, comprehensive, continuous, aligned with research, aligned with standards and assessments, and if it teaches teachers to do specific things for which they have a purpose. Thank you.

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Louisa C. Moats is currently the D.C. site director for five-year study of early reading instruction being conducted in Houston, Texas and Washington, D.C. public schools. The project's principal investigator is Dr. Barbara Foorman of the University of Texas Health Science Center who was awarded a NICHD grant to study elementary reading instruction in inner city schools. Dr. Moats' primary responsibility in Washington is to design and implement professional development for teachers in the project.

Dr. Moats spent the 1996-97 school year as a Visiting Scholar at the Sacramento County Office of Education, where she authored and presented leadership training materials on early reading for the California State Board of Education. These materials are now required content in all of the professional development programs conducted under AB 1086 in California.

Dr. Moats received her B.A. degree at Wellesley College, her M.A. degree from Peabody College of Vanderbilt, and her Ed.D. from Harvard University's Graduate School of Education. She worked as a teacher, neuropsychology technician, and specialist in learning disorders prior to her doctoral training. She was a licensed psychologist in private practice for 15 years in Vermont and a graduate instructor both at Harvard and at St. Michael's College. Specializing in reading development, reading disorders, spelling and written language, she has written and lectured widely throughout the United States and abroad. Her publications include journal articles, book chapters, a classroom basal spelling program and a book on Spelling, Development, Disability, and Instruction (York Press, 1995). Her new book for parents, authored with Susan Hall, is Straight Talk About Reading (Contemporary Books, 1999). The next book, Speech to Print: A Course in Language Study for Teachers will be published next year by Paul Brookes.

Committee on Education and the Workforce
 Witness Disclosure Requirement - "Truth in Testimony"
 Required by House Rule XI, Clause 2(g)

Your Name: <u>Louisa C. Monte</u>		
1. Are you testifying on behalf of a Federal, State, or Local Governmental entity?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
2. Are you testifying on behalf of an entity other than a Government entity?	<input type="radio"/> Yes	<input checked="" type="radio"/> No
3. Please list any federal grants or contracts (including subgrants or subcontracts) which you have received since October 1, 1996: <u>I am a co-Principal Investigator on HD 30995, "Early Interventions for Children with Reading Problems" given to Dr. Barbara Foreman at the University of Texas, Houston</u>		
4. Other than yourself, please list what entity or entities you are representing: <u>none</u>		
5. If your answer to question number 2 is yes, please list any offices or elected positions held or briefly describe your representational capacity with the entities disclosed in question number 4:		
6. If your answer to question number 2 is yes, do any of the entities disclosed in question number 4 have parent organizations, subsidiaries, or partnerships to the entities for whom you are not representing?		
	<input type="radio"/> Yes	<input type="radio"/> No
7. If the answer to question number 2 is yes, please list any federal grants or contracts (including subgrants or subcontracts) which were received by the entities listed under question 4 since October 1, 1995, including the source and amount of each grant or contract:		

Signature: Louisa Monte Date: May 5, 1999

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ISBN 0-16-059370-0



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