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ABSTRACT

The hearing transcribed in this report is focused on the imperative of having a federal educational research and development strategy. As part of this strategy, a discussion concerning an innovative approach to dissemination and professional development also took place. The report contains testimony from: (1) G. Carl Ball, Committee on the Federal Role in Education Research, National Research Council, National Academy of Sciences and Andrew C. Porter, Committee on the Federal Role in Education Research, National Research Council, National Academy of Sciences, Wisconsin Center for Education Research; (2) A. Alfred Taubman, Chairman, Michigan Partnership for New Education, Michigan State University; (3) Judith Lanier, President, Michigan Partnership for New Education, accompanied by Elnora Crutchfield, Assistant Principal for the Seventh Grade, Holmes Middle School, Flint, Michigan; (4) Carlton E. Brown, Dean, School of Liberal Arts and Education, Hampton University, Hampton, Virginia; and (5) the American Educational Research Association's Hispanic Research and Bilingual Education Special Interest Groups. (TMK)

HEARING ON H.R. 856, THE EDUCATIONAL RESEARCH, DEVELOPMENT AND DISSEMINATION EXCELLENCE ACT

HEARING

BEFORE THE

SUBCOMMITTEE ON SELECT EDUCATION AND CIVIL RIGHTS

OF THE

COMMITTEE ON EDUCATION AND LABOR
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

HEARING HELD IN WASHINGTON, DC, MAY 27, 1993

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HEARING ON H.R. 856, THE EDUCATIONAL RESEARCH, DEVELOPMENT AND DISSEMINATION EXCELLENCE ACT

THURSDAY, MAY 27, 1993

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON SELECT EDUCATION AND CIVIL RIGHTS,
COMMITTEE ON EDUCATION AND LABOR,
Washington, DC.

The subcommittee met, pursuant to call, at 10 a.m., Room 2261, Rayburn House Office Building, Hon. Major R. Owens, Chairman, presiding.

Members present: Representatives Owens, Scott and Ballenger.

Also present: Senator Riegle.

Staff present: Maria Cuprill, Wanser Green, Laurence Peters, and Andy Hartman.

Chairman OWENS. Please take your seats. The hearing of the Subcommittee on Select Education and Civil Rights is now in session.

This is the last hearing that the subcommittee will hold before H.R. 856, the bill that reauthorizes the Office of Educational Research and Improvement, is marked up by the Committee on Education and Labor next month.

If we are going to enter a serious debate about educational reform, it is imperative that we have a Federal educational research and development strategy, one designed on a scale large enough to provide meaningful support for the ambitious national education goals. OERI has been trivialized and its importance diminished by Neanderthal thinking that refuses to accept and understand that every significant endeavor—whether in health, science, agriculture, defense, or space exploration—has relied on research and development to ensure its success. We cannot continue to spend less than one-tenth of 1 percent of the education budget on research and development and meet the national education goals or change the direction of a decaying education system. Fads will continue to replace sustained efforts at school improvement.

The National Research Council's committee report, *The Federal Role in Education Research and Education Reform: Roles for the Office of Educational Research and Improvement*, played an important role in last year's passage of the House reauthorization bill. Today, we move to hear testimony on the work of the National Research Council.

Our second panel will discuss an innovative approach to dissemination and professional development. As part of a strategic plan to

(1)

meet the national education goals, the Michigan Partnership for New Education developed a network of universities to work with schools, businesses, and communities as local area partnerships to bring research much closer to practice. Specific schools and their teachers have become centers of innovation, discovering, developing, and disseminating new approaches to reinventing teaching and learning.

I welcome today's witnesses and I look forward to their testimony.

I might add that we basically think that the bill which we developed last year and which passed the House of Representatives is still the best answer to the problems of developing a structure for research and development for the long-term improvement of education in America. Our framework is that same piece of legislation.

Basically, we are still convinced that it is the best approach, and we will be moving forward with it. We know, of course, that it can be refined and adjusted and improved in various ways and that is why we are having today's hearing.

[The prepared statement of Hon. Major R. Owens follows:]

STATEMENT OF HON. MAJOR R. OWENS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

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The second panel will discuss an innovative model on approaches to dissemination and professional development. As part of a strategic plan to meet the national education goals, the *Michigan Partnership for New Education* developed a network of universities to work with schools, businesses, and communities as local area partnerships to bring research much closer to practice. Specific schools and their teachers have become centers of innovation, discovering, developing, and disseminating new approaches to reinventing teaching and learning.

I welcome today's witnesses and I look forward to their testimony.

Chairman OWENS.I yield to Mr. Ballenger for an opening statement.

Mr. BALLENGER. Thank you, Mr. Chairman.

Mr. Chairman, last year, you and I worked long and hard to develop a bill which would continue and improve the Federal role in educational research. As a businessman and a Congressman concerned about the state of education in this country, I supported the general thrust of our bill last year, and it would be my hope that we could come to an agreement quickly this year, based on the bi-

partisan bill that passed the House in the 102d Congress and provided new direction to the Office of Educational Research.

I am looking forward to the testimony this morning, especially from Mr. Ball who, as a businessman himself, can speak to the importance of R&D from a private business perspective. I am especially interested in his views and those of others here this morning on the government's issues we have struggled with on this reauthorization; and I thank you, Mr. Chairman.

Chairman OWENS. Thank you.

Mr. Scott.

Mr. SCOTT. Thank you, Mr. Chairman. I appreciate the fact that you are convening this hearing on H.R. 856, the Educational Research, Development and Dissemination Excellence Act.

As we continue to debate educational reform in this country, I believe that it is essential that part of the discussion be focused on the manner in which educational research is funded, conducted and the results disseminated. There are too many statistics today that point to areas in which our students lag behind students from other parts of the world. Furthermore, too many of our young people are at risk and our current educational system is not meeting their needs. Instead of becoming contributors to society, they are becoming drains on society, often ending up in our prison system. We have to focus educational research on meeting the needs of these at-risk youth.

We have a President, a Secretary of Education and a Congress committed to moving America soundly into the next century. In order to accomplish this, I feel that we must look at what we are teaching our young people and the strategies that are most effective for transmitting that knowledge. Educational research is vital, but research for the sake of research accomplishes very little. We must look at how the findings are disseminated, how the interventions are replicated, and how the programs that are proven effective are institutionalized.

I am looking forward to hearing from the scholars whom you have convened today. I am particularly pleased to welcome Dr. Carlton Brown, a witness on the second panel. Dr. Brown is the Dean of the School of Liberal Arts and Education at Hampton University in Hampton, Virginia, in my distr t. I have known Dr. Brown for many years, and he brings a gre deal of knowledge and expertise to this topic; I am anxious to hear his recommendations.

Thank you, Mr. Chairman.

Chairman OWENS. Thank you. I am pleased to welcome our first panel. Welcome back Mr. G. Carl Ball of the Committee on the Federal Role in Education Research, National Research Council, National Academy of Sciences. He was here before as a businessman, testifying on the same legislation. Also, Dr. Andrew Porter, Committee on the Federal Role in Education Research, National Research Council, National Academy of Sciences.

Gentlemen, welcome. We have your written statements which will be entered in their entirety into the record. Please feel free to highlight your written statements.

STATEMENTS OF G. CARL BALL, COMMITTEE ON THE FEDERAL ROLE IN EDUCATION RESEARCH, NATIONAL RESEARCH COUNCIL, NATIONAL ACADEMY OF SCIENCES, GLEN ELLYN, ILLINOIS; AND ANDREW PORTER, Ph.D., COMMITTEE ON THE FEDERAL ROLE IN EDUCATION RESEARCH, NATIONAL RESEARCH COUNCIL, NATIONAL ACADEMY OF SCIENCES, WISCONSIN CENTER FOR EDUCATION RESEARCH, MADISON, WISCONSIN

Chairman OWENS. Mr. Ball.

Mr. BALL. Chairman. If it is agreeable, Mr. Porter will go first.

Chairman OWENS. That is up to you.

Dr. PORTER. Mr. Chairman and distinguished members of the subcommittee, thank you for this opportunity to comment on the reauthorization of OERI. My name is Andy Porter. I am a member of the National Academy of Sciences panel on the Federal Role in Education Research, and I will speak to the recommendations of our report which I know you have a copy of.

I am also a professor at the University of Wisconsin, Madison, where I direct an education research center, the Wisconsin Center for Education Research. We have two of the OERI research centers housed in the center. I direct the one on school organization and restructuring and the one on math teaching and learning. Collectively, our support from OERI constitutes one-third of the support of the center I direct; another third comes from the National Science Foundation, and the final third comes from private foundations.

I know OERI quite well. In the mid-1970s, I worked there for a brief time. As you know, OERI has a very troubled history. It has had too many different directors. It has had too many assistant secretaries. It has had too frequent reorganizations. It has often been a political football. In the early years, it had sharply declining funding, and its low level of funding has continued today. Nevertheless, even with the tiny investment that has been made in education research through OERI, much good has been done, and I am very encouraged by President Clinton's nomination of Sharon Robinson as the next Assistant Secretary of OERI.

I have four brief points to make. My first point is this: Authorization for OERI is urgently needed. Education research and development is the best hope for a brighter future in education for our children. Until there is a better understanding of education and how it works, I think we are destined to go from one fad to the next in education reform. Without authorization of OERI, the agency will lack the direction that it must have; and it is even possible that badly needed increases in support will be held hostage by the lack of reauthorization.

My second point is to applaud you and members of the committee for crafting what I think is an excellent bill. Our National Academy of Sciences report can be read as strong support for many of the components of your bill. We agree upon the importance of education research and development. We agree upon the central role that OERI should play in providing leadership for education research and development.

We agree that appropriations need to be dramatically increased. On a more specific level, the mission that we crafted as a simpli-

fied, more sharply focused mission, agrees exactly with the mission you put forth in your bill. Expand fundamental knowledge, promote excellence and equity, monitor the state of education.

We agree in general terms on the appropriate organization for OERI, organized into research institutes—we call them R&D directorates—and a reform assistance and dissemination office, which we call a Reform Assistance Directorate.

We agree that the Agency's current funding is badly out of balance. More field-initiated studies are needed desperately to complement the excellent work being done in the research centers and labs.

More long-term work must be supported if we are going to see education research through to improved practice. More basic research is desperately needed. Our report called for building learning communities to better connect research and practice. Your bill calls for regional partnerships and America 2000 communities, which I think have high promise for doing exactly that.

We agree that the infrastructure of the R&D system must be strengthened and especially that we must find ways to support increased participation of minorities in the research community.

My third point concerns the policy board. Like you, we, the National Academy of Sciences committee, agree that a policy board of distinguished individuals is needed; and that one-third of those individuals should be researchers and that the remainder of the board should be a balanced representation of practitioners, parents, employers, policymakers and other noteworthy citizens for their contribution to education. Unfortunately, this has not always been the case for OERI and its predecessor, NIE.

We also agree with the purpose of this board to bring focus and stability to the Agency and to buffer the Agency from the many political pushes and pulls that characterize education.

But we have a few important points of difference on this board. H.R. 856 says the policy board will determine priorities that should guide the work of OERI. Our record advises that the policy board establish a process for developing priorities. We believe that broad-based involvement of the expertise of the Nation is absolutely crucial to the establishment of priorities for OERI. The board, the policy board of OERI, must not set priorities based on their own thoughts, by themselves.

H.R. 856 requires publishing the priorities of OERI annually. That sounds okay. But I urge you not to do anything that would bring greater instability to the Agency; the priorities of the Agency must remain fairly stable over time, if the field is to respond and if progress is to be made.

We also doubt the advisability of giving the board its own staff. We believe that the board's having its own staff may bring the board to have conflict between itself and the Agency as we have seen in other parts of the government, for example, between the National Center for Education Statistics and the NAEP board.

Also, we believe that the board must accomplish its important mission without accidentally stumbling into a process of micromanagement. But I believe that the research priorities plan in your bill might invite just such micromanagement, for example, when it

says the board would set goals for expenditures, specify objectives and set distributional resources within research institutes.

My fourth point concerns stability. OERI and its predecessor, NIE, have had nine different directors or assistant secretaries over the course of the past 19 years. This averages to a new leader every two years. Often the new assistant secretary or new director has sought to reorganize the Agency. This lack of stability has been hard on the field, and it has been demoralizing to the staff of OERI. It must stop. We strongly urge a 6-year renewable term for the assistant secretary of OERI to bring stability to the Agency.

Let me close by addressing a comment I hear all too often. I hear people say all we need to do is to put into practice that which we already know about education. This is simply wrong. It is the kind of thinking that hurts our children. Without education research, there won't be education based on those research insights, there won't be education of the quality we must have.

It would be like saying in medicine we don't need any more research back at the time when a smallpox vaccine was introduced. We can stop right there, give the vaccine, and that is all we need to know about chemistry, biology and applied medicine. Had this been done, all the many advances in health care that have occurred since then would not be available to us. And we wouldn't be positioned to solve such crucial problems that are with us now, such as AIDS.

More education research is desperately needed. Dissemination is important, but without something to disseminate, dissemination is a waste of time. The Federal role of OERI is crucial to success. Thank you very much.

Chairman OWENS. Thank you.

Mr. BALL. Thank you, Chairman Owens, members of the Education and Labor subcommittee. I am very pleased to be given an opportunity to address your committee on the subject of the report of the National Research Council's Committee on the Federal Role in Education Research.

Let me reintroduce myself briefly. I come from a worldwide industry which is highly competitive, the vegetable and flower seed industry. The George C. Ball Company employs several thousand people worldwide. We invest roughly 10 percent of our revenue into research to improve existing products and develop new ones with the sure knowledge, if we didn't do this, we probably would be out of business in 5 years, driven off by Dutch and Japanese competitors who would spend more on research than we do.

A couple of years ago, when I was asked to serve on this committee, I quickly recognized that it was made up of a group of outstanding scientists and educational practitioners. As a businessman with several decades of experience in managing industrial research, I found myself rather an outsider to the education establishment. But this position allowed me to have broad outlines which may have been partially hidden from the view of insiders because of their very closeness to the field. I would like to share some of these outlines with you.

Our modern society is a creature of research. Much of this has occurred in the last century. And it is said more scientists are alive

today than have existed in all the previous generations of mankind.

One has only to think of major fields like transportation—jet engines, for example, powering jet aircraft which, in turn, have empowered a new era of personal transport. A jet engine looks simple enough, but it is, in fact, an exceedingly complex device, resulting partially from the researcher's art. This art is one of the reasons why the engine has performed so effectively in moving people about. It is well and carefully designed by people steeped in science and research as well as practical technology.

One finds the same phenomenon in agriculture and electronics and, of course, in medicine. I was in Washington last month with the Association of Supervisors and Curriculum Developers and heard Maya Angelou state her belief that education is, quote, "a matter of life and death," end quote.

If she is half-right, we should surely increase our expenditures on education research to better inform education practices and enhance the opportunity of students to live successful and healthy lives.

Our committee quickly recognized that education research funding is clearly inadequate. You can see a graphic representation of this in our report, page 102, which I believe is in your folder. A quick glance will reveal the differences in federally funded research of education versus comparable fields. The differences are order of magnitude 10, 20 or 30 times.

It should be pointed out that in terms of the underfunding of educational research, the situation is even more dire than is reflected in these graphs, the reason being that most other fields have major research contributions from the private sector, from business and industry. Both in pharmaceuticals and electronics, firms like Merck and Hewlett-Packard, commit in excess of a billion dollars per year to research. This type of private-sector support of research is very little seen in education.

I would like to approach this issue from the standpoint of critical mass. Aeronautics can be a useful metaphor here. Getting an airplane off the ground, you have to reach critical mass of airspeed quickly in order to sustain flight in the event one of your engines stops running. You need a certain minimum critical mass of airspeed. Throughout the deliberations of our committee, we sensed this kind of problem in the Federal Role in Education Research.

Education being a $300 billion industry, $300 million, which is a one-thousandth part of the education industry's funds, cannot support adequate research efforts. There is a lack of critical mass. Let me give a couple of examples of this lack of critical mass from the current OERI enterprise.

OERI funds centers at universities: Each is responsible for an important topic area and conducts most of the federally sponsored research in that area. There is a Center for Schooling for the Disadvantaged; one on Work Force Preparation; one on School Leadership and several others. Most of the centers are funded at about a million dollars per year. That supports only three, four, or five full-time researchers, hardly critical mass, considering the magnitude of challenges in education.

The same situation exists with the regional OERI laboratories.

In some years, OERI has invited field-initiated proposals from researchers throughout the country. In each of those years, there has been only about $1 million available for awards, despite receiving hundreds of proposals. Only about a dozen are funded and, by law, they are limited to 18 months. According to my experience, this is not the kind of sustained funding and effort which is required for successful research. The most effective research programs often take years to complete.

I would like to offer one final example to illustrate this principle of critical mass. It has to do with my firm's research environment. In our segment of the seed industry, we commit 50 individual professional researchers to our program. Consider this: If our funding for research were to be made to match the education industry, research funding in a comparable way, we would have to fire 49½ of our 50 researchers and commit the half-time remaining person to keep score on our competitors to see how long it would be before their product introductions would drive us from the marketplace.

So my first main point is really a question: What is the difference between agriculture and education that would cause agriculture to be researched with a one-tenth part of its funds and education to be researched with a one-thousandth part of its funds? That is my key question.

Incidentally, it is interesting to note that back in 1973, someone had the vision to actually fund education research to a scale roughly 3½ times what we are doing today in constant dollars. However, as can be seen on the graph on pages 96 and 97, also in your packet, this Federal program was quickly cut down to its present low level of funding.

In discussing education research, the question is sometimes asked, what is it that we should research? Our committee's assignment was to look at organization, government's funding and related issues, not the research agenda; but I found it very interesting that the first several hours of our committee's deliberation were spent making cases for the need for more research in education. We couldn't resist that. Each of us seemed to have his own favorite research objective and agenda.

Mine was television. We know so little about the impact of television on our children and the education process for good or ill. Sometimes when I get up from watching certain programs, I wonder if TV is not some kind of neo-Pied Piper, winnowing our children off into unwanted directions.

Recently, Senator Simon told us about 80 studies that show that violence on television can have adverse effects on youth. But we know little about how television might be used to strengthen the adolescents in our society.

Back to our committee's concern about an education research agenda: Other members wanted to look at the plight of minorities, teacher issues, governance, finance. Our chairman had to work very hard to bring us back to our plan and keep us on task. But it was clear to me from this exercise with a group of keen minds, interested in education, that there is indeed no lack of researchable education issues.

It is said that all politics is local. Perhaps the same thing can be said about education. Everyone on our committee agreed with our

principle recommendation regarding field-initiated research funding. This is set forth on pages 166 to 169 in our report. We are proposing $267 million annually in increased funding, overall; roughly two-thirds of that increase, we propose, would involve field-initiated research. We believe this will bring balance to the issue of local versus centralized research.

This shift to field-initiated research funding would provide a needed and missing local control to our overall education research program. This shift to local control will match the deeply rooted local orientation of our education system.

So my second and last main point is the shift in emphasis to field-initiated research, and the validity thereof.

It is not the job of our committee to comment on or suggest where money for this additional appropriation might be found. However, it is hard for me as a businessman to think about how to organize and fund a research program without also thinking about where the funds will come from. I suggest looking at our major Department of Education programs and wonder if OERI can provide them with important research functions.

Finally, having read a draft of House Resolution 856, it seems to me that our Academy recommendations are reasonably close to your bill in most issues with no irresolvable conflicts apparent. I wasn't able to compare the budget figures, but my impression from the description of your proposed policy board is that such a board may be rather deeply involved in what might be considered operating issues, which could place it in conflict with the role of the director.

This is a common problem in business: governing boards either over—or underplaying their role. The worst condition might be what we call micromanaging, where policy or governance boards get into the operation of an enterprise. This can be a lose-lose situation, as most governing boards are not in a position to effectively deal with the minutia of operating decisions and our presence at this level tends to vitiate the effectiveness of operating administrators.

It is my recommendation that the board should control policy and give direction, but avoid management issues which are involved in the operation of the enterprise.

However, I would not want these comments to overshadow the substantial agreement between our two committees on the future shape of OERI. I am impressed and heartened by this; H.R. 856 seems to me right on track.

Thank you for your attention. I would be happy to answer any questions you might have regarding my testimony.

[The prepared statement of Mr. Porter and Mr. Ball follows:]

TESTIMONY OF ANDREW C. PORTER AND G. CARL BALL
on behalf of the National Academy of Sciences' Committee
on the Federal Role in Education Research
before the House Education and Civil Rights Select Subcommittee

May 27, 1993

INTRODUCTION

The Office of Educational Research and Improvement (OERI) in the Department of Education is responsible for a broad range of research, development, and dissemination activities. Over the years, OERI and its predecessor agencies have been subject to widespread criticism: researchers have often claimed that support for education research has been insufficient, misguided, and poorly managed; teachers and principals have often been unaware of the office or claimed it hasn't done much to improve their schools; and members of Congress have often expressed dissatisfaction and frustration--as much with their votes as with their words.

With these historic problems in mind, with heightened national attention on educational issues, and with its scheduled congressional reauthorization approaching, OERI asked the National Academy of Sciences in the Fall of 1990 to consider how it could better carry out its mandate to improve education in the United States. The Academy, through its National Research Council (NRC), convened 15 distinguished experts to conduct the study. The following remarks are drawn from the resulting report, Research and Education Reform: Roles for the Office of Educational Research and Improvement (1992). [1]

[1] The National Academy of Sciences' Committee on the Federal Role in Education Research was chaired by Richard C. Atkinson. The Study Director for the project was Gregg B. Jackson.

RECOMMENDATIONS OF THE NRC COMMITTEE

We begin by enumerating the recommendations made by the NRC committee. These include recommendations for strengthening the governance and mission of OERI, for restructuring the agency to better focus and coordinate its efforts, and for improving its operations. The final recommendations call for substantially increased funding--or in the absence of significant increases, a very much narrower mandate for OERI.

Mission, Governance and Agenda

A-1 The mission of OERI should be to provide leadership in:

- expanding fundamental knowledge and understanding of education;
- promoting excellence and equity in education; and
- monitoring the state of education.

The mission should be accomplished in collaboration with researchers, teachers, school administrators, parents, students, employers, and policy makers.

A-2 OERI should support a balanced portfolio of activities: basic research, applied research, statistics, development, evaluation, dissemination, and technical assistance; field-initiated and institutionally based R&D; and long-term sustained efforts and responses to newly identified needs and opportunities. To do so, OERI must substantially expand support for basic research, field-initiated research, and sustained R&D activities.

A-3 OERI should have a director appointed by the President, in consultation with the agency's board and with the advice and consent of the Senate, for a 6-year renewable term.

A-4 OERI's agenda setting should be guided by a 24-member policy-making board. At least one-third of the membership should be distinguished researchers who have done work on education issues, complemented by a balanced representation of practitioners, parents, employers, policy makers, and others who have made noteworthy contributions to excellence in education.

A-5 The OERI board should establish a process to develop priorities for OERI's agenda. The process should involve active participation of the various groups concerned with education. These priorities should be set so as to maintain the continuity, stability, and flexibility needed to conduct high quality research and to effect educational change.

A-6 The OERI board should publish a biennial report on federally funded education R&D that describes its accomplishments, summarizes the programmatic activities and funding levels throughout the federal government, identifies unmet needs, and makes recommendations for future directions.

A-7 The Office of Management and Budget (OMB), the National Science Foundation (NSF), or the Federal Coordinating Committee for Science Engineering and Technology (FCCSET) should extend data collection programs, in consultation with OERI, to provide annual data on federal agencies' program activities and expenditures for education R&D.

Organization and Functions

B-1 OERI's research and development activities should be organized under several R&D directorates. Direct support for school change should be organized under a single Reform Assistance Directorate. Organization and management practices should forge appropriate linkages and coordination among the all the directorates and the field.

B-2 Each of OERI's R&D directorates should allocate substantial resources to support field-initiated research for both basic and applied work.

B-3 Each R&D directorate should support national R&D centers for pursuing coherent and sustained programs of basic research, applied research, and development.

B-4 OERI's regionally governed laboratories should be administered by the Reform Assistance Directorate and converted to Reform Assistance Laboratories (RALs) with liaison and assistance staff assigned to each state in their respective regions.

B-5 The Reform Assistance Directorate should support the research-based refinement and rigorous evaluation of innovative programs and processes that have the greatest potential for use in school reform and help schools in using these programs and processes. This recommendation represents an expansion of the functions currently carried out by the Program Effectiveness Panel (PEP) and the National Diffusion Network (NDN).

B-6 The Fund for the Improvement and Reform of Schools and Teaching (FIRST) programs that support local school-based reforms should be administered by the Reform Assistance Directorate, should be modified to require utilization of research

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in development of the improvements, should involve teachers and principals in the development process, and should provide sustained support for these efforts.

B-7 The Reform Assistance Directorate should foster development of a national electronic network that allows all concerned with education to access research and exemplary practice information. The system should incorporate an enhanced ERIC.

B-8 The National Center for Educational Statistics (NCES) should remain as a separate office in OERI with careful attention to preserving its scientific independence. Staffing levels should be approximately doubled as soon as practical to be commensurate with the expanded responsibilities NCES has been given over the past 5 years.

B-9 OERI should work with teacher and administrator education programs, state agencies, and local districts to help practitioners and researchers create learning communities that use research findings, practitioners' craft wisdom, and pursue new inquiry in the quest for educational reform.

B-10 OERI should develop research, training, and fellowship programs to attract high-quality personnel into education research, with particular efforts to recruit underrepresented minorities and scholars in disciplines other than education.

Operations

C-1 OERI should have independent authority for staffing, contracts, grants, and reporting.

C-2 OERI should actively recruit highly qualified personnel from various disciplines for OERI staff positions and should create an intellectually stimulating working environment.

C-3 OERI's contract and grant application review process should provide an appropriate balance between expertise in research and in practice for all proposals, with technical research merit judged by research experts and programmatic relevance judged by program experts.

C-4 OERI should implement a consensus development process involving distinguished experts to review and report on the quality and implications of potentially important bodies of research and evaluations that appear to have unclear or conflicting results.

Funding

D-1 To implement the committee's recommendations, OERI should be given substantial, phased-in, increases in its budgets and staffing levels.

D-2 Unless OERI's budget is substantially increased in the near future, the mission and activities of the agency should be significantly narrowed.

We now turn to a discussion of some of the important themes in the committee's report.

BACKGROUND

On the whole, the United States expects a great deal from its education system. Not only do we expect the schools to impart the rudiments of learning, to equip citizens for

economic survival, and to produce the kind of informed populace needed to sustain the nation's democratic institutions, we expect them to mitigate economic and social inequalities, find ways to circumvent difficult barriers of language, disability, and disadvantage, and to provide an increasing array of social services. Even to approach these expectations, schools need to be extraordinarily resilient and resourceful.

In the past decade, dozens of reports have identified serious problems with schooling in America. Every state has mandated initiatives for reform, and countless local programs and alliances have tried to bring about change and improvement. Intense pressures have built up nationally for renewed attention to education, as indicated by the call for national education goals (National Education Goals Panel, 1991), the congressionally mandated rapid growth of the Education and Human Resources Directorate at the National Science Foundation, and former President Bush's AMERICA 2000 proposal for improving education (Alexander, 1991).

There is no question about the significance of the challenges now facing U.S. education. Part of the imperative for today's reforms comes from increasing academic and intellectual demands of the workplace. Part of it comes from the mediocre educational attainments of a significant proportion of youth in the United States, particularly those in low-income families and those of minority status. Demographic trends have also quickened the reform impulse. The U.S. population is an aging population, so that there will be proportionately fewer workers to support retirees in the foreseeable future. In addition, the population groups that are expanding most rapidly, African Americans and particularly

Hispanic Americans, are also at highest risk for school failure and the accompanying likelihood of a marginal economic existence.

Many people have concluded that ad hoc improvements will not suffice to meet these challenges; rather, a fundamental rethinking of education is necessary. The core idea is that schooling should promote conceptual understanding, problem solving, and the ability to apply knowledge and skills in new contexts and to real-world problems (Porter et al., 1991). A variety of solutions have been proposed, both structural and substantive. Among the most talked-about are a national system of standards and assessments; school-site management; school choice; abolition of ability grouping; outcome-based curricula; team teaching; ongoing staff development; deep coverage instead of broad coverage as a curriculum principle; community-based learning; small, stable, family-like instructional units of students and teachers; the use of portfolios of student work to replace standardized tests; and parental control of schools.

Whether these many suggestions can be knit into a workable and effective program for improving the nation's schools remains to be seen. As a society, the United States has been good at launching reforms; it has been less good at continuing them to completion (Cuban, 1990; Elmore and McLaughlin, 1988). And despite the growing national consensus that the nation faces a major problem in education from kindergarten through high school (K-12), fixing the problem--or even defining it adequately--remains a daunting challenge.

Education in the United States exists on a vast scale with annual budgets of $240 billion for just the K-12 component and more than $375 billion for the total education enterprise--encompassing higher education, industrial education, and supporting

organizations. Both the scale and the decentralized character of education make the imposition of central solutions impossible. If schools in the United States are going to get better, it will require the combined efforts and commitment of all concerned--parents, teachers, administrators, and government officials. The challenge for federal and state policy makers is to create conditions that will make education reform more likely--to help schools and communities equip themselves with the tools of reform.

THE ROLE OF RESEARCH

At the present time, the formulation of education policy is running far ahead of education research--and this is cause for concern. Whether the initiative is school choice, or national standards and assessments, new ideas are being advanced and implemented with little knowledge of how they will fare.

Few Americans would deny that research has been a potent force for improved medical care or the emergence of modern agriculture in the twentieth century. So axiomatic is this to the business of agriculture, for example, that one of the nation's foremost seed companies invested 40 years of effort in developing the seedless watermelon. When it comes to education, however, it is difficult to find an equivalent example. Education research is more likely to be dismissed as trivial or irrelevant than it is to be considered a fundamental ingredient in understanding how children learn and in improving how they are taught.

Telling evidence of the low status of education research is the very small portion of federal education funding that goes to research--just $350 million of $64.1 billion in fiscal

1991. In comparison, the federal government spends 3 times as much for space research and development, and 30 times as much for research related to health. Policy makers are not alone in their general low regard for research as an integral part of a robust system of education: teachers commonly indicate that they do not use research and do not see its connection to what they do on a daily basis in the classroom (Louis et al., 1984).

There are many reasons for the undistinguished reputation of research in education, only some of which are well-founded. Part of the cause can be found in the practical orientation of teacher education. Schools of education generally do not prepare the nation's future teachers to value disciplined inquiry or even, at a more mundane level, to keep track of relevant research. Once on the job, the conditions of work do not encourage school teachers to study the research literature. No matter how enlightening research may be, it cannot contribute to improvements in education if it is not understood, used intelligently, and refined in the context of local experience.

This situation is aggravated by the national tendency to want quick solutions to problems--even if they have been generations in the making. Much of the public discussion of education research has a distinctly utilitarian cast: it assumes that researchers conduct studies, their findings are translated into products or programs for use in the schools, and education is improved. This view is at once too narrow and too grandiose. It implies that the only valuable research is research that can be directly translated into classroom practice, a view that gives short shrift to much research. And it encourages unrealistic expectations about what research can--or should be able to--accomplish.

The effects of research on educational practice are seldom straightforward and quick. As in other fields, there are few definitive studies, but rather a gradual accretion of knowledge drawn from overlapping studies in many fields of study, conducted over a long period of time, punctuated by an occasional breakthrough. In physics and chemistry, as well as social and behavioral science, decades of basic research provide the seedbed for new approaches and methods. Improvement in education will occur only if all participants--parents, students, teachers, the public, and policy makers--are willing to make strong intellectual commitments to work together using new insights, approaches, and techniques to improve education.

Although the undistinguished reputation of education research may be partly attributable to some of the work, the NRC committee did not share the widespread negative judgments about the contributions of research to the reform of education. Its review of research-based programs to improve teaching, strengthen curricula, restructure institutions of learning, and assess and monitor the progress in U.S. schools led to the conclusion that research can improve education--that research has been demonstrably useful.

Basic research and theory building in cognitive science, for example, have produced important insights into how children acquire knowledge and make sense of new experience. Many of the present generation of cognitive scientists are now taking these insights into applied settings--that is, classrooms--to develop teaching strategies that encourage children to develop progressively more effective thinking strategies.

In a very different vein, the data collected by the OERI National Center for Education Statistics provide crucial information to federal, state, and local policy makers, social

scientists, education associations, and others about the character, status, and problems of the education system. The National Assessment of Educational Progress, for example, is an important source of information about students' knowledge and how their knowledge has changed over time. Trend data indicate that reading and mathematics skills have increased only slightly over the past two decades (National Center for Education Statistics, 1991), information that has helped fuel the desire for thoroughgoing reform. One of the lesser known trends apparent in these data is that the reading and mathematics scores of African American and Hispanic students have been rising faster that the national average, which many analysts interpret to mean that the basic skills movement, for all its limitations, had some positive effects.

If, as the NRC committee argues, a sustained investment in research is an essential ingredient in the overall effort to improve education, what can OERI, which is after all a very small player in a very big enterprise, do to strengthen the effectiveness of education research? First, successful education research tends to require a sustained investment of time and money. (Should we be surprised at this if the seedless watermelon took 40 years to develop?) Second, we can only benefit from innovation if we can distinguish worthwhile programs from fads. An important shortcoming of almost all federally funded (and other) education research is the lack of money and time allotted to evaluation. Third, even its brief review of research quickly convinced the committee that no one mechanism and no one discipline should be given priority in federal funding. Although OERI funds virtually no field-initiated research, most of the innovative programs reviewed were built on a research base supplied by the works of individual social and behavioral scientists. A vigorous

program of support for field-initiated research is as important as the current support of laboratories and centers. Moreover, advances in education have been built on research in the cognitive sciences, psychology, sociology, anthropology, organizational behavior, and clinical work. Education research will be substantially strengthened to the extent that it embraces a broad array of disciplines and fields of study.

All of these recommendations--support of long-term research efforts, serious evaluation, much greater support of individual scholars and from many disciplines--suggest bigger dollar outlay, and indeed, the NRC committee strongly recommends a large increase in OERI's research budget. But that sort of financial commitment on the part of Congress is only likely if OERI can be strengthened. The next section of this essay briefly describes OERI's checkered institutional past before discussing some structural changes that the NRC committee recommended to lend it greater independence and strength.

APPRAISAL OF OERI

Governance

The National Institute of Education was created in 1971 as a separate agency within the Department of Health, Education and Welfare (HEW), to consolidate education research and development activities, give responsibility for management of these activities to professional scholars, and to provide higher status for the work. Its director reported to the Assistant Secretary for Education, who was also in charge of the Office of Education and, starting in 1974, the newly established National Center for Education Statistics (NCES).

A National Council on Educational Research was created by legislation to set overall policies for NIE. The 15 members were appointed by the President and, in the 1976 reauthorization of NIE, Congress specified that the council was to be broadly representative of the general public, of the education professions, and of the various fields of education.

With the creation of the Department of Education in 1979, the Office of Educational Research and Improvement (OERI) was established. It was conceived as an umbrella organization to house a semi-autonomous NIE, NCES, Library Programs, and some discretionary and dissemination activities. The National Council of Educational Research was retained.

During the 1980s OERI was reorganized and NIE eliminated. The policy-making council was replaced with a National Advisory Council on Educational Research and Improvement. The responsibilities of the new council were somewhat more limited, since it was not given authority to prescribe the duties of the head of OERI, and it was to provide advice to the Secretary of Education and to the Assistant Secretary of OERI, rather than determine policy.

It is not clear which governance structure--the policy-making council of NIE or the advisory council of OERI--has been most effective. There is widespread agreement that the advisory council has not been influential within OERI or outside of it. The policy-making council, under both Republican and Democratic administrations in the 1970s, was generally considered competent and hardworking, but it was unable to help NIE gain the support of educators, the public, or Congress. In the early 1980s it was considered less distinguished, more politicized, and even less effective in securing support.

Another key issue in the governance of OERI has been the roles played by the top administrators. Each new director or assistant secretary of OERI (and NIE) has sought to make his or her mark by pursuing a distinctive agenda, but most have not remained long enough to enact more than a small portion of it. Seven of the ten former top administrators of OERI and NIE have held their positions for less than 2 years.

However, even with their short tenures, most of the directors and assistant secretaries have reorganized the agency. It is not clear whether the reorganizations have been due to a persisting belief that there are structural solutions to the problems of federal support of educational research or to the lack of opportunities for discretion in other areas of managing the agency.

Politicization

The National Institute of Education was born in the midst of political maneuvering. It was proposed by President Nixon, a Republican, at a time when he was simultaneously proposing cuts in federal funding for many social and education programs to a Democratically controlled Congress (Sproull et al., 1978). Political conservatives, wanting to limit federal involvement in the nation's life, were generally against the institute. So were many liberals, who were unwilling to trade federal support of local school programs for education research. Senator Warren Magnuson, a powerful member of the Senate Appropriations Committee and chair of the subcommittee responsible for HEW, was angered by Nixon's proposals to cut $3 billion from that department and sought to extract revenge through NIE.

Ever since, there has been a widespread perception that NIE and OERI have been inappropriately and dysfunctionally politicized. The examples of politicization, however, vary markedly depending on who is citing them. Members of Congress and their staffs frequently charge that the administration's ideological and political agendas have skewed the appointment of top administrators, the selection of topics to be studied, the determination of how the topics are to be studied, the awarding of contracts, and the editing of reports and timing of their release. For instance, it is claimed that there was little research on the educational effects of dual-earner families during the Carter administration (for fear that the results might impair the women's employment opportunities, which were supported by that administration) and little research on women's equity issues during the Reagan administration (because excellence, rather than equity, was that administration's focus). In turn, members of the administration frequently charge that Congress has politicized the research by favoring constituency desires rather than substantive merit, by large set-asides for the laboratories and centers, by mandating specific centers and studies, by limiting the focus of some congressionally-mandated studies (such as the lack of examination of student achievement in the 1980s Chapter I study), by pushing other pet projects with threats against OERI's appropriations, and by making "big cases" over trivial complaints from constituents.

Some researchers complain that those who hold views unpopular with the members of proposal review panels are precluded from funding, and that various interest groups have distorted OERI's agenda. Organizations of professional educators frequently complain that OERI (and NIE) has been the pawn of the researchers and ignored the needs of practitioners.

Education writers complain of political coloring of research reports, especially those on issues of major concern to the administration.

Thus, for almost three decades, charges of politicization have swirled around NIE and OERI. Many people view the agency as politicized, and that perception inevitably affects the credibility of its work. The diversity of the allegations, however, does suggest that these charges are partly a function of the dissension that often accompanies education. Over and over again, what one group views as leadership, other groups view as politicization.

Sustained Efforts

The Office of Technology Assessment's recent report (1988) on R&D for technological applications for education provides a good discussion of the importance of sustained efforts in R&D work:

> The Department of Education has had an off and on love affair with technology. Where research support has been consistent, as in support of children's television programming in the late 1960s through the 1970s, or long term as in support for technology in special education, important milestones were reached. These are exceptions. Most research projects did not have opportunities to proceed from laboratory research through to development of products and processes, much less to testing in the classroom, with real students and teachers.
>
> In the 1970s, the Department supported quite a few projects lasting 5 or more years . . . During the 1980s few projects received comparable long-term support.
>
> . . . [The 1987-88 plans] fall short of focused, long-term commitments called for by the National Governors' Association, the National Task Force on Educational Technology, and the National School Boards Association . . . . Significant improvements in education can be made if sustained support is made available for development of new tools for teaching and learning. The private sector, while a contributor to this effort, does not have the primary responsibility or appropriate vision for making this a priority. States and localities do not have the capacity.

Instability often results in mediocrity. Most of the research-based innovations that are currently available to educators provide only modest improvements, partly because of the complexity of human learning and behavior, but also partly because these innovations are seldom subject to successive iterations of research, development, and evaluation aimed at strengthening effects, ensuring effectiveness in a wide range of settings, enhancing market appeal, and minimizing costs. Funding for such work is rarely available, and universities often do not consider the second and subsequent iterations to be scholarly work.

As the nation moves from innovation to comprehensive reform, the need for sustained efforts becomes even more important. As Elmore and McLaughlin (1988) have observed:

> Reform of the basic conditions of teaching and learning in schools requires "steady work". . . . Lags in implementation and performance are a central fact of reform . . . the time it takes for reforms to mature into changes in resource allocation, organization, and practice is substantially longer than the electoral cycles [four years] that determine changes in policy.

Balanced Portfolio

OERI supports many kinds of education R&D activities. Each makes different contributions, and a mix of them is necessary to fulfill its mandate.

Two critical types of R&D activity have been severely underfunded at OERI. First, the agency invests very little in field-initiated research--research whose topics and methods are suggested by scholars around the country, rather than in response to requests by an agency for specific work. Field-initiated research harvests the insight, creativity, and initiative of researchers widely dispersed across the country, and has been a major contributor to knowledge and technology in all fields of science. NIH invests 56 percent of

its R&D budget in field-initiated research and NSF devotes 94 percent but, in 1992, OERI invested only 2 percent of its R&D budget for this purpose. It seems to have been congressional action that has constrained field-initiated research at OERI by imposing set-asides on virtually all of the agency's primary appropriations and specifying very low levels of support for this work.

The second underfunded critical type of R&D activity is basic research. Basic research in education is aimed at expanding understanding of the fundamental aspects of human development, learning, teaching, schools, and their environmental contexts; such research generates new views of what exists and new visions of the achievable. While federal government overall, excluding the Department of Defense, invests about 40 percent of its R&D budget in basic research, in 1989 only 5.5 percent of OERI's R&D budget was allocated for this purpose.

In 1977 a National Research Council report, Fundamental Research and the Process of Education, recommended that the federal government "increase . . . the proportion of the federal investment in education research and development designated for fundamental research" and that NIE "take immediate steps to implement a policy of strong support for fundamental research relevant to education." Support for basic research at NIE increased substantially for a few years after the report's publication (Timpane, 1982). During the early years of the 1980s, the entire Department of Education invested about 11 percent of its R&D budget on basic research; since 1986 it has spent only about 2 percent (National Science Foundation, 1991).

Basic research has been slighted at OERI primarily because Congress, teachers, administrators, and the administration have repeatedly urged that the agency quickly solve the pressing problems in schools. Since basic research seldom yields practical applications in less than a decade, the agency has responded to demands for solutions by focusing on applied research, development, and dissemination activities. Although this is an understandable response, it ignores the fact that several of today's most promising innovations in education have been heavily influenced by findings from basic research in cognitive science--work that was conducted not only by education researchers but by investigators in several of the behavioral and social sciences.

Funding

NIE was established to enhance the federal role in education R&D, yet within a year its budget began spiraling downward. That trend continued when NIE's functions were assumed by OERI, reaching a low point in 1989. This downhill slide inevitably extracted a heavy toll on the agency. Careful agenda setting became futile; "quick fixes" replaced thoughtful investments; and few sustained research and development activities could be maintained. Resources were spread so thinly that mediocrity was virtually assured. Individual researchers, with less political clout than institutions, were squeezed out. Agency staff focused on required administrative functions and survival strategies rather than fulfilling the agency's substantive mission. Top-flight personnel often shunned working in the agency.

Researchers, watching resources for field-initiated work dwindle, blamed the loss on the set-asides of funds for the laboratories and centers, which have taken up increasingly

large percentages of the budgets. Some observers suggest a quite different view: that the centers and laboratories, especially the latter with clients spread across the country, have provided most of the constituent support for NIE and OERI, and without their efforts, the agencies would have disappeared.

The centers and laboratories, however, have also suffered from the declining budgets: in 1973 NIE provided $80 million for their operations (in 1990 constant dollars); by 1979 that had declined to $52 million; and in 1991 the amount was $47 million. For individual laboratories and centers, the effect has been more dramatic because there are now twice as many of them as there were in 1973.

The budget cutting has also been reflected in congressionally requested studies. For instance, in the mid-1970s Congress directed NIE to conduct a nationwide study of the administration and effectiveness of compensatory education. The equivalent of $34 million (in 1990 dollars) was appropriated for the 3.5-year study. In 1990 Congress directed OERI to conduct a nationwide study of school reform efforts--a much broader topic--but just $9 million was made available for the 3.5-year study.

These budget cuts have had a marked effect on the work and products of OERI. A U.S. General Accounting Office report (1987:2) that reviewed the work of NIE, NCES, and the department's Office of Policy, Budget, and Evaluation concluded:

> During the past decade, the production of federally sponsored research, statistical, and evaluative information on education has declined notably . . . so much so that the availability of up-to-date information to disseminate to teachers and other practitioners may be threatened.

PLAN FOR A MORE EFFECTIVE OERI

At the outset, it is important to recognize that much that needs to be done about U.S. education is beyond the responsibilities and authority of OERI. OERI's mission is to expand understanding and assist in the improvement of education. It has no authority over teacher education institutions, state education agencies, school boards, district administrators, principals, teachers, or parents. The agency also is tightly constrained in the extent to which it can promote or induce change. The role of OERI (and its predecessor, the National Institute of Education [NIE]) has always been limited to generating new knowledge, developing new techniques and approaches, disseminating information about both, and assisting interested parties to apply the education research and development.

In addition, the mission of OERI is inherently difficult. The disagreements and conflicts over education are endless. Probing the mysteries of human learning is not easy. Linking research with practice remains a challenge. And improving schools is always difficult.

But OERI is also faced with many problems that are not inherent in its mission or responsibilities. If these problems are eliminated or reduced, the agency could be more effective. Frequent changes in leadership have caused organizational instability, false starts abandoned efforts, and unfulfilled agendas. Having the head of any research agency serve at the will of a high political appointee creates the appearance, if not the reality of politicization. So does requiring a research agency to submit its reports for clearance by a politically controlled public affairs office. Congressional actions have also weakened OERI. In addition to substantial budget cuts through most of the 1980s, set-asides in the

appropriations have almost eliminated field-initiated research, and mandated studies have occasionally been politically skewed.

Fragmentation within OERI, and between it and other federal agencies, has resulted in agenda setting with little benefit from what the others have learned and accomplished. The paucity of sustained research has often limited the advance of understanding. The paucity of sustained development efforts has resulted in many innovations that are less effective and more expensive than necessary. Inadequate mechanisms for quality control and accumulation of results have forced practitioners and policy makers to wade through large literatures with little guidance as to what is valid, important, and widely applicable. Weak links with teachers, administrators, and policy makers have often limited researchers' knowledge about the realities of schools and public policy making and denied practitioners the benefits of R&D. Inadequate funding has contributed to most of these problems and undermined OERI's capacity to deal effectively with them.

When Congress passes legislation to reauthorize OERI in 1993, we recommend a number of changes in leadership structure and in the mechanism for setting research priorities:

1) OERI should have a director appointed by the President, in consultation with the agency's board and with the advice and consent of the Senate, for a 6-year renewable term. The rapid turnover at OERI has been dysfunctional to an agency that needs sustained leadership in planning for, investing in, and supporting the long-term efforts that are required for major scientific and technological advances.

There are several precedents for 4- or 6-year terms of office in federal research agencies. These arrangements have been instituted to ensure sustained professional management and to minimize the opportunities for politicization. Although they cannot ensure either--appointees are still free to quit and both the President and Congress retain discretion over agency budgets--a fixed term would allow the growth of a spirit of independence and professionalism in OERI.

2) OERI's agenda setting should be guided by a 24-member policy-making board. At least one-third of the membership should be distinguished researchers who have done work on education issues, complemented by a balanced representation of practitioners, parents, employers, policy makers, and others who have made noteworthy contributions to excellence in education.

With OERI's history of controversy, constant charges of politicization, and fragmentation, bringing focus and stability to the agency is a bigger job than any one person is likely to manage. The board we propose is modeled closely on the National Science Board of the National Science Foundation. Most observers believe that this board has served its agency well. It would differ significantly from the boards of NIE. It would be larger and more diverse, helping to ensure that its members understand the views of the major groups concerned with education. It would be limited to people who have already proven their ability to make important contributions to research on education or to excellence in education, thus ensuring competence and some common understandings during its deliberations. In addition, the board would not set OERI's agenda on the basis of its

members' own predilections, but rather would distill priorities from the needs and capabilities of the country after wide consultation with those concerned about education.

3) The OERI board should establish a process to develop priorities for OERI's agenda. The process should involve active participation of the various groups concerned with education. These priorities should be set so as to maintain the continuity, stability, and flexibility needed to conduct high-quality research and to effect educational change.

OERI is currently required to publish proposed research priorities in the Federal Register every 2 years, resulting in the establishment of a new set of priorities. We propose long-term plans with a limited biennial update.

In addition, OERI's research agenda must reflect the priority needs of researchers, teachers, administrators, parents, students, employers and policy makers, and the agenda-setting process must reflect the capabilities of the education R&D enterprise. Unrealistic objectives of quick fixes to complex problems or universal solutions to problems with multiple causes serve only to disappoint researchers and potential users of their work. Without the integration of needs and capabilities, the productivity, effectiveness, and applicability of the education R&D will suffer.

4) OERI should support a balanced portfolio of activities: basic research, applied research, statistics, development, evaluation, dissemination, and technical assistance; field-initiated and institutionally based R&D; and long-term sustained efforts and responses to

newly identified needs and opportunities. To do so, OERI must substantially expand support for basic research, field-initiated research, and sustained R&D activities.

With an eye to leveraging the influence of the federal government in supporting widespread school reform, we made a large number of recommendations for reorganizing OERI, including the creation of a Reform Assistance Directorate, which would be the link between research and state and local reform efforts. More important, perhaps, than the specific design details, is the spirit that informed our thinking.

The report calls upon OERI to provide leadership in developing learning communities. OERI should work with state agencies, local districts, teacher education institutions, and researchers to help practitioners and researchers create learning communities. Based on our collective knowledge and experience, the committee became convinced that widespread school reform will require partnerships between researchers and practitioners. Each has much to contribute. Researchers can provide breadth and depth of inquiry and rigor of investigation; they can elaborate new theories, conduct carefully controlled experiments, study programs and practices in multiple sites, and prepare national indicators of educational progress. Practitioners have an intimate and holistic understanding of the realities of schooling: they accumulate craft wisdom from daily experiences. Among their ranks are exemplars of good practice and effectiveness whose "magic" needs to be understood and conveyed to others. Practitioners are also the ultimate implementers of most reform strategies.

OERI could encourage such partnerships in several ways. It could fund new approaches to conveying each group's needs to the other. It could support development of

ways to better share the expertise of each group with the other. And it could support innovative collaborations where each group works with the other on their respective responsibilities.

OERI's efforts will have to be supported with leadership at the national, state, and local levels. For instance, school districts will have to provide release-time for teachers; teacher education institutions will have to experiment with substantial changes in their programs; and policy makers and researchers will have to take the time to listen and communicate with practitioners much more effectively than they have in the past.

5) With regard to funding, a substantial increase in the budget and staffing of OERI is required if it is to play an important role in the nation with effective education reform. The NAS report recommends increases in OERI's budget for more basic and applied research, more research based development, laboratory staff with state liaison responsibilities, a minority fellowship program, more extensive refinement and evaluation of promising innovations, and consensus conferences to reach findings about important and contested bodies of research and evaluation. If that increase is not forthcoming, the mission and activities of the agency should be significantly narrowed.

The committee recognizes that its funding recommendations would require a large expenditure. Some people will simply dismiss it as too expensive. We see it as a critical investment in the nation's future. Without the investment, and concomitant efforts at state and local levels, the country is not likely to come close to meeting the national education goals.

Over the first 6 years, our recommendations will cost the nation approximately $1.3 billion in additional expenditures. Over the same period, the nation will spend about $1,500 billion on elementary and secondary education in this country. It is clear that this added investment in R&D will be paid back many times over if it improves the effectiveness or efficiency of our education system by even 1 percent. It also should be noted that even with full implementation of all our recommendations, federal investment in education R&D will still be significantly less than federal R&D investment in agriculture, transportation, or health.

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Chairman OWENS. Thank you.

Mr. Ballenger, would you care to continue?

Mr. BALLENGER. Sure. Thank you, Mr. Chairman.

Mr. Ball, first, if I might, I don't know if the statistics you presented regarding the expenditures on educational research would compare to a local school system in Gastonia, North Carolina, that won an award for America 2000 because of its Odyssey Program, but I am sure there was a substantial amount of research and development that was created there. But at the same time, with the assistance of Northern Telecom and also Bell South and the fiber-optics industry was able to connect three colleges and two junior high schools, and three high schools to teach various classes. I saw it operate, and it was unbelievably fabulous.

I am a businessman, and I love to see strange things put together that way.

How much—this is a pure question, and you may not have the answer—how much private money goes into the development of education? You as a businessman, I as a businessman, recognize that if our children aren't better educated than they are at the present time, we are not going to be able to compete in the world market, because not only our everyday workers, but the ones that are moving up the ladder won't have the capacity that is necessary to deal with the world the way it is today.

That is kind of a broad question, but I wondered if you had any idea about input from the private sector.

Now, I realize Northern Telecom and Bell South were both approaching this from the viewpoint that somewhere down the road they were going to make some money out of this thing, developing a program that would be usable everywhere.

Mr. BALL. Congressman Ballenger, I see a major role for the private sector in education research and in the development of the program. Certainly, it obtains, in spades, with respect to technology, what you have described with Northern Telecom. Research is a very many-splendored thing in this sense, and you hit upon one area. This looms very large in the future of the design of our educational system, and I am sure that it will be approached not only by firms like you have mentioned, the Whittle people are coming on strong with respect to technology of that sort. I would like to say that there is a whole lot to research in education apart from technology in these dazzling new ways in which we can communicate and work.

It is a very broad field, requiring inputs both public and private, and it is really the public section that we are addressing in our recommendations and that I think would fit very effectively with the private programs that you described.

Mr. BALLENGER. Dr. Porter, I saw you write some notes. Would you like to speak to that?

Mr. PORTER. Thank you very much. I think with an increased Federal investment in education research, you could expect that to have a positive influence on the amount of private sector investment, too. If you just look at the biotech industry, around the University of Wisconsin-Madison these private firms are springing up and feeding off the university's research base. Most of that is supported out of the National Science Foundation.

But right now I think the business of education operates pretty much orthogonal or separate from the research base, because there has just been so little Federal leadership in that regard. So I see it as an opportunity. I think if your bill and the increased appropriations that you are suggesting in your reauthorization were to come about, you would see a very positive leveraging effect upon investment from the private sector.

Mr. BALLENGER. I would like to ask you, since you are connected to the University in Wisconsin and obviously you have used research ideas on new ways to teach and so forth and so on, have you found—in breaking into the structure that we have had there year after year after year after year where large numbers of people don't want to change—that it is difficult to get changes where something has been the same way forever.

Mr. PORTER. Well, absolutely. Change in education is extremely difficult. I can give you one example where we have had tremendous success. I think it is a nice example of the kind of sustained investment that you are calling for in your bill in education research and then into development.

Professors Elizabeth Bennamin and Tom Carpenter at the University of Wisconsin-Madison have developed a program called Cognitively Guided Instruction, a mathematics program in elementary school. It draws on basic cognitive science research. It works with teachers, not to tell them what to do, but to give them broad principles within which to operate in terms of improving their instruction and interactions with students.

One of the early users of that program, Maysa Jenkins, received the President's Award as the Distinguished Teacher of the Year based largely for her work in CGI instruction. We find teachers very, very receptive to that. In fact, it is now in the District of Columbia in six pilot schools and they want to go districtwide with it. So if you get something and it appeals to teachers and it holds high promise of improving learning, I think we can be pretty optimistic.

Mr. BALLENGER. Let me just say the two of you express it very well. The Gaston County School District won a $20 million award from the New American School Development Corporation and unfortunately, the selling of the program was done by an egghead educator that spoke in a language that was not understood by the majority of people in Gaston County. We had almost a revolution from the Christian Right, saying that the devil is coming in here and God is going to strike us all dead.

I do recommend that educators learn to speak English that the common people understand, so that they understand that educators are not just trying to destroy the world. But the Odyssey program was beautiful. The Christian Right is supposed to be on my side, but the newspaper had to ask me to write a letter down there to try to explain to them that we weren't really bringing the devil into the school; that we were really trying to upgrade education. And I did speak to the superintendent of schools and he apologized for the fellow he had put in charge of selling this thing to the people back home.

So one of the things I think we all have to recognize is that great ideas in education have to be put out in simple terms, because it is not the teachers, necessarily, that are going to fight you to the

death, but the PTA, or the people not represented by the PTA, but have their kids in the school.

OERI has a wonderful future, I think, and if we do the proper thing with it and come up with great ideas, we will have simple salesmen. You know as well as I do, in business if you don't talk the language of your customer, you aren't going anywhere. So I would just like to say that I think it is great.

I really am kind of glad that the Clinton administration didn't use exactly the same number and it is still 2000, the idea of developing new education in the year 2000, and I sadly understand that the funding, the private funding that was supposed to build there under the Bush administration, may be drying up; but I hope the Clinton administration will pick up on that.

I will be glad to jump on board and help on it because I really think that anything we can do to take the new ideas that we have in business every day and put them into the educational system is something we can do for the future of our country. That is probably one of the most important things we can do.

Thank you, Mr. Chairman.

Chairman OWENS. Thank you. The gentleman has pointed out something very important; we would certainly be altering our legislation to remove the terms "America 2000" and "Goals 2000," but the term "2000" would still be there. It is indicative of the bipartisan consensus that is developing around education. We would certainly like to encourage a bipartisan approach from here on out, too.

Mr. Ball, you had another comment.

Mr. BALL. Just to pick up on a point that Representative Ballenger spoke about. I talked with Deborah Myer. In a conversation, she expressed a regret about what she called the faddishness of education reforms and new ideas that come along, sort of the "reform of the month." She expressed a feeling that she was pleased that education is essentially a conservative function and that we don't get carried away with even more of those fads and that tendency.

That heightened in my mind the notion that we have to deal with a tension between the new and novel and the need to maintain a continuity in the programs. Again, it makes a very strong case for more and better research to cater to the need yet understand the new techniques as they come along.

Chairman OWENS. I want to thank both of you gentlemen for giving us insight into the works of the Academy as it developed the report, which we still consider very important in terms of undergirding our basic approach to research and development. Mr. Ball, your confessions on the internal workings of the committee reminded me of the disclosure of Thurgood Marshall's papers about the internal workings of the Supreme Court and how its deliberations took place. I was reminded of that when you started talking about some of the things the committee did and how you had to fight to keep it from getting sidetracked by other issues. We take that as a sign of the passion that was related to this endeavor.

You both seem to worry a great deal about the possibility of the proposed board drifting into micromanagement. In your deliberations, did you take a look at the board we proposed for OERI as

compared to the NSF board? I think the person who was directing the study, Mr. Atchison, was a former director of NSF. How do we compare? Is it an inapt comparison that should not be made?

Mr. PORTER. Well, I think there are many similarities. Your recommendation is to have a large and representative board with lots of different points of view. NSF is the same way. You have recommended that the members be distinguished themselves; that they have a record of having made important contributions themselves to the enterprise, either to education practice or to research. That is similar to NSF as well. The idea is that it is a policy board rather than an advisory board. That is similar as well.

The recommendations we made in our report for a policy board really drew very heavily upon Dick Atchinson's experiences as Director of NSF. But there is this line between policy on the one hand and management on the other and it is difficult to know where to strike that balance. And——

Chairman OWENS. We concluded that the NSF had substantially more powers than the board we proposed.

Mr. PORTER. Pardon me?

Chairman OWENS. We concluded that the NSF had substantially more powers than the board that we proposed.

Mr. PORTER. You did?

Chairman OWENS. Yes.

Mr. PORTER. Well——

Mr. BALLENGER. Not all of us.

Mr. PORTER. Well, I must split the difference, then.

Again, I guess I could single out the areas where I think the bill comes closest to opening the door to stepping over that distinction between providing important policy direction on the one hand and micromanagement on the other. I think in the place where you start talking about things like setting objectives for the Agency, when you get down to that level, depending upon the individuals, this could be a problem.

There is another place where it is just a little bit confusing as to whether you are getting into micromanagement. For example, you say, well, that the various directors of the research institutes should be nominated by the board which makes a lot of sense. What isn't clear from your language is whether that would be the sole source of nominations. I would hope and assume that it would not be. Also, you don't address in your bill whether the assistant secretary would still be the so-called "selecting official," and I am assuming and hoping that he/she would be. But the language, because it mentions only nominations from the board—and presumably nominations would be open from any source, but it singles out the board—has that flavor of micromanagement, at points.

Chairman OWENS. Thank you very much. We will make some clarifications in those cases.

There have been arguments made that the bill's recommendation for the establishment of several new institutes means creating new layers of bureaucracy at a time when we are trying to reduce the size of Federal bureaucracy. We saw them as absolutely necessary. Compared to other endeavors like Commerce, Agriculture, and Defense, we are way behind in terms of the necessary structures to deal with research as it should be handled.

We also wanted to protect the educational research enterprise from political interference, and we think institutes go a long way toward doing that. Would you care to comment on how the National Institutes of Health or other similar bodies have managed to seal themselves off from intensive political interference and how we might do that against the structure?

Mr. PORTER. Well, as you know, our committee's thinking and your bill are in complete agreement on this need to organize OERI around research institutes. We happened to call them R&D directorates, but the name is the only difference. Now, whether that would be an additional layer of bureaucracy, it certainly wasn't our thinking that it would be, in that those directorates would replace the current organizational structure of OERI; so, it would be a replacement, not an additional one.

How the National Institutes of Health protect themselves from politicization is a good question. I think health is a different matter from education. I think everybody considers himself an expert on education, but I don't think everybody considers himself a chemist or a biologist or a medical doctor.

The other difference may be in size. OERI has been so tiny that if it is to get any attention it would have to be political attention. There is not enough money there to really get any kind of other attention. You seem to have addressed both of those issues in your bill.

Chairman OWENS. Mr. Ball.

Mr. BALL. I would like to support that notion. I think there is a critical mass issue involved here that you can't really break something into separate parts, into institutes or whatever, unless you have enough to deal with. I don't totally understand the National Institutes of Health organization, but it seems to me to be a marvelous model for us to follow here, because we do have the divisible parts of the education scene—the problems of minorities, the governance issues, the finance issues—which lend themselves admirably to that kind of division.

We did not undertake to suggest what these institutes might be in our proposal, but we were quite convinced that it would be a very legitimate way to divide up the effort.

I think one way to get it depoliticized would be the length of the terms of the leadership; of course, that can cut both ways, but I think it is a possible way of providing continuity of the program.

Chairman OWENS. You mentioned the need for OERI to develop learning communities, and you believe that widespread school reform will require partnerships between researchers and practitioners. Our second panel today will highlight the Michigan Partnership for New Education. Do you know much about this partnership or similar partnerships? Would you care to comment on what kind of model that might be or what other models you had in mind when you mentioned learning communities?

Mr. PORTER. Judy Lanier and I were together for years at the College of Education, Michigan State University. While I was still there, the beginning ideas of the partnership were being developed by Judy, so I am somewhat familiar with it.

What I am very familiar with is an idea that ran in front of that development which Judy Lanier also pioneered, and which I

became a big supporter and champion of. That is the concept of teacher collaborators in a research institute. At the time we had the Research Institute on Teaching at Michigan State University which Judy Lanier and Lee Coleman co-directed. They were brought into the Institute—released half-time from their duties to collaborate on research projects—and stayed for an extended period of time, approximately 3 years.

That is a very, very valuable way to connect research and practice. It brings the practitioner right to the research enterprise, so the nature of the questions being formulated reflect practice. It does something on a small scale like what you are talking about in your bill in creating teacher agents, which I think is the real way to communicate research, through the practitioners, the teachers themselves.

But I don't think you get good communication unless you are in collaboration at the point of research. So I think this is a very good idea. I am not absolutely current on the Michigan Partnership. I am sure you are going to hear all about that a little bit later, but the idea of practitioners and researchers collaborating at the time that research and development is done is excellent.

Chairman OWENS. Mr. Ball?

Mr. BALL. No comment on that.

Well, just one thing. I do regret the tendency on the part of policy groups and deliberative groups on these education problems to virtually ignore the role of the teachers and lower level administrators. It seems to me that they have in their grasp a lot of the answers to our problems, if we would just listen to them and recognize how deeply grounded they are in the realities of the workplace, of the classroom.

Chairman OWENS. One last question, Mr. Ball. You talked about the international global market; how in the arena of competition, you wouldn't exist very long if you didn't have a very well-organized and funded research and development operation. We are getting a number of comments from various people about the fact that very little is spent on research and development in this by our global competitors. The Japanese don't spend very much for research and development for education and the British don't and the Germans don't. Do you have any comment?

Mr. BALL. I have wondered about that, and I have thought about what one can say about it. I guess the bottom line of my thinking is, we need to play catch-up. Somehow we have let things drift off target in the last few years. Someone mentioned international test comparisons; the one that sticks in my mind is that only the top 5 percent of the math achievers in our secondary schools are in the top 50 percent of the Japanese.

If we go head to head with the Japanese, and if their companies are supplied with students who are obviously far more qualified than ours, how are we going to compete? That is a question you have got to face up to.

So I think that we simply have a lot of work to do to get our education establishment up and running. I think research is one of the ways we can do that.

We have a lot of other things that have to be done as well—financing, for example. But we have to research, because that is the best way that is available to us. That's my opinion.

Chairman OWENS. Do you have a comment, Dr. Porter?

Mr. PORTER. I guess my first thought is that it is a good thing that they aren't investing more in education research or we would be further behind. Sandy Wigmore just whispered in my ear that they draw pretty heavily on the work that is published in our journals, not only in education, but in a lot of other fields.

Chairman OWENS. As they did in industry.

Mr. PORTER. So once again we are coming up with the ideas, and they are doing the manufacturing.

Chairman OWENS. Thank you.

Mr. Scott.

Mr. SCOTT. Thank you, Mr. Chairman. I just have a couple of questions.

Mr. Ball, you indicated that the term of the research could only be 18 months. Did I understand that?

Mr. BALL. That is the term of the——

Chairman OWENS. Our present law.

Mr. BALL. [continuing] the field-initiated research programs as they exist now.

Mr. SCOTT. Would you suggest a longer term so that longitudinal studies could be developed?

Mr. BALL. Yes, I would. There are some research projects which can be accomplished quite rapidly; because of their very nature, they involve specific limited goals. Others require great dedication of resources over a long period of time.

I think I mentioned the last time I testified here that our industry has been working on taking the seeds out of watermelons for 40 years. We just achieved it; a really remarkable technological achievement that took 40 years to accomplish. I think you have to look at a mix of short-term projects with long-term, coming all together, making it a totally effective program.

So, yes, indeed, we do need more than 18 months. I think that is quite an unsatisfactory time.

Mr. BALLENGER. You are going to take some of the fun out of eating watermelon.

Mr. BALL. That is what my wife says, Congressman Ballenger. She is a South Carolinian, and she says, why in the world would you want to take those beautiful seeds out of the watermelon?

Mr. BALLENGER. You can always spit your distance.

Mr. BALL. We go ahead, undaunted. Incidentally, there is an interesting point——

Mr. BALLENGER. I am sorry to interrupt.

Mr. BALL. [continuing] research is serendipitous. I don't know if you are familiar with the story of aspartame, which started out being a cancer cure and ended up being a $500 million sweetener story. That is also true of our watermelons. We wanted to take the seeds out for esthetic reasons and being able to eat them more effectively—the northerners aren't quite like the southerners. What we found out, however, is that the seeds exude ethylene gas and hasten the destruction of the fruit. Now that we have taken the seeds out, watermelons have a shelf life several weeks longer and

can be shipped wider distances, which has improved their usefulness as a fruit.

So I think we don't always recognize the potential for serendipitous things like that in all research, including education research.

Mr. SCOTT. Mr. Ball, I thought I heard you say something along the lines that the committee wanted to do research on minorities, but were told they had to get back on their mission. Can you elaborate on that?

Mr. BALL. My view of it is that the basic thrust of the research program should apply to all individuals, all youngsters coming through the system, the whole of society; but that there are unique problems and opportunities relating to minorities which can be very effectively dealt with and exorcised in terms of a research program, and should be gathered together into one of the natural divisions of the OERI program—one of the institutes—and dealt with there. Also, cross-filing with other institutes, where it is appropriate, definitely has a place as a separate institute unit.

Mr. SCOTT. One of the concerns I have is the fact that our educational system just isn't working for a lot of young people. There are some things that help, some things that don't.

I was at an elementary school a couple of months ago that had a special program that amounted to a cost of $150 extra per student. They were able to increase their achievement level from the 20th percentile to the 50th percentile with that extra little program. There are a lot of other studies that have shown how you can clearly change the odds significantly for at-risk groups.

What kind of research is going on to see what works and what doesn't work; how does that apply to this legislation? Should we ask it of the next panel?

Mr. BALL. Well, I think that the answer is, not a whole lot. Because you can't shoot a 20,000-ton cruiser with a handgun. And that is what we are trying to do now. We don't have the resources to really do a job researching the problems of minorities and the other areas where research is needed.

I have an uncomfortable feeling that this situation is going to get worse before it gets better. I got a certificate to teach as a substitute teacher in the Chicago schools and other schools in Illinois, and spent three weeks in the classroom last year, with mostly minority youngsters. In one school where I taught, there was 40 percent Hispanic; in another there was 85 percent black.

So, I have seen it up close and it gets scary. I think the closer you get to it, the more needy it looks, the more the need becomes apparent. I think we really have to deal with that with research. We have to get on with it.

Mr. PORTER. I would just add that in the research that OERI has been funding there has been a high priority in the last 10 years on investigating the quality of education and how it can be improved for schools serving high concentrations of poor children. I know, for example, that the bulk of the research at my center—the OERI math center—the cognitively guided instruction program is being done in schools with high concentrations of minority students.

In the Center on School Organization and Restructuring, when we select good examples of restructured schools to study to see what makes them effective and how they have become that way,

we also pick schools that are serving high concentrations of low-income and minority youngsters. OERI, within its past work, has said this is the place where we should concentrate our resources because it is the place where there is the greatest need.

But that is not to disagree in any way with Carl's statement that research should be done that benefits all students; actually, what you find is that the work that benefits low-income students is work that really benefits other students as well.

Mr. SCOTT. We have another panel, so I will make just one other comment. I think we are missing the mark in terms of delivering education to a lot of students. There is no excuse that more at-risk students end up in prison than in college, particularly when you look at interventions that work. We need to do a better job in delivering education and research; and determining what works and what doesn't is very important.

Thank you, Mr. Chairman.

Chairman OWENS. I would like to close out by saying that we value your opinions quite highly, both as individuals and as colleagues at the Academy. We appreciate your study. In fact, that study confirms most of what we have asserted in our bill.

I would like for you to take another look at the issue of micromanagement and the powers of the board. I am going to have copies of this chart, "How Other Research and Development Entities Make Funding Decisions," delivered to both of you. The chart compares OERI, as proposed in the legislation, with the National Science Foundation, National Institutes of Health, and the New American Schools and Development Corporation.

Let me just give you an example. Under the legislation that we are proposing, before issuing an RFP or soliciting contract bids which exceed $500,000 in any single fiscal year, the Secretary must submit the proposal to the board for review.

Under National Science Foundation, all grants and all contracts which exceed $500,000 in a single year or a total of $6 million overall must be approved by the 21-member National Science Board. The National Institutes of Health's advisory council must approve all contracts and grants which exceed $50,000.

We would like for you to review this in light of your previous comments. We would like you to submit your response for the record within the next 10 days.

Thank you again. We certainly appreciated your testimony.

Mr. PORTER. Thank you.

Mr. BALL. Thank you.

Chairman OWENS. Before we proceed to the next panel, I would like to acknowledge the presence of Dr. Sharon Robinson, the nominee for Assistant Secretary for OERI. We certainly appreciate her attendance here—all ears, we hope.

Our next panel is Mr. Alfred Taubman, Chairman, Board of Directors of Michigan Partnership for New Education; Dr. Judith Lanier, President of Michigan Partnership for New Education, who is accompanied by Elnora Crutchfield, Assistant Principal for the seventh grade of the Holmes Middle School in Flint, Michigan; and Dr. Carlton Brown, Dean of the School of Liberal Arts and Education, Hampton University, Hampton, Virginia.

I think it might be appropriate, before you begin, to take a break for a vote. We will break for 10 minutes.

[Recess.]

Chairman OWENS. Please take your seats.

STATEMENTS OF A. ALFRED TAUBMAN, CHAIRMAN, BOARD OF DIRECTORS, MICHIGAN PARTNERSHIP FOR NEW EDUCATION, MICHIGAN STATE UNIVERSITY, EAST LANSING, MICHIGAN; JUDITH LANIER, PRESIDENT, MICHIGAN PARTNERSHIP FOR NEW EDUCATION, ACCOMPANIED BY ELNORA CRUTCHFIELD, ASSISTANT PRINCIPAL FOR THE SEVENTH GRADE, HOLMES MIDDLE SCHOOL, FLINT, MICHIGAN; AND CARLTON BROWN, Ph.D., DEAN, SCHOOL OF LIBERAL ARTS AND EDUCATION, HAMPTON UNIVERSITY, HAMPTON, VIRGINIA

Chairman OWENS. We have introduced our panelists already. We will start with Mr. Taubman.

Mr. TAUBMAN. Good morning, distinguished members of the Committee on Education and Labor. I am A. Alfred Taubman, the Chairman of the Board of Taubman Centers, Inc., a $2.7 billion real estate investment trust, and Sotheby's Holdings, Inc., the world's oldest and largest fine art auction company.

I am here today as Chairman of the Michigan Partnership for New Education, a nonprofit consortium of business, higher education, government, and labor committed to higher standards of teaching and learning for the children in Michigan. I am also here as a proud product of Michigan's educational system and one who happens to be dyslexic. When I was young, we didn't know what to call the condition, and I wasn't even diagnosed. They just thought I was inadequate.

The memory of that frustration fuels my passion today and my commitment to educational change, with all we know about learning, to give every American child a genuine chance to reach for the stars.

I come before you today to express my deep concern with the quality of our public education system, a system that has inadequately responded to changes in society and the workplace. I also want to express my unequivocal support for H.R. 856, which reauthorizes and restructures OERI. We must put a stop to mediocrity in American classrooms, and believe, as a Nation, that our children can achieve world-class standards of learning; and then we must put into place a system that can live up to those standards, beginning with superbly prepared educators and cutting-edge research on teaching and learning.

Five years ago, I became a serious student of educational reform. I was dissatisfied as a donor, convinced that the tens of millions of dollars I had invested in model schools and private initiatives were not having the impact that I had hoped for. I began discussions with then Michigan Governor Jim Blanchard and Dr. Judith Lanier, the Dean of Michigan State's School of Education, who is here with me today.

We agreed that by joining forces we could build a partnership that could create credible prototypes of a new education where research, preparation, and innovation would take place. Three years

ago, the Michigan Partnership was formed; we are here today to share some of the lessons we have learned.

We have invested over $25 million in a new statewide system of teaching and learning. At the heart of our strategy is a network of professional development schools that perform applied R&D as well as capacity-building for educational leadership. We have 19 prototype schools open in Michigan, working with eight of the 14 public universities that certify 85 percent of Michigan's educational workforce.

As an investor, I did share the public skepticism regarding research and higher education's ability to respond to local problems in real schools, but now I am convinced that we will not achieve adequate change without also changing the way teachers are prepared and the way research is conducted.

How and why, you might ask, can we increase our expenses when budgets are shrinking? Number one, we can't afford not to. Business as usual is failing. And educational costs continue to escalate. In a decade, spending on K-12 education has risen 40 percent to $274 billion, or 4 percent of GNP. Business has spent an additional $210 billion a year on training and upgrading including $40 billion in remedial education, which is basically teaching graduates of our high schools how to read, write and do simple mathematics, a huge tax on business having to pay twice.

Finally, less than one-tenth of 1 percent, as mentioned here before, of every educational dollar is spent on R&D, compared to industry averages of 5 to 20 percent. So when will we say "enough," and learn what businesses have already learned?

If you are in the manufacturing business producing widgets and 25 percent of your widgets fail, you can't sell another 25 percent because they are so badly made; you don't hire more salesmen, you fix the widget machine. We can't improve quality without improving the process.

Similarly, educators and policymakers must return to the factory floor—reform education—and that means higher education. Congress must hold universities to higher standards of productivity and research in preparing our educational workforce. Today, universities enjoy a monopoly on how teachers and administrators are licensed and certified; they must do a better job of preparing teachers and responding to real problems in real schools. This will require a rigorous agenda that applies research to curriculum preparation for future teachers.

So what is a private citizen to do?

In January, I met with Secretary Riley to discuss the Federal Government's role. Unfortunately, Federal dollars now invested in teaching universities that prepare teachers and policymakers often neglect important innovations being tested. If new and existing research dollars instead become tied to local reform initiatives and local schools become sites where future teachers are prepared, scarce Federal dollars would have a chance of hitting a home run.

The reauthorization of OERI could have a significant multiplier effect. Our experience in Michigan suggests that universities remain gatekeepers to change and lack significant incentives to change. They continue to win Federal funding to finance business

as usual. We can no longer afford research that happens predominantly in the ivory tower.

Secretary Riley agreed and he suggested that OERI was the proper vehicle for the job. What has ensued is an exciting collaboration among OERI and Congressman Owens' staff, the Taubman Foundation and the Michigan Partnership. If H.R. 856 is passed along with Goals 2000, I think education consortiums like ours will have the gumption and necessary resources to reform and renew educational delivery systems, State by State, across the Nation.

As a businessman, I can sell the importance of R&D to my peers, but I need your help. Most businesses are turning sour on the promise of school reform. This legislation can help reinvigorate their involvement and reinforce the importance of their involvement in holding universities to higher standards. We can leverage private sector investment in R&D with incentives from the Federal Government.

So why is the reauthorization of OERI so urgent at this time? As an example, after the Civil War, President Lincoln was faced with a national crisis; the Nation's agriculture base was damaged. It was difficult to feed our own people though most Americans lived on farms. Lincoln asked the country's elite universities to help. They told them that they didn't teach agriculture and then, of course, the Land Grant Educational Reform Act was born out of necessity.

Today, less than 3 percent of the population produces a surplus of food for this Nation and helps feed the whole world. It could not have been done without the land grant mission. Today, in our age of information and technology, we must increase our learning productivity in order to compete internationally. We need to revitalize the components of the agriculture reforms in a new educational concept.

We cannot depend on just the Yales and the Harvards. They don't produce teachers. Research must be done in the field in the classrooms where teachers work.

I know Congressman Owens shares this vision. I applaud him for daring to think that big. Our country's future is at stake.

On a more practical note, OERI deserves support because, number one, OERI is uniquely positioned to leverage higher returns from current Federal dollars by insisting that universities, reformers and State legislators link arms.

The bill invests in the capacity and infrastructure for change.

Number three, together we can demonstrate that investing in an infrastructure for R&D has a short- and long-term payoff also. The bill embraces the concept of professional development schools, which are fundamentally changing the way schools and schools of education do business. Michigan State University, as an example, has totally restructured its certification process for teachers. Future teachers are being taught in clinical settings much like doctors experience in internship and residency in teaching hospitals. This is tangible evidence of what new teaching and learning can do.

Finally, reauthorizing OERI will send strong signals and incentives to universities to change. It will also accelerate State reform by encouraging educators and policymakers and reformers to work together at the community level.

OERI can and should be the infrastructure for ongoing innovations in educational renewal at the State and university level. As the Land Grant University did for agriculture, the professional development school can be our educational experiment station. We must begin to produce higher productivity from teaching and learning. The reauthorization of OERI is a responsible start.

If this legislation helps accelerate work like ours in States across the country, and I think it will, I believe we would be back insisting on higher levels of R&D investment from the Federal Government. I believe that in the end, you will agree that it was money well invested.

Thank you.

Chairman OWENS. Thank you.

[The prepared statement of Mr. Taubman follows:]

STATEMENT OF A. ALFRED TAUBMAN
TO THE SUBCOMMITTEE ON
SELECT EDUCATION AND CIVIL RIGHTS
U.S. HOUSE OF REPRESENTATIVES
REGARDING
THE EDUCATIONAL RESEARCH, DEVELOPMENT
AND DISSEMINATION EXCELLENCE ACT

A. Alfred Taubman
Chairman
Michigan Partnership for New Education

May 27, 1993

Good morning, distinguished members of the Committee on Education and Labor. I am A. Alfred Taubman, Chairman of the Board of two New York Stock Exchange companies: Taubman Centers, Inc , a $2.7 billion real estate investment trust, and Sotheby's Holdings, Inc., the world's oldest and largest fine art auction company.

More importantly, I am also Chairman of the Michigan Partnership for New Education, a non-profit consortium of business, higher education, government and labor committed to higher standards of teaching and learning for all children in my home state of Michigan.

I come before you today as a private citizen and businessman deeply concerned with the quality of our public education system, a system that is inadequately responding to changes in society and the workplace.

We must put a stop to the mediocrity characterizing most American classrooms today, and believe as a nation that all of our children can achieve world-class standards of learning. We then must put in place a system that can live up to those standards, beginning with superbly prepared educators and cutting-edge research on teaching and learning.

Five years ago I became a serious student of educational reform. I was dissatisfied as a donor, convinced that the tens of millions of dollars I had invested in model schools and private educational initiatives were not having the impact that I had hoped for. I began discussing the needs of education with then Michigan Governor Jim Blanchard and Dr. Judith Lanier, then Dean of Michigan State University's School of Education. We all agreed that reforms to date had lacked the capacity to respond systemically, and that by joining forces we could build a partnership able to design and implement credible prototypes of a new education where research, preparation and the dissemination of innovations would take place. Three years ago the Michigan Partnership was formed, and a delegation of us are here today to share some of the lessons we've learned about school reform and the importance of applied research and dissemination.

Today, with Governor John Engler's active leadership, we have invested over $25 million in a state-wide innovations system for teaching and learning. At the heart of our strategy is a network of professional development schools, schools with local sanction and state mandate to perform applied research and development and capacity building for existing and future educational leadership in our state. We have 19 prototype schools open in Michigan working with 8 of the 14 public universities that certify 85 percent of Michigan's educational workforce.

For me, working with the Michigan Partnership has been a challenging and rewarding undertaking. I've come to appreciate the crucial and all-too-often absent role that applied research and development must play in ensuring the renewal and reform of our educational delivery systems. I'm here to express my unequivocal support of H.R. 856, The Educational Research and Development and Dissemination Act, which will reauthorize and restructure OERI.

As an investor, let me begin by saying I shared the public's skepticism regarding research and higher education's ability to respond to local problems in <u>real</u> schools. But after years of experimentation in model programs and an analysis of current spending, I have come to the conclusion that we will not achieve systemic change and ongoing educational renewal without simultaneously changing the way that teachers are prepared and research is conducted.

How and why, you might ask, can we increase our research and development expenditures at a time when budgets are shrinking?

1. We simply cannot afford not to. "Business as usual" is failing, and educational costs continue to escalate. Currently one out of every three state dollars is spent on K-12 education. In the past ten years, annual spending on elementary and secondary education has risen 40 percent (even after adjusting for inflation) to $274 billion or four percent of our GNP. Businesses spend an annual $210 billion on training and upgrading, including $40 billion on remedial education (which, by the way, is an unfair tax on business, since we pay to teach our workforce how to read and write, a cost our international competition does not have to bear). In addition, businesses contribute 316 million of philanthropic dollars earmarked for K-12 improvements. Higher education received another $200 million for a total of $516 million.

2. Ten years after the landmark report, *The Nation at Risk*, we stand even more precariously on the edge of defeat. Businesses and parents are getting impatient and we don't have the political capital or the will to invest in new ways of teaching and learning. The public wants solutions and rightly so.

3. To date, our attempts at reform have been piecemeal, resulting in well-thought-out designs to replace or improve components of schools, but no delivery system for broadscale implementation, let alone systemic reform.

4. The realities for most communities remain: Over 90 percent of most educational budgets are spent on payroll, leaving little money for upgrading the process used to create teachers and administrators. Even less money is spent investigating ways to better manage the "business" of the schools. And even less money is spent on research for progressive new ways to teach.

5. The stark truth is that less than one-tenth of one percent of educational expenditures is spent on R&D, compared to private industry averages of five to twenty percent. Let's face the facts: We are never going to climb out of this hole the way we are going.

So when will we say enough and learn what businesses have had to learn these past two decades?

If 25 percent of your widgets fail, and you can't sell another 25 percent because they are inadequately made, a business does not hire more salesmen. You have to fix the machine. Deming taught businesses that we simply cannot improve product quality, (in our case higher levels of teaching and learning) without systemically and continuously improving the process that creates the product (again, in our case teachers and learners). Educators and policymakers must return to the factory floor, and in education that means higher education.

Universities have for the most part been left out of the school reform equation. They are perceived as obstacles to change. While often warranted, this perception cannot continue. Congress must hold universities to higher standards of productivity in research and in the preparation of our future educational workforce. Today universities enjoy a complete monopoly on how teachers and administrators are licensed and certified. They must do a better job of preparing teachers and responding to real problems in real schools.

This will require a rigorous applied research and dissemination agenda, committed to understanding how substantial increases in learning occur, and able to feed that information back into the curriculum that prepares future teachers. It's the only way to break the remedial quagmire we're in today.

So what is a private citizen to do?

In January, I met with Secretary Riley to outline ways that the federal government could invest in educational reform based on our four-year learning curve at the Michigan Partnership. I maintained then that the federal government has a unique role to play in educational reform. By definition you have been in the research and development business. A high percentage of federal dollars are already invested in teaching universities that prepare teachers and policymakers and in research universities that study teaching and learning. Typically, however, both these investments are made in a vacuum, often neglecting the important innovations that are being tested in schools trying to respond to changing workforce criteria and heightened social problems. If new and existing research dollars became tied to local reform initiatives, and local schools became sites where future teachers are prepared, scarce federal dollars would have the chance of hitting a home-run. In this way, the reauthorization of OERI could have a significant multiplier effect in accomplishing educational reform and renewal.

Our experience in Michigan suggests that universities remain gatekeepers to change. These institutions have not had significant incentives to change their research and practice, or respond to the problems teachers face once they are prepared, because they continue to win federal funding and receive tuition dollars to finance "business as usual." We can no longer afford research that happens predominately in the ivory tower.

Secretary Riley agreed, and suggested that OERI was the vehicle to get behind. What has ensued is an exciting collaboration among OERI, Congressman Owens' staff, The Taubman Foundation and the Michigan Partnership.

If this legislation is passed, along with Goals 2000, I think private/public/higher education consortiums like ours will have the gumption and necessary resources to respond imaginatively to the pressing need to reform and renew educational delivery systems, state-by-state, across the nation.

As a businessman, I know I can sell the importance of R&D to my peers. But I'll need your help. Most businesses are turning sour on the promise of school reform. This legislation can help reinvigorate their involvement and educate them to the complexities of reform and the importance of their involvement in holding their universities to higher standards. We can leverage private-sector investment for research and development with incentives from the federal government.

So, why is the reauthorization of OERI so urgent at this time?

100 years ago, President Lincoln was faced with a national crisis. We had just been ravaged by the Civil War and the nation's agricultural base was severely damaged. We had difficulty feeding our own people, yet most of the population was agrarian. Lincoln turned to the universities and asked for help. They informed him that they did not teach agriculture, and the Land Grant Educational Reform Act was born out of necessity. Today, less than three percent of the population produces a surplus of food for this nation and the world. It could not have been done without the Land-Grant Mission.

I maintain we are in a similar state today. The industrial age is over We live in an age of information and technology. We need to increase our learning productivity in order to compete internationally and "feed our people." We need to revitalize the components of the Agricultural Extension Service and Experiment Stations in a new educational context We cannot depend on the Harvards and the Yales to help us out of this problem. They are not the producers of teachers. Research must be done in the field, in the classrooms, where our children are. I know Congressman Owens shares this vision and I applaud him for daring to think that big. We must. The future of this country is at stake.

On a more practical level, OERI deserves support and reauthorization because:

1. The federal government already invests substantial dollars in higher education and research, and OERI is uniquely positioned to leverage higher returns from those investments by insisting that universities, reformers and state legislators link arms.

2. This bill is the linchpin and perhaps pre-cursor to systemic reform because it invests in the capacity and infrastructure for change.

3 It wisely embraces the concept of professional development schools, understanding that for very little extra cost the same OERI experimental research dollars can also be capacity-building and dissemination dollars if the federal government insists that teacher preparation and research on teaching and learning happen in applied settings.

4. Together we can demonstrate that investing in an infrastructure for R&D has short-and-long-term pay-offs (We have 19 Professional Development Schools across the state working with local, community and business leaders to protect the innovations they are incubating. These schools have a mandate to simultaneously conduct cutting-edge research in applied settings and train existing and future educators.)

5 Professional development schools are fundamentally changing the way schools and schools of education do business. Based on the research generated in our professional development schools, Michigan State University has totally restructured its certification process for teachers. Future teachers are being taught in clinical settings, much the same way doctors experience an internship and residency in "teaching hospitals." We can show skeptics tangibly what new teaching and learning looks like, and visitors can actually see the importance of integrated research and preparation.

6. Finally, the reauthorization of OERI will send strong signals and incentives for universities to change. It will also accelerate state reform initiatives by encouraging teacher educators, state policymakers and reformers to work together at the community level Ultimately, businesses want to work at the local level. OERI can help build that local infrastructure and leverage private dollars by doing so

OERI can and should be the infrastructure for ongoing innovations and educational renewal at the state and university level. As the Land Grant University did for agriculture, the professional development school can be our educational experiment station. We must begin to think of long-term, systematic ways to yield higher productivity from teaching and learning. The reauthorization of OERI is a responsible start.

It helps put into place a coordinated strategy and system for research, demonstration, preparation and dissemination to work together, coherently responding to ongoing changes in society and education. I believe it is time to begin to think as big as the Land Grant Mission for Education. If this legislation helps accelerate work like ours in states across the country -- and I think it will -- I believe we will be back insisting on higher levels of R&D investment from the federal government, and I believe in the end you will agree it was money wisely invested.

Chairman OWENS. Dr. Judith Lanier.

Dr. LANIER. Congressman Owens, if it would be possible, I would like to have Ms. Crutchfield speak first since she is a teacher and working in one of the schools. That will give context and meaning to my remarks if she comes before me. Would that be permissible?

Chairman OWENS. Certainly.

I would like to note the presence of our distinguished Senator from Michigan, Senator Riegle.

Thank you very much for coming by. Senator, you are welcome to stay and join us.

Senator RIEGLE. Thank you. If I may—I appreciate your acknowledging my presence. I wanted to come over, and had I been able to get here sooner, I wanted to say a word just before Mr. Taubman spoke on behalf of the program that he has laid out. And you will hear more about it now from your next witness, but we think this is a tremendous breakthrough; and I want to thank you for your leadership and interest in conducting this hearing.

I am actually holding a hearing myself in the Banking Committee, but I put someone else in charge to come over, because I feel so strongly about it, and I think this really is a breakthrough concept. And so Dr. Lanier will lay out for you an elaboration of what Mr. Taubman has said, but I appreciate very much his leadership in stepping forward.

We hear about these partnerships with the private sector, and usually it is more talk than action. This is action, and his leadership, I think, is extremely important to the country on this issue; and I thank you for your courtesy.

Chairman OWENS. Thank you very much, Senator. I appreciate your stopping by.

Senator RIEGLE. Thank you.

Chairman OWENS. Ms. Crutchfield.

Ms. CRUTCHFIELD. Good morning. Mr. Chairman and members of the subcommittee, thank you for the opportunity to present testimony on the Educational Research, Development and Dissemination Excellence Act. As a teacher and assistant principal in the Holmes Middle School in Flint, Michigan, I strongly urge your passage of this bill, since better educational understanding and know-how is critical to me as a teacher and to my teacher colleagues. Without better knowledge and insight about what works—and how we come to know what works—those of us struggling to help students learn will have a much harder, if not impossible, time achieving this Nation's goals for better learning. My remarks focus primarily on Title IV of the Act, since it affects me directly through the creation of the National Education Dissemination System.

Now, it may be unusual for an educator pressured with the work on the front lines of an inner-city school to take precious time away from students to speak on behalf of education research. I say this because if it were not for my experiences with the Michigan Partnership for New Education in recent years, I would never have come to Washington to urge greater investment in education research and dissemination. Never before was educational R&D accessible to me in forms that helped improve my teaching and that of my colleagues, as well as our students' motivation and learning.

I must tell you that in my prior years as a teacher I was never motivated to review the research literature on teaching or learning or educationally at-risk students. I was forced to read some of this during my years as an undergraduate and later as a graduate student, but it was all pretty abstract stuff, far removed from the practical demands of my daily encounters with students. Occasionally I felt that I should stay abreast with the research, but how could I do this and when could I do it? It comes out in so many volumes of so many different journals that there was no way that I could possibly keep up with it. And even if it were more organized and in less disarray as a field, time for committed teachers who struggle daily with the pressing needs of students is simply not available.

But time alone is not the problem. Even with more time, we teachers wouldn't use it to study the research literature anymore than we do now. It is not helpful in its current form, since it rarely relates to the problems at hand and it rarely addresses the everyday situations we find in our work. I am not saying that some pieces of the research information don't contribute to better understanding of the problems we encounter in teaching and in school administration, but the problems we face are typically much more complicated than any of the research I have ever read. And workshops on the findings and uses of research aren't much better. They often deal with topics of interest, but they don't help me when I am back at school struggling with the complex challenges of getting poor kids in Flint to learn important lessons.

So what was different about the Michigan Partnership experience, and how did it change my mind in regard to educational research? The Michigan Partnership brought university and school faculty together in my community—in four feeder schools of the northwest quadrant in Flint, in two elementary schools, one middle school and a high school. We worked together over the past 3 years there, to innovate and demonstrate better teaching and learning for Flint students in those schools.

The partnership bought us time to think and work together, time to think and to combine what they know through the educational research with what the school faculty knew from educational experiences.

And together we created better learning opportunities for students. All of us learned a great deal and expect to learn a great deal more in the years to come. But let me tell you more about the arrangement and suggest its promise for disseminating research knowledge on a broader scale than in Flint, Michigan, alone, particularly as it relates to the development of learning grant institutions and cadres of research and development teacher-change agents.

The Michigan Partnership is a collaboration among a set of business, education, and government leaders who want to improve learning for Michigan kids. They figure that you can't improve learning for kids without improving learning for teachers and changing the ways our schools now operate and relate to local communities. So the universities that care about applying educational research in real settings, while combining it with better teacher

educations, are given additional financial resources to partner with innovators in real schools and communities.

Together we create and operate what is called Innovation Demonstration Sites, places that apply the best we know from the research and experiences, places that invite members of the public and future educators to come and learn from what we do. We become living examples of educational change in action, and we become an educational reform network that is grounded in research. Maybe one day we will call these learning grant institutions. But let me explain this in a more concrete term through an example of my work.

In the summer of 1990, the school and university faculty met to talk about the problems of students in Holmes Middle School where I work. We met in study groups, and mine was concerned with reducing the isolation of limited learning opportunities made available to special education students. The inclusion research, as it was called, was aimed at including special education students in regular education classes, places where they had formerly been excluded.

At the same time, another line of research we considered was from cognitive studies about the learning tasks and activities made available to students. The cognitive research suggested that more active, thoughtful engagement on students' parts was critical to understanding and high-level learning. So we began acting on the implications of both the inclusion and cognitive studies.

After struggling with the problem of implementation and change, we found that many students were doing better, but some were not. We began to experience more student disruption and misbehavior; and, of course, that was expected out of some kids. And in some classes, there was an increase in student suspension. So where were the researchers then when we needed them? Well, they were right there with us helping us to figure out the problems as well as to help us create the potential solutions to those problems, for they were in the site with us for good. Now, I don't want to belabor the point, but I think you should know a bit more.

In our subsequent study we noted that while disruptions came from both special and regular education students, they came primarily from students with frequent absences. As these students acted out, it led to further absences from suspensions or time-outs leading naturally to further detrimental effects on their education.

Yet when these kids returned to classes and had better interactive and active student work, they made less trouble. With our change from passive to more active learning, the frequently absent student had a more difficult time figuring out and fitting back into the classroom setting.

It was harder for them to reestablish relationships with groups of students who worked together actively on a daily basis, forming relationships with one another as they learned. So our implementation of the cognitive research had helped some students but had caused problems for others. So what then? Well, it is too long of a tale for me to continue, but we didn't quit. We kept working at it.

Acting on further research, we developed an alternative education program for these students. The literature notes that traditional in-school suspension programs were more or less known as

dumping grounds for students or disruptive students; so we designed our own around an integrated activity based curriculum.

We continued to act on the cognitive research but now understood that inclusion research depends on students and their context. But imagine these same circumstances in the typical research dissemination paradigm.

I would likely have learned about one or more of these recommended innovations from a classroom or a workshop or I might have learned about them from a consultant coming in and giving us in-service training. In either case, it is likely that I would not have tried the new activities since they were both major changes in school policy and practice. And even if I had, as soon as a few student disruptions began, I would probably have abandoned the new innovations entirely before affecting my students' learning.

There are lessons in this experience that have implications of a dissemination system such as you hope for in Title IV.

First, good dissemination must include examples in deed as well as in word. It needs to include demonstrations in real school settings, places where the research is actually applied by persons who are experts in using it for better student learning. External experts—usually distant from the complexities of the daily life in schools—are always eager to sell their research advice and to tell teachers and administrators what they should do, but they seldom come in to demonstrate potential implications, to work out the kinks of application, or to find potential errors in their over-generalizations.

And they rarely stay to learn about the longer-term consequences of the innovation over time or to cumulate and integrate more powerful ideas and innovations with one another. The dissemination of research from a partnership school such as mine is a powerful strategy for it provides concrete examples, ones that visitors can come in and observe and interact with. Visitors, like Mr. Taubman and his business colleagues, as well as educators from other places come in and question the school and university faculty who applied and conducted the research and later maybe if it didn't work went back and revisited and researched more.

Visitors question students about how their experiences have changed and ask students to explain what it is they are learning. We have a growing number of future teachers also learning in our school and others like them, so now the next generation of Michigan teachers can learn to apply the research as well.

We also have educators from the university and school district taking mini-sabbaticals to study with us. The effects of the applied research are evident in these innovation demonstration sites.

So my recommendation is to pass the bill. But, have teacher-change agents as persons who can demonstrate research applications instead of those who have merely taken some training about it.

And I recommend having your learning grant institutions as partnership schools, places where university and schools collaborate officially in the conduct, application, and demonstration of educational research and development for better student and teacher learning.

You see, when I received my teacher preparation, I was taught from a book. And when I graduated and took a job, I found that the school was nothing like what I had learned from the book. So, I would go into the classroom, close my door, do the best job that I could. I didn't use research, and I did not collaborate with my colleagues. Today that has all changed. Our partnership school provides a common ground for teachers and teacher educators to prepare future and practicing educators for new knowledge and skills in a changing world of teaching and learning.

We focus on students and learning, and collaborate in research application and demonstration. Applying research, for me, now means that as a school, as a system, as an educator, and as a field, we are all making continuous progress. Each new problem we solve helps us to ask a new question. Each new question helps us to provide even better experiences for our students.

We no longer get stuck thinking about implementing a technical model. When we thought about implementing a technical model, we worried about the model, not the learner. The research is now helpful to us and our students.

So I urge you, again, to reauthorize the Office of Educational Research and Improvement. And I urge you to focus the dissemination system on the networks of learning grant institutions, ones that have partnership schools as a central component, and ones that have can-do, teacher-change agents and key actors in them. Federal, State, and university support for the creation and maintenance of such applied dissemination sites could make them available throughout the United States.

I thank you for your attention, and this opportunity to speak to you today.

Chairman OWENS. Thank you.

[The prepared statement of Ms. Crutchfield follows:]

STATEMENT OF ELNORA CRUTCHFIELD, ASSISTANT PRINCIPAL AND TEACHER, HOLMES MIDDLE SCHOOL, FLINT, MICHIGAN

Mr. Chairman and members of the subcommittee, thank you for the opportunity to present testimony on the Educational Research, Development and Dissemination Excellence Act [H.R. 856]. As a teacher and assistant principal in the Holmes Middle School in Flint, Michigan, I strongly urge your passage of this bill, since better educational understanding and know-how is critical to me as and my teacher colleagues. Without better knowledge and insight about what works—and how we come to know what works—those of us struggling to help students learn will have a much harder [if not impossible] time achieving this Nation's goals for better learning. My remarks focus primarily on Title IV of the Act, since it affects me directly through the creation of a National Education Dissemination System.

Now, it may be unusual for an educator pressured with work on the front lines of an inner-city school to take precious time away from students to speak on behalf of education research. I say this because if it were not for my experiences with the Michigan Partnership for New Education in recent years, I would never have come to Washington to urge greater investment in education research and dissemination. Never before was educational R&D accessible to me in forms that helped improve my teaching and that of my colleagues—as well as our students' motivation and learning.

I must tell you that in my prior years as a teacher I was never motivated to review the research literature on teaching or learning or educationally at-risk students. I was forced to read some of this during my years as an undergraduate and later as a graduate student, but it was all pretty abstract stuff—far removed from the practical demands of my daily encounters with students. Occasionally I felt that I should stay abreast with the research—but how and when?? It comes out in so many volumes of so many different journals that there was no way that I could pos-

sibly keep up. And even if it were more organized and in less disarray as a field—time for committed teachers who struggle daily with the pressing needs of students is simply not available. But time alone is not the problem.

Even with more time, we teachers wouldn't use it to study the research literature any more than we do now. It is not helpful in its current form, since it rarely relates to the problems at hand, and it rarely addresses the everyday situations we find in our work. I'm not saying that some pieces of the research information don't contribute to better understanding of the problems we encounter in teaching and school administration—but the problems we face are typically much more complicated than any of the research I have ever read. And workshops on the findings and uses of research aren't much better. They often deal with topics of interest, but they don't help me much when I am back at school struggling with the complex challenges of getting poor kids in Flint to learn important lessons.

So what was different about the Michigan Partnership experience—and how did it change my mind in regard to educational research? The Michigan Partnership brought university and school faculty together in my community—in four feeder schools of the northwest quadrant in Flint—in two elementary schools, one middle school and one high school. We worked together over the past three years there, to innovate and demonstrate better teaching and learning for Flint students in those schools.

The Partnership bought us time to think and work together—time to combine what the university faculty knew from educational research with what the school faculty knew from educational experience—and together we created better learning opportunities for students. All of us learned a great deal—and expect to learn more in the years to come. But let me tell you more about the arrangement, and suggest its promise for disseminating research knowledge on a broader scale than in Flint, Michigan alone—particularly as it relates to the development of "learning grant" institutions and cadres of research and development "teacher-change agents."

The Michigan Partnership is a collaboration among a set of business, education, and government leaders who want to improve learning for Michigan kids. They figure that you can't improve learning for kids without improving learning for teachers, however, and changing the ways our schools now operate and relate to local community. So the universities that care about applying educational research in real settings—while combining it with better teacher education—are given additional financial resources to partner with innovators in real schools and communities. Together we create and operate what we call innovation-demonstration sites—places that apply the best we now know from research and experience—places that invite members of the public and future educators to come and learn from what we do. We become living examples of educational change in action—and we become an education reform network that is grounded in research. [Maybe one day we will call these "learning grant institutions."] But let me explain this in more concrete terms, through an example of our work.

In the summer of 1990, the school and university faculty met to talk about the problems of students in Holmes Middle School where I work. We met in study groups, and mine was concerned with reducing the isolation and limited learning opportunities made available to special education students. The "inclusion research," as it was called, was aimed at including special education students in regular education classes—places where they had formerly been excluded. At the same time, another line of research we considered was from cognitive studies about the learning tasks and activities made available to students [both regular and special education]. The cognitive research suggested that more active, thoughtful engagement on students' part was critical to understanding and high-level learning. So we began acting on the implications of both the inclusion and cognitive studies.

After struggling with the problems of implementation and change, we found that many students were doing better—but some were not. We began to experience more student disruption and misbehavior than we expected—and in some classes there was an increase in the student suspensions. So where were the researchers then—when we needed them? Well, they were there with us, helping to figure out the problems created as well as the potential solutions—for they are in this site with us for good. Now, I don't want to belabor the point, but you should know a bit more.

Through our subsequent study, we noted that while disruptions came from both special and regular education students—they came primarily from students with frequent absences. As these students acted out, it led to further absences from suspensions and time-outs—leading naturally, to further detrimental effects on their learning. Yet when these kids returned to classes that had less interactive and active student work [such as sitting quietly in their seats filling out assigned dittos] they made less trouble. With our change from passive to more active learning, the

frequently absent students had a more difficult time fitting back in. It was harder for them to reestablish relationships with groups of students who worked together actively on a daily basis—forming relationships with one another as they learned. So our implementation of the cognitive research had helped some students—but it had caused problems for others. So what then? Well, it is too long of a tale tell here, but we didn't quit.

Acting on further research, we developed an alternative education program for these students. The literature notes that traditional in-school suspension programs became nothing more than dumping grounds for disruptive students, so we designed ours around an integrated activity-based curriculum. We continued to act on the cognitive research, but now understood that the "inclusion research" depends on students and context. But imagine these same circumstances in the typical research dissemination paradigm.

I would likely have learned about one or more of these recommended innovations from a class or a workshop. Or I might have learned about them from a consultant coming in for in-service training. In either case it is likely that I would not have tried the new activities, since they both represent major changes in school policy and practice. And even if I had, as soon as a few student disruptions began, I would probably have abandoned the new initiatives entirely, before effecting better student learning. There are lessons in this experience that have implications for a "dissemination system" such as you hope for in Title IV.

First, good dissemination must include examples in deed, as well as in word. It needs to include demonstration in real school settings—places where the research is actually applied by persons who are expert in using it for better student learning. External experts—usually distant from the complexities of daily life in schools—are always eager to sell their research advice and to tell teachers and administrators what they should do. But they seldom come to demonstrate potential implications, or to work out the kinks of application, or to find potential errors in their overgeneralizations. And they rarely stay to learn about the longer-term consequences of the innovation over time, or to cumulate and integrate more powerful ideas and innovations with one another.

The dissemination of research from a partnership school such as mine is a powerful strategy, for it provides concrete examples—ones that visitors can observe and interact with. Visitors—like Mr. Taubman and his business colleagues—as well as educators from other places come and question the school and university faculty who apply and conduct their research there. Visitors question students about how their experiences have changed and ask students to explain what it is they are learning. We have a growing number of future teachers learning in our school and others like them—so now the next generation of Michigan teachers can learn to apply the research as well. We also have educators from other universities and school districts taking mini-sabbaticals to study with us. The effects of the applied research are evident in these "innovation/demonstration" sites.

So my recommendation is to pass this bill. But it is to have teacher-change agents as persons who can demonstrate research applications—instead of those who have merely "taken some training" about it. And I recommend having your "learning grant institutions" as "Partnership Schools"—places where universities [who can bring much of the research talent to bear] and schools collaborate officially in the conduct, application, and demonstration of educational research and development for better student and teacher learning.

You see, when I received my teacher preparation, I was taught from a book. When I graduated and took a job, I found that the school was nothing like what I learned from the book. So I to shut the door and do the best I could. I didn't use research and I did not collaborate with my colleagues. Today that has changed. Our partnership school provides a common ground for teachers and teacher educators to prepare future and practicing educators for new knowledge and skill in a changing world of teaching and learning. We focus on students learning, and collaborate in research application and demonstration. Applying research for me now means that as a school, as a system, as an educator, and as a field, we are all making continuous progress. Each new problem we solve helps us ask new questions. Each new question helps us provide even better experiences for our students. We no longer get stuck thinking about implementing a technical model. When we thought about implementing a model we worried about the model, not the learners. The research is now helpful to us, and our students.

So I urge you again to reauthorize the Office of Educational Research and Improvement. And I urge you to focus the dissemination system on networks of learning grant institutions—ones that have "partnership schools" as a central component—and ones that have "can-do" teacher-change agents and key actors in them.

Federal, State, and university support for the creation and maintenance of such applied dissemination sites could make them available throughout the United States. I thank you for your attention, and this opportunity to speak with you today.

Chairman OWENS. Dr. Lanier.

Dr. LANIER. Thank you, Mr. Chairman and members of the subcommittee. It is a pleasure to be here, and I appreciate the opportunity to speak with you.

I am currently a faculty member at Michigan State University and President of the Michigan Partnership for New Education, which, as you have heard, is a collaboration among government, business, and education to create and sustain a statewide innovation system.

In prior years, I have directed one of the federally funded national research centers. I have also served as a dean of a large school of education for a dozen years and engaged myself in research development and teaching as a faculty in elementary, secondary, and high schools and college sectors of society.

Throughout this career, from a beginning teacher in the real rural, small, one-room school to that of the beginning leader in the uncharted waters of collaborativity which I feel I am today, I have worked to forge better connections at all times between educational research and educational practice. I am a member of the National Academy of Education.

Today I am here to not only urge your strong support for the reauthorization of the Office of Educational Research and Improvement but also to speak with you about some possible enhancements of Title IV of the bill which outlines the plans for the National Education Dissemination System.

I wanted to stress, by the way, the urgency of your passing the bill at this particular moment in this Nation's history since my sense is that the Nation's overall commitment to education reform is waning, largely, I believe, because of the many prior reform efforts of the last 10 years from the time *A Nation at Risk* was announced largely because many of those reform efforts were not grounded in research, were ill-directed and, thus, we were not very successful. And further I also think that the students and teachers of this country, in particular, deserve access to a better education than they are currently getting and educational R&D is essential to their better success.

In terms of Title IV of the current Act, as you have spelled it out currently in H.R. 856, there are two major directions that I would urge modification, should there still be time.

First, the proposed dissemination system, I believe, needs to be more systemlike. By that I mean that instead of a series of disconnected projects, all worthy in and of themselves—remember we have more focused national efforts to disseminate research, and we build on these learning grant institutions and the teacher extension agent idea as recommended in the bill—make each of these purposefully connected, connected to comparable State and local initiatives and also connected importantly to the education of teachers.

Without a connection of this sort, the sponsored research development and dissemination may likely never actually get to students and teachers.

Further, without such a connection and without cost-sharing—which we might be able to bring about through a national, State, and local connection—we, as a Nation, simply will not be able to afford the means of increasing educational research at the level we must, or making its knowledge products and tools broadly available to the students and teachers across this country.

The second means of strengthening the dissemination system section of the bill is to connect it better to the work of the proposed institutes in the earlier part of the bill, while grounding it simultaneously in the realities of students, educators, and families in these real learning grant institutions.

But while I make these suggestions for revision, if these revisions slow down passage of the bill, I would say change them later. I urge expeditious passage of this particular bill.

A few other comments on the bill itself. The national board that you speak of to help establish research policies and priorities, I believe, is very important, especially if it includes a balanced representation of research users and research producers. The representation of lay and professional members on such a board is also important. The institutes are critical as well.

I would, however, recommend funding them at a $50 million minimum, bringing them on line gradually as adequate appropriations become available for each.

I say this because insufficient resources increase the danger of limited success. Creation of an institute increases great public expectations for high productivity and quality work across the breadth and depth of the field, not surface attention to huge areas of concern.

We need to deliver in education, I believe. And if we have limited funds, it may be better to begin with one or two institutes in critical areas such as those for at-risk children, seeing that the research is broad and deep and importantly made available to the users in ways that make its application visible and enduring.

I will speak in more detail now to my concern about the outreach and dissemination system.

The authors of the bill have clearly seen the analogy between the situation confronting agriculture in the late 19th and early 20th century, as Mr. Taubman earlier said. We were an agrarian society at that time and the demand for food was rising and farmers had neither the habits nor the technology to meet the demand in the way in which it was occurring.

Now, if we look at the parts of the solution, a major part at that time was research and development in agriculture. New products and better ways of working with farmers were developed primarily by land grant universities which had to be created. My point is that both the Federal and the State and local governments all invested heavily in these R&D activities.

At the same time, as State and local extension services for technology and knowledge transfer were put in place, colleges of agriculture focused their undergraduate and graduate student studies on the emerging knowledge as it came forward. And as we know, they were overwhelmingly successful. Now we are less an agrarian society; we are an information, knowledge-based society. And schools and institutions now are asking for better products as well

as information on old ones. They are pressed to work together, joining their efforts together as well as with business and industry.

Schools and institutions, too, have an inherited technology; and that is poorly suited for these new assignments. Yet they have to deliver for us even though the new products are not well defined, even though the means of producing them are not fully explored. The best way of organizing schools and universities for this work is largely unknown, although we have some early, promising efforts; but careful work on these issues is needed and it will require both basic and certainly much more applied research than we have had heretofore. It will require some experimentation, some development work, and certainly close cooperation among universities and schools in these surrounding communities just as with agriculture extension. If these things are not done, we simply will not get the education that America needs.

So the authors of this bill have clearly seen the parallels, but they should go further in building on the strengths and weaknesses of the agriculture model. Wouldn't it be nice if we had surpluses of education and of learning as we have in agriculture? The lessons suggest the importance of four sections, I believe.

The first is strong connections between research producers and users. We must bring those together, for learning on both sides.

Second, the need for major investment in research applications across many different localities of the country. In the work of the Michigan Partnership, we are thinking of them in rural as well as urban and suburban environments.

Third, cooperation across levels of government—at the national, State, and local.

And fourth, placement of much of the research in institutions that will endure; institutions that prepare the future and existing workforce in this country in education.

And here I urge reflection of the fact and recognition that we already know some things from research, more than we are currently doing. So let us now get applications of these results in action, occurring in real places that you can visit and see.

And then let us exploit those places for the preparation of educators so that the research that does exist gets into the minds and hearts of the people who will use it with children in this Nation as well as in the research journals that go into our libraries.

If the learning grant institutions could effectively become applied research sites—places where university-school-community partners engage in innovation. demonstration, and preparation around the country—they could readily be networked to one another and to other parts of the education system for sharing what we learn. The teacher extension agents would be primarily persons who worked in these sites; people who could do and demonstrate.

The current bill suggests that it is those who have attended a training session that would become teacher change agents. I am suggesting that is insufficient; that is important and necessary, but go a step beyond and have these agents be persons who do it.

So the key to success in this regard are the connections and the interactions between three pieces: the research application; the research production—which I put in the middle—and research dissemination: not a linear pass-it-down model, but a work back-and-

forth model between ongoing connections of application, production, and dissemination for researchers to produce the bits and pieces of disconnected parts. They are important parts, but parts that should not be recommended for broad dissemination until they are tested further in multiple applied settings, brought together where important quality controls, protections for children, and opportunities for school and university faculty learning are in place. An interface for exchange of research syntheses—some undertaken by the institutes, and some undertaken in the application sites themselves, whether they are professional development schools or learning grant institutions—will be important for the identification and the generation of important questions of areas of inquiry as well as evaluation of progress in the field. We forget, as a part of the agriculture movement, the engineering and mechanical portion was important because equipment and tools and pieces need to be connected one to another.

So the pieces and bits of basic research need connection and learning from their application in real sites.

The Federal Government, it seems, should stimulate investment in these activities rather than trying to do it themselves in particular settings. I have learned from Mr. Taubman, whom you heard from earlier today, that the concept of leverage here is a very important one especially in the straitened economy that we are in.

If we were to pursue a one-third Federal match for States coming forward with two-thirds of the resources as well as an acceptable business plan for establishing an integrated educational innovation system, one that supported such learning grant institutions that met standards of quality control, we could make the limited Federal resources go much farther than they otherwise would. And we could do a better job in the long run as well, for we would effectively be creating an infrastructure for continuously developing and testing the external validity of educational R&D in this country.

We would have a system for guaranteeing better research synthesis, for it must really come together in applied settings. And we would also have a means of integrating educational research with real educational practice. And if we could not begin in all States at once or if it seems wise to test the ideas for 3 to 5 years or more before making it broadly available, we could begin with a small set of innovators who also value educational R&D and are ready to invest in it with the Federal Government.

Education in America is everybody's business. The States and the localities and universities and the school districts in the country should join you in this undertaking. Better educational research is critical to better learning for students, teachers, researchers, and even for policymakers. A number of States and the educators in them are ready to join you in support of increased educational research.

Chairman OWENS. Thank you.

[The prepared statement of Ms. Lanier follows:]

STATEMENT OF DR. JUDITH TAACK LANIER, PRESIDENT, MICHIGAN PARTNERSHIP FOR NEW EDUCATION, EAST LANSING, MICHIGAN

Mr. Chairman and members of the subcommittee. I appreciate the opportunity to present testimony today on the "Educational Research, Development, and Dissemi-

nation Act" [H.R. 856] introduced last February. I am currently a faculty member at Michigan State University and President of the Michigan Partnership for New Education—an organization working with Michigan government, business, and education to create and sustain a statewide educational innovation system.

In prior years, I directed one of the federally funded national research centers [The Institute for Research on Teaching], served as a Dean of Education for over a decade, and engaged in research, development and teaching as a faculty member in elementary, secondary, and collegiate sectors. Throughout my education career—from a beginning teacher in a one-room school to that of a beginning leader in the uncharted waters of collaborative education reform—I have worked to forge better connections between the worlds of educational research and educational practice. I am a member of the National Academy of Education.

Today I am here to urge your strong support for the reauthorization of the Office of Educational Research and Improvement—although my remarks will also be directed at possible enhancements to Title IV of the bill, which outlines plans for a National Education Dissemination System. I want to stress the urgency of your passing the bill at this critical moment in our Nation's history, since the Nation's commitment to education reform is waning—largely because many of the early reform efforts were not grounded in research, and thus we were not very successful. Further, the students and teachers of this country deserve access to a better education than they are now getting, and educational R&D can help.

I also want to urge your strengthening Title IV of the current Act in two ways. First, the proposed dissemination system needs to be more "systems-like." By this I mean that focused national efforts to disseminate research [such as the learning grant institutions and the teacher extension agents recommended in this bill] need to be purposefully connected to comparable State and local initiatives—and to teacher education. Without a connection of this sort, the sponsored research, development and dissemination may never actually get to students and teachers in the systematic manner in which it is intended. Further, without such connection and cost-sharing, we as a Nation will not be able to afford the means of increasing educational research, and making its knowledge products and tools broadly available to the students and teachers across this country that we must reach.

The second means of strengthening the "dissemination system" section of the bill is to connect it better to the work of the proposed institutes—while grounding it simultaneously in the realities of students, educators, and families in real "learning grant" institutions over time.

But while I make these suggestions for revision, let me be clear that I urge expeditious passage of this bill. A National Board for helping to establish research policies and priorities is important—especially if it includes some balanced representation of research users and producers—the representation of lay and professional members on such a Board is also important. The Institutes are critical as well, and I recommend funding them at a $50 million minimum—bringing them on line gradually as adequate appropriations become available for each of them. I say this because insufficient resources increase the danger of limited success—creation of an Institute increases public expectations for high productivity and quality work across the breadth and depth of the field—not surface attention to huge areas of concern. We need to deliver in education, and with limited funds, it may be better to begin with one or two Institutes in critical areas, such as those for at-risk children—seeing that the research is broad and deep and, importantly, made available to the users in ways that make its application visible and enduring. I will speak in more detail, now, to the area of my primary concern—that of outreach and creation of a dissemination system.

The authors of this bill have seen the analogy between the situation confronting agriculture in the late 19th and early 20th centuries, and that of education today. Then an agrarian society, the demand for food was rising and farmers had neither the habits nor the technology to meet it in predictable ways. A major part of the solution at that time was research and development in agriculture. New products and better ways of working with farmers were developed—mostly by land grant universities. Both the Federal, State and local governments invested heavily in R&D activities—as well as in State and local extension services for technology and knowledge transfer. Colleges of agriculture focused their undergraduate and graduate students' studies on the emerging knowledge. As you know, they were overwhelmingly successful.

Now we are an information-based, learning society—and schools and universities are being asked for new products, as well as for better work on old ones. They are pressed to join their efforts with one another, as well as with business and industry. They have inherited technology and organization poorly suited to the new assign-

ments—yet they must deliver, even though the new products are not well defined and the means of producing them not fully explored. The best ways of organizing schools and universities to do the work are largely unknown, although some early efforts seem promising. But careful work on these issues is needed, and it will require basic and applied research, some experimentation, some development work, and close cooperation among universities, schools and their surrounding communities—as with agricultural extension. If these things are not done, we simply will not get the better education America needs.

So the authors of this bill noted the parallels. But now they should go further in building on the system strengths and weaknesses of the agriculture model—for we could certainly use surpluses of learning in our schools at this time in history. The lessons suggest the importance of [1] strong connections between research producers and users, [2] the need for major investment in research applications across many different localities of the country, [3] cooperation across levels of government, and [4] placement of much of the research in institutions that will endure—institutions that prepare the future and existing workforce in the field.

Here I urge recognition of the fact that we already know some things from research. So let us now get applications of these "results in action" occurring in some real places—and then let us exploit these places for the preparation of teachers and other educators so that the research that does exist gets into the minds and hearts of the people who will educate the children of this Nation—as well as into the research journals that go to our libraries. If the "learning grant institutions" could effectively become applied research sites—places where university-school-community partners engaged in innovation, demonstration and educator preparation across the country—they could readily be networked to one another and to other parts of the education system for sharing what is learned. The "teacher extension agents" would be primarily persons who worked in these sites—rather than those who simply had "knowledge about" the literature.

But key to success in this regard, are the connections and interactions between research application, research production and research dissemination. Research is produced in bits and pieces of disconnected parts—important parts—but parts that should not be recommended for broad dissemination until they are tested further in multiple applied settings where, importantly, quality controls, protections for children, and opportunities for faculty learning [both school and university] are in place. An interface for exchange of research syntheses—some undertaken through the institutes and some undertaken in the application sites [whatever they are called]—will be important for the identification and generation of new important questions and areas of inquiry, as well as evaluation of progress in the field.

The Federal Government, it seems, should stimulate investment in these activities rather than do it themselves in particular settings. I have learned from Mr. Taubman, [the successful businessman you have already heard from today—also the chair of our board] that the concept of leverage is an important one—especially in a straitened economy. If we were to pursue a one-third Federal match for States coming forward with two-thirds of the resources and an acceptable business plan for establishing an integrated educational innovation system—one that supported the "learning grant institutions" that met standards of quality control—we could make the limited Federal resources go much further than they otherwise would. And we could do a better job in the long run as well, for we would effectively create an infrastructure for continuously developing and testing the external validity of educational R&D in this country. We would have a system for guaranteeing better research synthesis [for it must really come together in applied settings] and a means of integrating educational research with real educational practice.

If we could not begin in all States at once—or if it seems wise to test the idea for three to five years before making it broadly available—we could begin with a small set of innovators who also value educational R&D and are ready to invest in it with the Federal Government. Education in America is everybody's business. The States and the localities, and the universities and school districts in the country should join you in this undertaking. Better educational research is critical to better learning—for students—for teachers—for researchers—and even for policymakers. A number of States and the educators in them are ready to join you in support for increased educational research. I applaud your interest in the field, stand ready to assist you in any way it might be helpful. Thank you for the opportunity to speak with you today.

But unsatisfactory past experiences and the size of the Federal deficit have convinced many people that the Federal Government cannot do much But they can Even though the vast amounts of education dollars are spent by local and State governments and the private sector, the Federal Government has strong leveraging

power. The question thus becomes whether this Federal program can be designed as an effective catalyst to encourage coordinated use of local, State and private resources to develop a powerful dissemination system for educational research—one that can reach throughout the country, linking research producers and research users together for better learning for everyone.

Chairman OWENS. Dr. Carlton Brown.

Dr. BROWN. Thank you, Chairman Owens, Mr. Scott and Mr. Ballenger. I am Carlton Brown, Dean of the School of Liberal Arts and Education at Hampton University, which is an historically black nonsectarian private institution. We are located in the urban region of southeastern Virginia and that area includes the cities of Hampton, Newport News, Norfolk and Virginia Beach. And of course that is Congressman Scott's region of the Nation.

I also serve as vice chair to the board of directors of the Holmes Group which is the consortium of nearly 100 primarily research universities that have taken on the task of pressing forward several key reforms in the preparation of educators and in educational research and development.

The primary goals of the Holmes Group are: one, to make the education of educators more intellectually responsible; two, to connect our own institutions more directly to schools and to make the improvement of education a shared agenda; and three, to help make schools better places for teachers to work and learn and better places for children to learn and develop.

In this regard, the Michigan Partnership has served for some time—as it has developed—as a model for us in the significant aspect of our work which has to do with how States, localities and universities begin to respond to the research and development in the school reform agenda.

Additionally, I have recently completed a three-year term as chair of the Committee on Multicultural Education of the American Association of Colleges for Teacher Education. And, I do want to mention one final role which I think is relevant here and that is as a member of the school board of the City of Hampton, Virginia. I do all of this in my spare time.

I am here today to testify very strongly on behalf of H.R. 856 and the reauthorization of OERI. Hampton University has been engaged in the process of preparing teachers and other educators throughout its 125-year history. The past 20 to 30 years have really marked its development as an institution with a significant orientation toward research. In the field of education, the university's involvement in research and development has been heavily marked by collaboration with the public school systems of our region and by collaborative work with other institutions.

These efforts include the design and development of locally useful research and development work as well as inquiry activities focusing on larger national educational issues and I might note here, a tremendous involvement through NSF and other organizations in research and development in assigned education.

This particular approach to collaboration in research and development has yielded for us a number of programmatic features between the school systems and the university to date. Research that is jointly conducted by the university and school system personnel on the issues of student assessment for gifted programs and the

paucity of minority students, for example, led to the development some years back of a jointly operated gifted and talented assessment and placement program serving all students in the locality which has doubled the number of successful minority students placed in gifted and talented programs throughout the system.

In fact, we are graduating from high school this year the first class that includes a number of the students who otherwise would never have had the opportunity to be placed in gifted programs. This is as a result of a collaboration on a real problem faced by a school system. That program actually takes place on the university campus in a building that was designed primarily to serve as a laboratory school setting for the process of preparing teachers and conducting research, and it is staffed by school system personnel and university graduate assistants who have already been trained as teachers and who are now pursuing advanced degrees in various aspects of education.

Additionally, several alternative programs have also been jointly developed and operated by the local school system and the university through a multifaceted partnership. Our joint efforts tend to include mixtures of school systems, State, university, and private foundation funding.

One of the many problems of teacher education surfaced by several inquiries during the 1980s is of course the serious disjunction between teacher education programs on the one hand and what occurs in student teaching or internships and first year teaching on the other.

Bridging this disjunction requires the development of a high class of professionals whose job it is to provide innovative teacher training and assist prospective teachers in both settings. Hampton University was one of four sites in the Commonwealth of Virginia chosen to achieve special State funding to experiment with what we call clinical faculty programs.

These are specially selected Master Teachers from the local school system who are trained to play multiple roles in the process of teacher education at both the university and the school system.

It is expected as we continue development of this program that these clinical faculty members will be major factors in the transformation of teacher education at the university and of teacher induction in the school system.

Additionally, clinical faculty become the primary partners to university faculty in the pursuit of research and development focused on the problems of teaching and learning as they are experienced by schools, teachers, administrators, and students. This provides for, under the circumstances, an avenue for research defined by practice and the problems experienced in actual teaching practice.

Part of what we are after might be best exemplified by another organization on our campus which is the National Center for Minority School Education Research and Outreach which is funded by the Office of Education. This program is designed to work with underdeveloped and under-represented institutions, primarily Historically Black Colleges, those that enroll a significant number of Hispanic students and in two instances, institutions designed specifically for Native American collegiate education.

We work with those institutions in collaboration with school systems in their localities to team faculty at the university with personnel in the school system for the purpose of developing and pursuing a research agenda feeding both sets of needs, those of university faculty as well as the school system.

I might add that at many of these institutions what we find is that the faculty, prior to the pursuit of advanced degrees and placement on university faculty, are generally people with an average of 12 to 20 years of public school teaching and administrative experience. So, they bring with them to the university the background of practice; our task is to reconnect that experience and the university role back to practice.

We are currently engaged in discussions with the local school system to extend the set of schools serving as laboratory settings in which effective educational practices may be developed and validated. In these settings school personnel and university faculty from several disciplines, and of course including education, will continue to collaboratively develop a research and development agenda focused on the improvement of practice and the reorganization of schools.

School and university personnel collaboratively engage in research, the initial and continuing education of teachers, curriculum development and other activities designed to improve practice and allow for the demonstration of effective designs.

In the Commonwealth of Virginia, five institutions of higher education are engaged in forwarding this agenda as members of the Holmes Group national consortium. We do so through collaborative work, through the exchange of ideas and successes, and through collective interaction with the State's Department of Education in the creation of a climate for change. One of our more recent endeavors is the completion of a case study involving our institution, the University of Virginia, and Virginia Commonwealth University. The case study is designed to examine our collective and individual institutional progress toward Holmes Group goals as well as the State policy climate for change to address on a larger scale the kinds of initiatives exemplified by the Michigan Partnership.

While we endorse all parts of the agenda of the Office of Educational Research and Improvement, we take particular interest in the dissemination potential of H.R. 856.

Historically, educational research has involved two groupings of individuals as has been mentioned several times already: research users and research producers. The same disjunction that exists in the world of preparing for practice also exists in the world of knowledge, development dissemination and utilization. While many seek some balance among the two groups, we take a somewhat different slant. It is the case that to an extent, useful educational research bears some stark contrast to research in many other academic fields. While much can be said for the importance of more traditional approaches to research, such as individual inquiry, it remains the case that many of the other effective inquiries that can inform the improvement of schooling is heavily informed by practice and is largely collaborative in its orientation.

To ensure that educational research becomes more directly useful to practitioners and that it have a definitive impact on prac-

tice, we propose the establishment of laboratories, real school settings in which research and development become collaborative endeavors—and of course there is language in H.R. 856 that speaks to this. In these settings the users and producers of research are in large measure the same people. This is the bridging organization where we begin to blur the lines of distinction between the different components of the profession: the skills and capabilities that university faculty have in research begin to be translated to the practitioner; the skills, capabilities and perspectives of the practitioner begin to invest themselves in the thinking and the application of the researcher.

The problems of education are situation specific but with some major transportability characteristics to similar settings or problem situations. The kinds of jointly operated laboratories that we suggest will be staffed by school system and university personnel. These settings will function in large measure as do other schools except for those things specifically oriented toward teacher training and large scale research aimed at addressing national goals and State priorities. They will be similarly resourced and of course there will be some exceptions.

These settings must be largely regulation free to enable them to more openly address fundamental issues of schooling improvement through the collaborative thinking and actions of State, local, and university educational personnel.

In this matrix, the initial education of education professionals would also take place. And I might adhere that if we prepare the next generation of education professionals in a matrix where this kind of activity is taking place, we don't have to be deeply concerned about whether or not the next generation of practitioners will start off their life as Ms. Crutchfield described. Those problems will in large measure be resolved because of the nature of the environment and what they come to understand constitutes effective educational practice plus the skills that they will gain in that process.

Inquiry and development activities would be jointly determined. In this way the very best of educational R&D could be effectively implemented and observed in the work of master teachers who would also become important implementation consultants to other schools and school systems seeking to implement proven effective educational solutions.

Our vision is one in which Federal funds would be allocated to States allowing them to form partnerships with local school systems and universities to develop laboratories addressing significant national, State, and local educational goals and issues. These programs would operate with mixtures of local school systems, State, Federal, university and private funding.

It is our view that the improvement of education requires the establishment of such laboratories, that they be linked to State and national initiatives, and that they serve as a complex within which all of the significant issues of educational change and improvement can be most effectively resolved, validated, and disseminated.

Thank you.

Chairman OWENS. Thank you. Thank you all.

[The prepared statement of Dr. Carlton Brown follows:]

STATEMENT OF DR. CARLTON E. BROWN, DEAN, SCHOOL OF LIBERAL ARTS AND EDUCATION, HAMPTON UNIVERSITY, HAMPTON, VIRGINIA

Good morning! Mr. Chairman and members of the subcommittee. Thank you for this opportunity to provide testimony for the reauthorization of H.R. 856. I am Carlton E. Brown, Dean of the School of Liberal Arts and Education at Hampton University. Hampton University is a historically black nonsectarian private institution. We are located in the urban region of southeastern Virginia which includes the cities of Hampton, Newport News, Norfolk, and Virginia Beach.

I also serve as Vice Chair to the Board of Directors of the Holmes Group, the consortium of nearly 100 primarily research universities that have taken on the task of pressing forward several key reforms in the preparation of educators and in educational research and development. The primary goals of the Holmes Group are: [1] to make the education of educators more intellectually responsible, [2] to connect our own institutions more directly to schools and to make the improvement of education a shared agenda, and [3] to help make schools better places for teachers to work and learn. Many of us are working in our own States to establish this important agenda using the the Michigan Partnership as a model of the kind of State initiative necessary to achieve this agenda. Additionally, I have recently completed a three-year term as Chair of the Committee on Multicultural Education of the American Association of Colleges for Teacher Education. The final role that I play which I think is relevant here is as a member of the School Board of the City of Hampton.

I am here today to testify on behalf of H.R. 856, the Educational Research, Development, and Dissemination Excellence Act which reauthorizes the Office of Educational Research Improvement. Hampton University has been engaged in the process of preparing teachers and other educators throughout its 125-year history. The past 20 years have marked its development as a research institution. In the field of education, Hampton University's involvement in research and development has been heavily marked by collaboration with the public school systems of our region. These efforts include locally useful research and development work as well as inquiry activities focusing on national educational issues.

This particular approach to collaboration, research and development has yielded a number of programmatic features between the school systems and the university to date. Research jointly conducted by University and school system personnel on the issues of student assessment for gifted programs and the paucity of minority students led to the development of jointly operated gifted and talented assessment and placement programs serving all students in the locality. The program takes place on the University campus and is staffed by school system personnel and university graduate assistants. Several alternative programs have also been jointly developed and operated by the local school system and the University through a multifaceted partnership. Our joint efforts include mixtures of school system, State, university, and private foundation funding.

One of the many problems of teacher education surfaced by inquiries during the 1980s is the serious disjunction between teacher education programs on the one hand and student teaching and first year teaching on the other. Bridging this disjunction requires the development of a new class of professionals whose job it is to provide innovative teacher training and assist prospective teachers to make sense of both settings. Hampton University was one of four sites in the Commonwealth of Virginia chosen to receive special State funding to experiment with Clinical Faculty programs.

Clinical Faculty are specially selected Master Teachers from the local school system who are specially trained to play multiple roles in the process of teacher education at both the University and the school system. It is expected that clinical faculty will be major factors in the transformation of teacher education at the University and teacher induction in the school system. Cinical faculty also become the primary partners to University faculty in the pursuit of research and development focused on the problems of teaching and learning as they are experienced by schools, teachers, administrators, and students. This provides an avenue for research defined by practice and the problems experienced in actual teaching practice.

Given the demographics of education with which you are familiar, I feel that it is important to take several steps to include several types of underdeveloped as well as minority institutions in educational research ventures—particularly those ventures focused directly on the issues of school reform. In this light, I am recommending the development of a historically black colleges agenda, language for which can be seen in several places in your proposed bill. As an example, let me cite Hampton University's Center for Minority Special Education Research and Outreach. This program is funded by the Department of Education and engages in activities designed to in-

crease the research and grantsmanship involvement of historically black institutions and other institutions with significant minority membership. The Program does so by requiring faculty in the several institutions that it serves to pair on the development and execution of a research agenda with personnel in local schools. As you can see, this approach is very much in line with the proposals advocated here and those of the Holmes Group as the best means by which to both increase the numbers of persons of color and improve the quality and relevance of research to the field.

We are currently engaged in discussions with our local school system to establish a set of schools as laboratory settings in which effective educational practices may be developed and validated. In these settings, school personnel and university faculty from several disciplines to include education will collaboratively develop a research and development agenda focused on the improvement of practice. School and university personnel will collaboratively engage in research, the initial and continuing education of teachers, curriculum development, and other activities designed to improve practice and allow for the demonstration of effective designs.

In the Commonwealth of Virginia, five institutions of higher education are engaged in forwarding this agenda as members of the Holmes Group national consortium. We do so through collaborative work, the exchange of ideas and successes, and through collective interaction with the State's Department of Education in the creation of a climate for change. One of our more recent endeavors is a case study involving our institution, the University of Virginia, and Virginia Commonwealth University. This case study is designed to examine our collective and individual institutional progress toward Holmes Group goals as well as the State policy climate for change to address in larger scale the kinds of initiatives exemplified by the Michigan Partnership.

While we endorse all parts of the agenda of the Office of Educational Research and Improvement, we take particular interest in the dissemination potential of H.R. 856. Historically, educational research has involved two groupings of individuals: Research users and research producers. While many seek balance among the two groups, we take a somewhat different slant. It is the case that to some extent, useful educational research bears some stark contrasts to research in many other academic fields. While much can be said for the importance of more traditional approaches to research as individual inquiry, it remains the case that much of the more effective inquiry is heavily informed by practice, and is largely collaborative in its orientation.

To ensure that educational research becomes more directly useful to practitioners and that it have a definitive impact on practice, we propose the establishment of laboratories, real school settings, in which research and development become collaborative endeavors. The users and the producers are in large measure the same people. The problems of education are situation-specific but with major transportability characteristics to similar settings or problem situations. The kinds of jointly operated laboratories that we suggest will be staffed by school system and university personnel. These settings will function as do other schools. They will be similarly resourced, but with some exceptions. These settings must be largely regulation-free to enable them to more openly address fundamental issues of schooling improvement through the collaborative thinking and actions of State, local, and university educational personnel.

In this matrix, the initial education of educati n professionals would take place. Inquiry and development issues would be jointly determined. In this way the very best of educational R&D could be effectively implemented and observable in the work of master teachers who would also become important implementation consultants to other schools and school systems seeking to implement proven effective educational solutions.

Our vision is one in which Federal funds would be allocated to States, allowing States to form partnerships with local school systems and universities to develop laboratories addressing significant national, State, and local educational goals and issues. Programs would operate with mixtures of local school system, State, Federal, university, and private funding. It is our view that the improvement of education requires the establishment of such laboratories, linked to State and national initiatives, serving as a complex within which all of the significant issues of educational change and improvement can be most effectively resolved, validated, and disseminated. Only in such settings can the needs of any category of children at risk receive the attention necessary.

Chairman OWENS. Ms. Crutchfield, I want to thank you for the term innovation demonstration site. When I, as Chairman of the

Subcommittee on Select Education, tell people that we are responsible for educational research and development, they often say: "We don't need any more studying, just go out there and do something."

Most people are willing to accept that research and development in business or in agriculture or in defense means more than just academic study, but when it comes to education, they immediately jump to the conclusion that we are talking about regular academic study. So, from now on, I will say that my committee is responsible for oversight of innovation demonstration sites.

We certainly appreciate your testimony and the "right-on-the-firing-line" quality of it. I am troubled by the fact Mr. Taubman started out by saying that most businesses also are turning sour. We very much need that business involvement. Our whole model of the learning grant institution and district agent stresses that need.

We need to include people from a cross-section of business and labor because we feel the involvement of that sector is very important to keep the process going and avoid traditionalism from taking over so that you can have a new system of training people to do what they did before without getting outside insight.

Mr. Taubman, can you elaborate on what you mean when you say that businesses are turning sour? What steps can we take to keep them in the process?

Mr. TAUBMAN. Business, of course has always been a supporter of research. The idea of government research is something that I think businesses are questioning. If OERI provides financial support for matching funds, we have to go to business to get matching funds.

But, we have to have their confidence that on a systemic basis our programs are going to be supported. When business turns sour, I think business turns sour on all government, not specifically research in education. The delivery systems in education have really been poor, probably more than most things in government. It is understandable if they are not getting the delivery, they would feel sour about anything that has to do with State government or State government financed education.

Chairman OWENS. How do you see yourself having an impact on licensing and certification? How does your work impact on that?

Mr. TAUBMAN. Well, the change at Michigan State, a great deal of which has to do with Dr. Lanier, who was previously chairman of that department, had to do with the change in implementing our educational collaboration. Out of this came an opportunity for a new kind of certification.

Again, our concern really has to do with the structure that we already live with which is the fact that teachers are often given tenure in most States at the end of three years; in universities it takes 10 years, 20 years, or maybe never. This contrasts sharply with all business in America where tenure means the next hour in terms of productivity and delivery of productivity.

Unfortunately the structure has given us a way that productivity does not necessarily become important. What we are trying to demand is that productivity in the school by the workforce is important.

Chairman OWENS. Do you want to comment?

Dr. LANIER. Yes, I would like to comment on that, Mr. Owens, and relate it to research. One of the things that we are working toward here grew out of an early discussion that Mr. Taubman and I had relative to the preparation of teachers. The idea early on, when we were discussing alternative certification—what we called 90-day wonders in the preparation of people for work in schools—was that part of the problem is that today's schools are not the right places for preparing tomorrow's teachers.

If we are unhappy with the way they are currently operating—not adequately acting on the basis of research and best knowledge of what we know would work better for students—we need to create these sites and then use them as bases of judgments when people intern over time in them, whether they learn and can use what they know in their work with students. In a sense you let the preparation programs vary, but you hold constant the assessment of performance in these sites which engage in education and application of R&D in new, different, and stronger ways than they have heretofore.

So the certification issues eventually will be tied to internships in settings of the sort that we described. Dr. Brown commented that this is part of the goal of the Holmes Group and others: to raise the expectations and the norms for those who are learning to teach and will work with our children.

Chairman OWENS. I think that would be a good byproduct of the collaboratives that are funded under Title IV. I appreciate your thorough analysis of Title IV and the fact that you were quite positive about it.

For a long time I had to struggle with everybody, including my staff, to get them to see the wisdom of that section of the bill and the analogy with the land grant colleges and the experimental stations; the county agents and the district education agents.

Dr. LANIER. If you don't acknowledge some of the weaknesses and struggles they have had with those two systems.

Chairman OWENS. We deliberately wanted to maintain maximum flexibility; therefore, we didn't call them learning grant universities. We don't even make it necessary for them to be nonprofit. We left the flexibility there because we fear them becoming more system-like, becoming more traditional and just being taken over, freezing out some of the more innovative segments of the population, including the business sector, if they are controlled too much by the old university system, special schools of education and professional schools.

As a result of your comments and the way your partnership works, we are going to go back and take a hard look at that section and how we can reshape it, but we want to make it breathe and not put it in a situation where it may be smothered by academia.

Dr. LANIER. I want to respond to that if I might. I purposefully used the term learning grant institution, not university. I don't make those synonymous; I am thinking more like the partnership schools that would be these institutions where you bring the partners together.

A university would have to be at the table—maybe not in your scheme—but for the investment of R&D in a serious——

Chairman OWENS. We assume in the majority of the cases that would be so. It would be based in the university in the majority of the cases. Professional schools like schools of education, of course, is obvious, but how do we get the best of it without there being a danger of smothering?

We have a problem now because they have not done a good job.

Dr. LANIER. I think that is right when they begin partnering. First of all, the ones that will come want to do this work. As Mr. Taubman said, we have half of them and we are trying to lure others to participate with us because it is very hard work. Once the university faculty joins with school and community participants as well, everybody learns, I think. Arrogance and the "keep things as usual" attitude won't work in those settings.

Chairman OWENS. So you would say grants should go only to university educational institutions that already have some collaboration going——

Dr. LANIER. For a business plan to move in that direction.

Chairman OWENS. And already have it going.

Dr. LANIER. Applied settings.

Chairman OWENS. Yes, Mr. Taubman.

Mr. TAUBMAN. Yes, I agree with that. As we discussed, the program really has to be starting or even in place before I would recommend any kind of support; otherwise there is going to be a lot of leakage in terms of how these funds are really controlled and how they are used.

Research really has to be where we know there is an opportunity to build on it.

Chairman OWENS. Dr. Brown. I am really skirting around the edges in terms of academia and my suspicions that it might smother innovation.

Dr. BROWN. When we talk about the requirement that there be a collaboration, I think we are using it as a safeguard so that it does not get swallowed up in traditional university business. The Holmes Group has literally taken the position that unless we establish such collaboratives, unless they become the central focus for all educational improvement, then none of the goals that we seek will be realized. So I would endorse the idea that there has to at least be a business plan approved with a viable partnership with some clear and accepted settings in which this activity will occur and that all of the key parties be committed to that agenda.

Even if it is not as full blown as Michigan—everybody is trying to still figure out how Michigan did what it did—there has to be at least a plan struggling in that direction or you will in fact run the risk of throwing some good money after some other money.

Chairman OWENS. I want to close out by saying that I think teachers ought to be more readily acceptable of changes than farmers. It was not easy to convince farmers to use the results of the agriculture experiment stations. They had a difficult time in the early days trying to get farmers to apply what was known, but they got on board because they saw what works and saw that farmers who accepted it prospered and went ahead.

So what works is very important I suppose in convincing your colleagues to really stay with this innovation demonstration process fed by basic research. The problem that I encounter most when

I talk to teachers in the field is the discipline problem and the problem of today's youngsters being more difficult than they were 20 years ago. Ms. Crutchfield, has the involvement in the collaborative really worked in terms of helping with the discipline problem and keeping the most difficult students on track to improve their performance?

Ms. CRUTCHFIELD. Yes. Those of us who are on board with the collaborative efforts have seen a great change in student behavior and the indepthness as far as the content of the subject matter.

You could say it is depth instead of breadth; it is like they are going deeper into conceptual things. They are really learning and can go and express it to visitors who come in our building. It is a whole different culture.

Chairman OWENS. In 3 years you have seen some real changes in performance?

Ms. CRUTCHFIELD. Yes, we have seen some real changes in 3 years. We don't have our total staff on board yet; we are still inviting people to participate. But, in three years, you can walk in and tell the difference. People who visited three years ago and come back now, say you can see a difference.

We still have some behavioral problems but they are not at all like they were. I think the main reason is the collaborative efforts. Of course we are teaching kids that when they get into the society, they are going to have to learn how to work with people and to collaborate action; that is what success is about.

Mr. TAUBMAN. Mr. Chairman.

Chairman OWENS. Yes, Mr. Taubman.

Mr. TAUBMAN. Chairman Owens, as chairman of the Michigan Partnership for New Education, I want to invite you and your committee to Michigan to actually see a school setting. I know you are very busy, all of you, but I think it would be very important that you see the way this functions.

The teachers accept the idea that children come to school with knowledge and they try to build on that knowledge. Children are working together as teams; they get the opportunity to communicate and to help each other learn.

This is a marvelous idea and one that we didn't think of initially. It was thought of by a lot of other people, but we have been able to build on this. It has not been easy.

Dr. Brown pointed out that he can't figure out how we did it; well, I can't figure out how we did it, either. We still haven't done it; we are struggling.

On the other hand, Governor Engler has been a big proponent of this program. He has been working very hard to get funding for the program which he considers as one of the methods of building a strong educational system in Michigan.

Chairman OWENS. Dr. Brown, you had a comment?

Dr. BROWN. Yes, I just wanted to follow up on Ms. Crutchfield's comments. Among the things wrong with what we do that has not been mentioned here today is that we have generally caused teachers to have to deal with what they deal with isolated and alone. Consequently, in most schools, there is no one to bounce your thoughts off of. There is no premium on risk-taking, so the safe

thing for teachers is to do the best they can and try to keep a lid on it so no one thinks that they are not good.

The collaborative surrounds every teacher with assistance, with people to talk to at a variety of levels, with ways to look at a problem from a variety of perspectives, and ways to design and experiment with solutions. It even impacts how we go about evaluating a teacher's performance. One of the things we want to get into that process is to what extent the teacher was able to identify and pursue particular problems.

Currently, the way it is structured in most schools is if the teacher says I have a problem, we evaluate that as teacher ineffective. We have got to reverse this whole set of things. That is one of the reasons why so much has not happened positively in schools.

Chairman OWENS. Mr. Ballenger.

Mr. BALLENGER. Thank you, Mr. Chairman. I would like to add to the sourness that Mr. Taubman spoke about because in our manufacturer company back home, I think we pay about $500,000 or $600,000 a year in property taxes of which 40 percent goes into the educational system and then we have workers who have graduated from high school and they can't read or write. Let me tell you what we did—I didn't do it, somebody who is running my place right now did something. Excuse me, sir.

Mr. TAUBMAN. Excuse me, I am sorry.

Mr. BALLENGER. He extended the plant, and he had a corner that he thought was left over, so they built a classroom to teach people how to run printer presses and operating the mechanics and the engineering of this stuff.

I was just there about three weeks ago and he said the greatest thing has happened. We had that classroom but we weren't using it except one day a week. We started checking our employees and we have 35 Vietnamese, which means that a lot of them don't speak English very well. We also found out that some of the other employees obviously couldn't read or write very well. So, we went to the community college system and said if we got a classroom and give our employees an hour a day, would they send us a teacher.

And I mean this is the sourness of business on the education. We are now in the classroom every day, one hour a day, five days a week and we try to have it available for all three shifts at the plant.

But that was just one of the things that as I say business is trying to do it. I am sort of like Dr. Brown, I don't know how Michigan did it. I am sitting here trying to figure out. You said the governor has gotten involved.

Dr. Lanier had to be there, and Mr. Taubman, you mentioned 5 years ago you were interested. Somebody had to get the ball rolling somewhere. Dr. Brown, I agree with you. I don't know which one, the chicken or the egg came first but somebody there started it. And I just commend you highly for it.

I would like to ask Ms. Crutchfield—you did mention that everybody wasn't on board yet in your school—is there a difficulty amongst, shall we say, the faculty of the school in their willingness to drive into something new like this?

Ms. CRUTCHFIELD. As Chairman Owens said, a few minutes earlier, of course some of them are a little nervous and still are It is a

risky kind of thing and it is hard work and a lot of hours that we put into this, but as they see the rest of us being successful, getting our kids involved in our academics, they are coming on board. We have just about 85 percent of them on board now; we expect the other 15 this next year.

Mr. BALLENGER. If I might ask, the Flint School System is probably having a terrible economy right now, at least that is what I understood, and the school system is probably funded mostly from the local and State level. I believe somewhere the education in Michigan might have been assisted by outside money, but was the local school system level commitment from business or somebody that came in with additional money or did you do it with what you had?

Mr. TAUBMAN. Well, we have a $48 million 5-year program in Michigan of which we fund a third, a third and a third. That is the private sector, a third; our State government a third—and this is over and above our State education budget—and the universities contribute either in kind or in funds.

So consequently they get additional support from the Michigan Partnership for these schools to restructure the schools and to teach and retrain the teachers in the system. The collaboration of the universities is part of their funding in kind; they bring their people down to work in the schools and to teach in the schools, which Ms. Crutchfield mentioned.

Dr. LANIER. Could I just add to that, Mr. Ballenger? Before when you asked Ms. Crutchfield about the school faculty and their willingness and readiness, I should say that not all of the university faculties are wildly enthusiastic about this kind of program either, so training and motivation is important at that level as well. So, it means getting training for faculty both from the school and from the university and gradually moving toward greater participation.

Mr. TAUBMAN. We have 19 schools open. Dr. Lanier and I always felt that we needed 200 schools open but we have 3,600 schools in Michigan and about 1.6 million students.

We really need support for this because we have roughly a year and a half to go on our five-year program. It is not a question of our program; we are one of a half dozen programs that I know of in the United States that are going forward on their own without any Federal support at this time, trying to do innovative programs for change and the collaborative programs we have been discussing.

As we mentioned before, we feel that Federal support to these innovation programs will cause a virus in terms of all the other schools.

In Ms. Crutchfield's district, the northwest section of Flint, although they have four schools open, there are probably eight or ten schools involved in the process right now because teachers talk to teachers and the principals talk to principals and the superintendent is very much behind the program, so the whole program is going to feed on itself; plus the fact that we have local area partnerships.

In Muskegon, there is a roundtable of businessmen who are supporting their school. What we are trying to do is get the support in each local level. The two new schools we are opening up in Detroit have a local group sponsoring the program

So we are trying to use our funds as best we can. Your question is a very good one, Congressman, if you have time for a quick story.

Mr. BALLENGER. You have to ask our Chairman.

Chairman OWENS. Go on.

Mr. TAUBMAN. Our going from year to year reminds me of a story about a prince in a civil principality who had captured all the countries around him. He got bored and he looked down and saw his horse and he said, gee, it would be wonderful if my horse could fly.

So he called in all his magicians and one by one he asked them the question: "Can you make my horse fly?" The first one said, "I could probably make him disappear, but I can't make him fly." The prince said, "Put him in the dungeon." When they brought the next one up, he said, "I don't think I can make him fly but I might make him learn how to sing." "No, no, no," said the prince. "Put him in the dungeon." The next fellow obviously got wise to this. He walked up and said, "I think I can make him fly but I need a year." The prince said, "You need a year; I think that is reasonable. Go away and make him fly."

So as he is walking away his assistant runs after him. He says, "You know you can't make that horse fly, why did you agree to make him fly?" He said, "Lots of things can happen in a year. Number one, the horse can die. Number two, the prince could die. Number three, I could die. And number four, who knows, in a year we might make him fly."

Well, that is like us; we are working year to year and we are hoping to make the horse fly.

Mr. BALLENGER. I can understand that. Dr. Brown, you were discussing the emotional support, the support, the interaction in the classroom between teachers and assistants and so forth. Mr. Denning dreamed up a long time ago about quality circles and we didn't use it in this country. It went to Japan and now it is coming back.

And your discussion of that assistance that the classroom teachers get and the ability to interchange with other teachers, the ideas and so forth, very strange at least in my mind, appear somewhat to approach quality circles or that general idea that we are trying to develop in our industry today.

Mr. BROWN. It very much does do that. It is important to note that practically every other thing that we do in this Nation that is strong and effective involves people collaborating with each other, working in teams, communicating across several lines, sharing problems, and solutions.

It is unique to me that education is one of the last remaining institutions in which work is done in isolation, yet education keeps coming up as the arena in which we expect the most.

If you have an arena in which you expect the most, then you have to apply your most effective strategies and your most cogent resources to that. But, historically we have found this is not the case.

In the history of education in this century, I count this as at least the third time that we have rediscovered this reality. The first was during some of the off-shoot experiments of progressive

era and some experiments that John Dewey conducted in his laboratory school.

One of the follow-up eras was, for example, the era of the Teacher Corps in which we trained teachers in settings in which university personnel and school personnel collaborated on issues of school improvement to great benefit. You might have guessed by now that my background is in educational foundations, including educational history and philosophy. Part of my concern is that we finally invent a way to cause this to happen and leave it to institutionalization.

My big question as an historian is why it didn't institutionalize the last two times and why it should this time. I think the nature of collaborations we are talking about and how we manage standard resources in process provide a large part of the answer.

Mr. BALLENGER. I think that is an excellent explanation of the whole system and the one question I would bring up when you all sit down and figure out which one was the chicken and which one was the egg. If we can do that 50 times in each State, we might really be able to accomplish a great deal.

Dr. BROWN. Let me change your analogy a little bit.

Mr. BALLENGER. Okay.

Dr. BROWN. I think that what we are really doing is stirring the primordial soup again with the understanding that we know most of what is in the soup and we know something about what causes the primordial soup to give off life forms and let the chicken-and-egg situation determine itself.

Mr. BALLENGER. I will go along with that.

Thank you, Mr. Chairman.

Chairman OWENS. Mr. Scott.

Mr. SCOTT. I guess I want to get back to one of the questions I asked of the last panel and that is that we know certain interventions work or at least some interventions work. We have been able to change odds in certain classroom settings from where a class that would be predicted to be in the 20th percentile ends up in the 50th percentile because you did something.

We know some Head Start programs are excellent and some are marginal. From a research point of view, do we know the answers to this, what makes programs—what we can do to better educate at-risk children? Do we know that or do we need more research?

Chairman OWENS. Does it mean more research or do we need more innovation demonstration sites?

Dr. LANIER. I am happy to respond to that. I think that we know a lot more than we currently act on in terms of at-risk youngsters and what can affect them and make their learning of higher quality and available to more children than we have ever reached heretofore.

I think you heard here today some of the reasons why we think that does not happen. We continue to prepare our education force in most any place. They learn their practice in schools without a lot of quality control on the part of the institutions. For example, if you send out a beginning teacher, typically they will end up in these isolated classrooms where they will not have the opportunity to learn from others. They are not necessarily apt to see or experience their own learning insights that demonstrate research.

Mr. SCOTT. Let me back up a second. Do we know if they are learning from others; is the knowledge there to teach at-risk students?

Dr. LANIER. There is a substantial amount of knowledge. I can give you some examples of pieces of knowledge. For example, you know if a child does not have the opportunity to learn important subjects, they are not going to learn them in those settings.

In one of the schools that is not in the Flint situation, the way they have the research on tracking youngsters and how students get tracked into classes where they don't have an opportunity to learn is a very powerful line of research. Finding places that demonstrate this and actually act on that research are smaller in the number part of the research dissemination issue. In this particular school, where they were studying this research about access and tracking issues, they decided that the way in which the school was putting people in honors classes was unfair and unjust because many of the youngsters who were considered at-risk did not have access to those classes. It took a schoolwide, communitywide effort on the part of the educators to think profoundly about how they would change it.

Three-quarters of the kids didn't get access to honors class and were not going to learn some of those things except by happenstance in their lives.

So they acted on this research by making all of these classes available and opening them up so that all students have an opportunity to learn those higher goals for student learning. Acting on that piece of research is something that a single teacher cannot do alone. You can know about it but what can you do? You think, I have got to change the whole high school, which is what they had to do.

They effectively set goals at levels which students could achieve. It oftentimes takes schoolwide efforts to act on that research.

If future teachers are not prepared in those sites that are acting on that research, they don't know any different when they go out, and we constantly have a remedial problem with our educational workforce. I think there is a lot that we already know.

Some schools, not all, but a growing number—particularly those that are working on these kinds of problems—are acting on that kind of research. Mr. Scott, I think it is fair to say that we still have a lot more to learn, and the fact that we can be carrying on this kind of research in sites like in Flint, in Muskegon, in Detroit and a number of urban centers, we can get a lot smarter about that because there hasn't been enough in those areas in particular.

Dr. BROWN. If I can add a couple things to that. Yes, we do know as was suggested, much, much more than we have ever applied and we have also never applied what we know in the kind of systematic way that causes it to work.

There is a whole ledger of negative findings that says we tried this, and I am paraphrasing a principal I tried to work with in another State several years ago. "We tried that in 1954 and it didn't work." What happens is this: an approach to teaching and learning is designed, teachers are prepared to work within with a particular group of children. It is implemented very carefully, the findings are positive. It is documented, it is published, it is disseminated.

Others get a hold of it—superintendents, faculty at universities, or principals—and say this is a good idea; they take this single article, capsuling several years of work by 20 people, and they hand this article to a couple of teachers or a supervisor and say let's implement this in September.

So what you have got is the name of a particular approach to teaching and the learning and the shell of that approach, but none of the guts. Consequently, they may have implemented an approach, but when it fails, they go back usually to a more conservative version of what they were doing before.

What we need to do is to talk about how we go about implementing proven effective schemes. It is a detailed process. Education is the most complex and complicated thing we do. It involves human beings who, as all of us know, are much more complex than anything else. And it involves them in groups that have their own complexity and form their own identity. Implementation of any scheme has to involve factoring all of this over time with what are called successive approximations to the full scheme.

The other thing is that to the extent that the people who populate our schools and our universities are citizens of this country, then they also constitute a microcosm of that country so that if the society holds certain negatives, certain types of kids, there is no way that we should assume that people who hold the same negatives have not found their way inside schools and universities and are therefore part of what happens to kids.

Thirdly, the paradigm that we have been on for the past 20 years for at-risk kids takes the deadliest forms of instruction imaginable and provides it for kids for whom the very best and most innovative and creative instruction is required.

We have run a number of experiments over time about what you can do. Many, many years ago there was research done on expectation theory, which was really a trick. Some teachers were tricked into believing that a certain group of kids were capable of great learning and consequently they achieved great learning. So that says a lot about what we, as educators, expect from the people in front of us.

Other experiments have included taking the gifted curriculum, which is supposed to be very complex and detailed for very fine minds, and using it with kids who are just barely above survival in schools and finding out that the depth, the involvement, and the excitement of that material in fact creates a cognitive pressure, it creates a desire to know and to be able to do.

Finally, one of the byproducts from Flint that I saw a couple of years ago was a videotape of some interviews of middle school kids. There were some revealing and interesting things in that process. They asked the students about various aspects of school: what they liked, what they didn't like. They didn't like the usual things, except the one kid who liked math. They talked about social studies and how boring the society studies curriculum was and what they studied. And then they asked about their lives and the kids talked about things like getting off the bus at the end of the school day, rushing quickly into their homes, locking the doors, and staying away from the windows; that they cannot go out to play because of the potential for violence in certain segments of the city.

Now, you want to talk about powerful social studies. How does it occur that the very lives of these children cannot find their way into the social studies of the school? Their lives, the social studies of their lives are the crux of the American dilemma and constitute some extremely involving and exciting stuff; yet, somehow that never finds its way in too many schools to which kids are exposed.

One of the things we know about learning for any group of people is that the more exciting and personal the material, the more conflict is embedded in what it is we are trying to get them to learn; the more we cause kids to work together in the process of learning, the deeper the learning; the more the kids themselves focus on skills, the more the kids themselves retain; the more excited the kids are about spending time and energy on this material, the more kids want to come to school. In the examples that were cited earlier, kids who are working in teams form a partnership; things are going on.

Kids who choose to be absent find themselves missing out on the essence of what middle school life and elementary school life is all about to kids: being with your friends; so you create a pressure to be there. There is this whole range, this whole complex of factors that we have to learn how to manipulate; if we learn how to manipulate them well and deal in a very honest and up front fashion with the realities that we are facing, then I think that we can create and implement much more effective programs for at-risk children.

Mr. SCOTT. If the Chairman will recognize that this is a relevant discussion, how can H.R. 856 help get that information into the classroom so that, for example, at-risk students don't have the lower expectations inflicted on them and come out with the lower achievement?

How do we use, amend, or change H.R. 856 to make sure we get the best result?

Dr. BROWN. Well, I think what you have in place, at least in my reading of the bill, addresses a lot of that. I think if I would recommend any change, it would be to infuse every aspect of the bill with some responsibility for focusing on issues of at-risk children, focusing on issues related to the increasing diversity of this society, and focusing on issues that have to do with the quality of life of children in our urban centers and in our extreme rural areas. If we could infuse the entirety with that kind of language, then we would cause every person involved with this process to necessarily begin to address the issues and that would in turn influence how research is carried out, how it is disseminated, and what its major focus will be.

I think that those kinds of changes would help tremendously, but I think the guts are clearly there.

Mr. SCOTT. Any other comments?

Mr. TAUBMAN. Our classrooms are more diverse than ever. In a classroom setting with young people working together as teams, you have the opportunity to create a new social communication among people at a very early age. Whatever research you may do, the strengthening of that kind of relationship is the most important because people can learn together and be together at an early age and grow up that way. That is truly diversity reform

Dr. LANIER. In response to your question about how to strengthen the bill, I would suggest that we create these sites. That actually demonstrates what we know from current research.

The expectation literature would be very important as would tracking literature. If you have them actually demonstrated in real sites and then couple the dissemination through the educators being prepared for our future in those sites, they are learning with teachers who maintain high expectations, who understand that literature and act on it appropriately for children. Then they become the mentors for future educators who in fact carry it with them in their minds and hearts when they work with young people in the future rather than simply putting it, the findings, and expectancy in a book for someone to read and maybe act upon.

Ms. CRUTCHFIELD. I would agree with Dr. Lanier. Being a teacher when the partnership first came to our school, being able to have the kind of expertise that I brought to this partnership and the kind that the Michigan State professors brought to the relationship really made a difference; the fact that it was available to me right there on site made me work harder.

I would not walk away from whatever it was that I did not know or couldn't figure out. I would get home and still call back to Michigan State and say, Chris, can you help me with this or what do you think about this? So I would like to urge you to think about these sites as being the right place for applying the educational academics with the kids, putting everything right in front with them; whatever is happening.

We have got quite a bit of research out there, but we need to bring it closer to where it is going to be applied; put it in application with the students and use it.

Mr. SCOTT. Thank you, Mr. Chairman.

Chairman OWENS. Well, all of you certainly would make good candidates for the OERI priority review board. This has been enlightening. We invite you to submit any additional comments within the next 10 days.

We find your comments quite helpful as we refine the present bill and move toward markup. Thank you again. This hearing is now adjourned.

[Whereupon, at 1:05 p.m., the subcommittee was adjourned.]

[Additional material submitted for the record follows.]

Statement of the American Educational Research Association's Hispanic Research & in Bilingual Education Special Interest Groups

As the United States prepares to enter the 21st century it is important to highlight the need for extensive research concerning the Latino Community. This population has grown at a fantastic rate in the last two decades and is likely to continue growing. In many urban communities and schools, Latinos are the largest growing minority group. Yet relatively little is known about the nature of these communities.

Research is needed to understand the heterogeneity which is characteristic of communities of Latinos. Because of a common linguistic and cultural heritage, the Latino communities are often seen as homogeneous by mainstream researchers. As a result, there is very little useful knowledge about specific needs and the nature of problems of particular Latino communities in different geographic areas of the U.S. A major research question that needs to addressed immediately is, **Who is the Latino Community in the U.S.?** This will be an important first step in documenting the heterogeneity of the communities. A logical second research question, then, is, **What are the implications of this diversity?** For examples, what is the significance of the multiple Latino Communities in Los Angeles, New York, Washington, DC, and other large cities? **Are there similarities and/or differences with respect to educational, health, political, social and other needs and problems?** Educators, policymakers, and community agencies do not really have a clear enough understanding of the Latino Community to address the question in an informed and positive manner. An important reason for conducting more extensive and intensive research is to diminish the negative impressions that have been promulgated by the media and others about the Latino Community. Much of the information that trickles into the public media and the public consciousness about Latinos is negative. Gang violence, drugs, poor academic performance, language deficiencies, et cetera, are the dominant themes. Research is needed to promote the positive aspects and contributions of these communities. A focus on knowledge that the Latino Community can share with the larger society would be but one of the many benefits that would result from a new research focus.

Sharing what we already know as researchers of and from minority communities is of particular importance to us. We feel that there is a body of knowledge about the education of Latino children, that has been ignored by researchers who are interested in educational reform in general. For example, one of the issues is school restructuring; the literature shows that school restructuring entails changes in the fundamental organization of schools [Newmann & Clune, 1992; Hess, 1992; Murphy, 1991]. A number of recent case studies give a sense of the nature of such reorganization as it affects the "at-risk" student population [Coleman & Hofer, 1987; Smith, 1989; Wehlage, et al., 1989]. Lucas, Henze & Donato [1990] also comprehensively examine the structural features of schools that seemed to promote succes among language-minority students. Yet, the latter study is seldom cited in the literature on school restructuring. Similar cases can be found in other areas of reform: systemic curriculum reform, de-tracking, home-school-community patterns, and others [See Ruiz, 1993 for a review of the literature on language minorities and how it fits into the general literature on education and education reform]. The relationship between minority research and general education research is important. We feel it not only raises questions about fit, it also raises questions about whose knowledge is valued. We feel it is important to ask, **would the findings about Latinos and language minority students benefit other students and the educational system as a whole?** To answer such a question and to take this research from the periphery to the center of the literature will be important to us and to the many public school districts around the country given the changes in demographics.

Particularly important is that we share some of the things we do know—that despite the common cultural background and language, the Latino community is diverse, that a strong foundation in one's first language, whatever it is, is crucial to any academic achievement, and that biliteracy development is an asset in cognitive development

Beyond sharing, we need to move into researching areas that are critical such as **assessment and the development of successful bilingual programs.** For example, the federally supported evaluations of bilingual services [and concurrently, services] have typically focused on short-term goals and on the progress of students in the English language. The difficulty with this approach is that neither gives the educator a true picture of what is happening. The Hawthorne effects in the first few years, the flattening of normal growth curves on standardized tests in subsequent years, and the progressive complexity of academic and cognitive demands of the cur-

riculum affect the results. Furthermore, we already have significant research showing that it takes a minimum of 7-12 years to be as proficient as a native speaker and capable of undertaking with confidence and effectiveness the cognitive and academic demands of schooling [See Collier, Bilingual Research Journal, Winter 1992 for a synthesis on this literature]. Thus, both the definition of the nature of the problem under study and the methodological designs have been inadequate.

We strongly recommend Federal funding of research on language minority education that recognizes the need for long-term and comprehensive views of student achievement and program implementation. Broadening the range of measures and moving towards performance assessment is strongly recommended by the reform movement. We believe this is a sound strategy. Language minority student achievement should not rely on the sole measures resulting from English standardized tests that ultimately only measure the students' English language proficiency. To do research which only takes English language into account is inadequate because the findings are very narrow and, second, because standardized tests are not adequate measures of language proficiency. The relationships between thought, language and learning among bilinguals are complex and call for measures of student achievement in the first language and of using a variety of measures across time. To do this is to ensure the possibility of obtaining a more comprehensive picture of the students' academic success, rather than solely the measurement of English. The research question for language minorities should go beyond the mere duplication of the research on the reform movement findings with respect to the value of multiple performance measures, it should be asking: Which measures are more appropriate and for what purpose?

A large body of research shows that the greater the amount of first language instruction combined with balanced second language support, the higher the students are able to achieve academically over time [Ramirez, 1990]. The two-way, or developmental bilingual programs have been found to be the most outstanding program models for the language minority child. Furthermore, these models have been inclusive of English speakers and been proven to be very cost-effective. Research should focus on these programs. What are the characteristics of these models? How is language learning conceptualized and developed in these settings?

In relation to the effective models, we know that there are alarming numbers of Latinos dropping out of middle and high schools. The findings on dropouts indicate that the SES, language proficiency, and ethnicity interact. Minicucci & Olsen [1992] found that even in the best schools in California, language minority students are denied access to the core curriculum and, therefore become ineligible for continuing higher education. There is an emerging body of research that shows that when language minority students receive bilingual services, they do better in school [Grannis & Torres-Guzman, 1990]. We also recommend that research focus on identifying effective bilingual models that go beyond the elementary schools.

This is a synthesis of ideas contributed by the chairs of the respective SIGs—Ellen Clark and Virginia Collier—and some members, presented in alphabetical order—Esteban Diaz, Richard Ruiz, and Maria E. Torres-Guzman

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