

Archived Information

Cognition and Student Learning Research Grant Program

Proceedings from the Pre-Application Meeting of

February 19th, 2002

Welcome and Introductions

Ann L. Mullen, Ph.D. Senior Research Associate
Valerie Reyna, Ph.D., Senior Research Advisor
Grover Whitehurst, Ph.D., Assistant Secretary of Education

DR. MULLEN: Good afternoon, everyone. There are still a couple of people left coming in, but I wanted to go ahead and get started to make sure people have time to catch their planes and trains at the end of the day. I'm Ann Mullen. I'm sure I've spoken with or exchanged e-mail with probably most of you in the room. I'd like to welcome you to Washington and the Office of Educational Research and Improvement. I'm glad to see you all here. We're going to start the meeting today with some remarks from the senior staff here at OERI. And after these introductory remarks, I'll go into more detail about what's on the agenda today.

I'd like to start by introducing Dr. Valerie F. Reyna, the Senior Research Advisor to the Assistant Secretary. Dr. Reyna comes to her position here from the University of Arizona at Tucson, where she served as Professor of Surgery, Medicine, Biomedical Engineering, Mexican-American Studies and Women's Studies. In Arizona, Dr. Reyna's many administrative responsibilities included being director of the Division of Learning, Technology, and Assessment at the Arizona Research Laboratories; Director of the Informatics and Decision Making Laboratory at the College of Medicine; and,

Director of the Biopsychosocial Core at the National Institutes of Health Center, Department of Pediatrics. Her research, which has focused on false memories in children and risky decision-making in youth, has generated numerous publications and millions of dollars in funding from the National Institutes of Health, the National Science Foundation, and private foundations.

While at Arizona, Dr. Reyna was President of the Arizona Association of Chicanos in Higher Education, President of the Association of Women Faculty, and a member of the Arizona Governor's Task Force on Educational Reform, among many other services to groups and organizations. At the national level, her service includes membership on the editorial boards of five scientific journals and permanent membership on study sections of the National Institutes of Health.

Recently, Dr. Reyna was named Woman of the Year by the Hispanic Professional Action Committee. Dr. Reyna was recognized for her leadership positions in several organizations dedicated to equal opportunity for women and minorities, including the Arizona Association of Chicanos in Higher Education, of which she was the former president, nine years as a member of the executive board of the Hispanic Professional Action Committee, and her service on several executive boards of Hispanic community organizations in Tucson and education organizations and associations in Arizona.

Dr. Reyna received her undergraduate degree from Clark University and her Ph.D. in experimental psychology from Rockefeller University.

OERI has been extremely fortunate to have such an accomplished scientist and administrator serving as Senior Research Advisor. And, it is my pleasure now to introduce her to you.

DR. REYNA: Now, we'll see if any of that training transfers to this. I'll tell you my story sometime about the Nobel prize winner who tried to get the slides to work. There were three of them and, no, they couldn't do it. Which leads to the joke, how many Nobel prize winners...never mind.

Thank you so much for coming. It is such a pleasure to look out at your eager faces. You look very alert after the holiday weekend. Welcome to OERI. The new OERI. I want to thank a few people by the way. I'm going to be talking at more length later on in the program, as you may notice. So, I'm going to reserve my elaborate remarks for that. But, right now, I think some thank-you's are in order. In particular, I'd like to thank Ann Mullen for her hard work in making all this possible. She did a great job. We've draw on her intellectual resources, and many other kinds of resources, as well. We thank you very much. There are a number of other people that helped make today possible, and worked hard at the pre-application meetings in general. Ron Cartwright, sitting right over there. Sue Betka, Terry Pratt, Geraldine Williams, Nicole Vartanian, Naomi Karp, Sandra Garcia were very, very helpful. Mark Conostas, Tamara Knowles. So, thank you all very much. We couldn't do it without you.

This meeting is for you. And, at the end, I hope you will tell us more than about how you liked the sound system, that you'll tell us a little bit about how you liked the content of the meeting. And, it's designed to be of service to you. So, please take

advantage of it. We're going to have a question and answer period. And, I'm really looking forward to that. That's where I get to learn from you. What we do here is really very small compared to what you will do. Because you are the ones who will make the difference in the field. You're the researchers; you are the field. And, we're depending on you. No pressure at all.

Let me introduce, also, our assistant secretary. I'm going to say a few embarrassing words about him. Turnabout is fair play. His many honors and distinctions. And, I must say it is an honor, indeed, to serve this assistant secretary. Someone who has credibility as a scholar and a scientist. Who has over a hundred public scholarly publications. Who has served as editor in chief of journals such as *Developmental Review* for some twenty years, an academic press journal. And, in many other editorial capacities. We are fortunate in government to have him. He was the Leading Professor, it's an official title, "Leading Professor," of psychology and also pediatrics. He also served as chair of the Department of Psychology. This was at the State University of New York at Stonybrook. He has done a number of things to bridge the gap, and to serve as a model for bridging the gap, between research and practice. For example, his research has concerned enhancing children's readiness for school, which is obviously an important area. And, also focuses on determining predictors for the pre-school period, for reading achievement in elementary school. This is an area that he has collaborated with public and private entities on, and has a record of achievement that has served him in good stead in the role that he currently has. We are, indeed, pleased to have leadership of this caliber here, and I know that every day when I look down that long hall, and I see

him there before all of us, and there at the end of the day, after most people have left, I'm inspired. So, without further ado, Russ Whitehurst.

DR. WHITEHURST: I'm really pleased to see the room full. Glad that you're here. I was thinking before I came down for the meeting what we're really about here. And, was thinking about some of my relatives. My grandfather was a farmer and was farming in the twenties and thirties and forties, and I came along relatively late in his life. But, I remembered at the time that he was the president of the Farm Bureau, he was flying around the country and coming back home terrifically excited about the changes in farming that were coming about because, really, of science. I did not know his father, but I'm sure that the agriculture that he practiced was pretty much the same as had been practiced for hundreds of previous years. What had happened within a relatively short period of time in plant genetics and all the experimental sciences of agriculture that relate had really revolutionized the field. When we now go to the grocery store and are tempted by all the food stuffs there, and have problems with obesity rather than starvation, that's all due to the fact that agriculture, which had functioned pretty much in terms of folk wisdom, had been transformed into a science-based endeavor.

My grandmother's brother was a country physician. He traveled around by buggy to see his patients. His treatments predated the science of medicine. What he did was pretty much what had been done in the previous century. He used folk remedies. He could fix a broken bone, deliver a baby, and bring down a fever. But, there was no biochemistry underlying what he did, no understanding of the mechanisms of most diseases, and if you were really sick you were in trouble.

My father-in-law, in contrast, trained at Columbia Presbyterian just before the second world war, and was there at the dawn of the new age of medicine. He has seen the field transformed, again, from a field that operated based on folk wisdom, to a field that operates on science.

When we turn to education, the picture is quite a bit different the field still operates largely on the basis of folk wisdom. It does that more or less effectively. We have, after all, as a human species, been educating ourselves for thousands of years. And, that must have occurred with some success or we wouldn't be here and our culture wouldn't be maintained. So, that process succeeds, as long as the tasks to be learned are simple. And, as long as we are willing to tolerate an elitist system in which only those who are most cognitively able and have the most cultural support are expected to learn complicated subjects at high levels. But, we have a new day. A new day is one in which no child is to be left behind, and which the tasks of the twenty-first century are certainly tasks that are complicated to acquire. So, folk wisdom will not serve us anymore. We need a new way.

Where medicine has biochemistry, and where agriculture has plant genetics, education has cognitive psychology and brain science. These are the basic sciences that are going to revolutionize the practice of education in the twenty-first century. Thus, this particular funding program is very important to what we do because we need to nourish the basic sciences that will serve for education as the basic sciences have served for the other fields I talked about.

I look forward to the work that you're going to do. The challenge that you have is not only to do good science, but to embed that science in a context in which four, five, six, ten years out, we will have results that are useful to educators.

I spent the morning meeting with Secretary Paige and the superintendents from the Council of Great City Schools. These are the large urban school districts in America. During the breaks they bent my ear about their various needs. One of the things they said to me is that when we turn to academic research, they don't find anything useful. When are you going to do something that will be useful to us? I did my song and dance about it takes a long time, and we're here and we've got to get to there. That song and dance has strong elements of truth to it. We do have to get from our current research culture, which is oriented towards serving the needs and interests of other researchers, to a research culture which considers and serves the needs of practitioners. One of the things we want this competition to accomplish is to take those of you who are trained in cognitive science, who are accustomed to doing research in the laboratory, at the university, with samples of convenience (introductory psychology students, for example) and to move that research endeavor into school-based work or applied learning. We hope you will do that.

I'm very excited that we're able to launch this initiative. We have a budget proposal from the President for the '03 fiscal year for this office that has a 44 percent increase in it. That's unprecedented. It is the largest single increase on a percentage basis in the federal budget for next year. We have an administration that understands that if what works or evidence is going to be a main pillar of educational reform, we actually have to invest in that.

Again, I'm very pleased to see you here. I'm sure you will profit from what goes on the rest of the day. I really want to thank Valerie and the team that she's assembled for putting this together on such short notice. We were told it couldn't be done, that it would be next year before we could fund an initiative. Yet we're up and running. I look forward to seeing your applications when they come in not too long from now, and I look forward to working with those of you who get funded. Thank you very much for being here. Have a good day.