Setting a Research Agenda for Prekindergarten: Summary of a Conference Convened in the U.S. Capitol Building

The Columbia Institute for Child and Family Policy
The National Prekindergarten Center, University of North Carolina-Chapel Hill
The Foundation for Child Development

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Summary Prepared by Anthony Raden

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In January 2003, Columbia University's Institute for Child and Family Policy, the National Prekindergarten Center at the University of North Carolina, and the Foundation for Child Development hosted an invitational, half-day conference entitled, "Setting a Research Agenda for Prekindergarten." Held in the U.S. Capitol Building in Washington DC, the meeting brought together a select, bipartisan and multidisciplinary group of 34 stakeholders to discuss early childhood research priorities. The primary purpose of the conference was to engage a diverse group of legislative staffers, state and federal policymakers, advocates and academic researchers in a dialogue about essential questions and issues necessary to develop a coordinated research agenda for prekindergarten.

The meeting extended work by Columbia's Institute for Child and Family Policy in which more than 60 prominent policymakers, researchers, advocates and funders were interviewed about research needed to inform the development and implementation of universal preschool programs in the U.S. Results from the survey served as a starting point for far-ranging discussions about federal research priorities in early childhood education, as well as the role of research in federal and state policymaking.

The conference featured a panel presentation on the early childhood research priorities of key federal agencies. Speakers included: Marguerite Barratt, Program Director, Developmental and Learning Sciences, National Science Foundation (NSF); Reid Lyon, Chief, Child Development & Behavior Branch, National Institute of Child Health & Human Development (NICHD); Martha Moorehouse, Director, Division of Children and Youth Policy, U.S. Department of Health and Human Services (HHS); and Grover (Russ) Whitehurst, Director, Institute of Education Sciences (IES), U.S. Department of Education

This report summarizes the presentations of the featured speakers and the group discussions that followed.

Welcome and Introduction

Sheila B. Kamerman**,** the Co-Director of Columbia University's Institute for Child and Family Policy,[1] opened the conference by welcoming participants and highlighting the conference goal of fostering a stimulating, bipartisan discussion about research priorities relating to prekindergarten programs and policies. She thanked Ruby Takanishi and the Foundation for Child Development for sponsoring the day's events.

Kamerman noted that she has been carrying out research on early childhood education and care since the early 1970s, when she conducted a comparative, nine-country study for the U.S. Department of Health, Education and Welfare and the Organization for Economic Cooperation and Development (OECD). The study was among the first to highlight France's universal preschool program (*écoles maternelles)*, and the link between universal, educationally-based Pre-K programs and child care services. In recent years, Kamerman has collaborated (with several meeting participants) on the OECD Twelve Country Thematic Review of ECEC programs and a related FCD-sponsored tour of the *écoles maternelles*.[2]

Kamerman acknowledged that a typical, immediate response to the policy experiences of other countries is often that they are irrelevant to the U.S. Nonetheless, she believes it is worthwhile to examine statistics from abroad to dramatize what is normative policy in many other countries. To provide an international perspective on universal Pre-K, she noted:

- Of 19 Western European countries, including 15 that comprise the European Union, all but four have universal Pre-K. These publicly-subsidized programs cover 85 to 99 percent of 3-, 4-and, 5-year-olds.
- Of the ten additional countries soon to be joining the European Union, most have universal Pre-K programs as well.
- Not all of these programs are free; none are targeted just on the poor; all are universal.
- There are a growing number of countries carrying out longitudinal studies, which will provide opportunities for more systematic, cross-national research linking child outcomes and various characteristics of Pre-K programs. (In addition to the U.S., these countries include: Australia, Canada, Denmark, Sweden, and the United Kingdom)
- Extensive early childhood research is being conducted in the Nordic countries, the United Kingdom, and, to a lesser extent, France. This research, however, does not begin to compare with the extensiveness and rigor of American research.

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[1] For information on Columbia's Institute for Child and Family Policy, see: www.childpolicy.edu

[2] For a recent report on France's *écoles maternelles, see:* Michelle Neuman and Shanny Peer (2002). *Equal from the Start: Promoting Educational Opportunity for All Preschool Children – Learning from the French Experience*. New York: The French American Foundation.

Therefore, while policy developments lag in the U.S., American research is in the forefront. One of the major issues is determining how to link more closely this research base with policy initiatives.

Kamerman next presented the five questions on which the meeting will focus:

1. What are the major policy decisions related to prekindergarten that the country is likely to face in the upcoming decade?
2. What research is needed to help inform these policy decisions?
3. Given the current state of knowledge, what are the next research questions that should be addressed?
4. Do we need to develop new technologies, methods, or instruments to study pressing questions that we can't currently answer?
5. What research can the private sector address to complement the work of the federal government?

Kelly Maxwell, the Co-Director of the National Prekindergarten Center at the University of North Carolina, welcomed the participants and briefly described the mission of her Center.[3] She thanked Ron Haskins from the Brookings Institution and Representative Nancy Johnson's Office for helping to organize the day's meeting. Before turning the proceedings over to Ron Haskins, she explained that to spark a lively, informative discussion, the meeting sponsors intentionally invited a diverse group of people who would have differing perspectives and recommendations on research needs related to prekindergarten.

Research Priorities in Early Education: Perspectives from Key Federal Agencies

Ron Haskins, Senior Fellow at The Brookings Institution and Senior Consultant at the Annie E. Casey Foundation, moderated the panel on early childhood research priorities for federal funding agencies. Panel members included:

- **Marguerite Barratt**, Program Director, Developmental and Learning Sciences, National Science Foundation (NSF)
- **Reid Lyon**, Chief, Child Development & Behavior Branch, National Institute of Child Health & Human Development (NICHD)
- **Martha Moorehouse**, Director, Division of Children and Youth Policy, U.S. Department of Health and Human Services (HHS)
- **Grover (Russ) Whitehurst**, Director, Institute of Education Sciences (IES), U.S. Department of Education

[3] For information on The National Prekindergarten Center, see: www.fpg.unc.edu/~NPC/

Ron Haskins, Senior Fellow at the Brookings Institution and Senior Consultant at the Annie E. Casey Foundation

In his introductory remarks, Dr. Haskins reminded the participants of the "dual federal-state" system in the U.S. On the one hand, Head Start and Title I preschool programs are high-quality programs with an explicit intent to promote children's development. With historical roots in *comprehensive child development*, they tend to have broad goals that focus on health, nutrition, and education, as well as parent involvement and community development. "Head Start also has fairly well-circumscribed regulations," he added. "So there is a real federal direction and control."

On the other hand, Haskins explained, since the early 1960s, day care policy has been linked to the welfare system. The day care part of this dual system, accordingly, aims to support low-income mothers – providing a clean, well-lighted place for children so that mothers are able to work. For decades, early childhood researchers and advocates have tried to move child care policy in the direction of Head Start by advocating for more regulations, higher quality, and an enhanced focus on child development. Haskins noted that most experts would conclude that a body of high quality research on child care and child development documents that increasing the quality of early childhood settings improves child development. Nonetheless, on the whole, he argues, that wide-scale efforts to improve quality have failed, in part, because there continues to be two very different federal policies with different intentions. "The perennial issue is whether to increase the regulation of child care to increase quality to foster child development," Haskins said. "That pressure will not go away." The most recent approach gaining currency in Congress and in the states is to set aside federal money within various block grants that the states can only spend on quality improvement initiatives. According to Haskins, there is a lot of bipartisan support in Congress for this approach to improving quality.

Haskins highlighted two key messages from the research:

> "Head Start works" He noted that "even many conservative Republicans speak about the effectiveness of Head Start"; and
>
> "Quality makes a difference" Haskins explained that although there is some bipartisan agreement on this point, it is not sufficient to overcome strong resistance to increased federal regulations.

Haskins emphasized that two new factors are now influencing the early childhood education debate. First, in the past decade states have become heavily involved in funding preschool, with most of the efforts geared specifically on preparing children for public school (not in providing day care for working parents). Second, accountability standards within the No Child Left Behind Act require public schools to face a public evaluation of their success at educating students. Facing intense pressure to raise achievement, public schools increasingly believe (in part, because of the research

literature on school readiness) that low-income children, on average, start school academically behind their more advantaged peers. Consequently, the belief is widespread that unless children arrive at school better prepared to learn, public schools will not succeed in eliminating the achievement gap. Haskins, therefore, foresees increasing momentum to expand further states' efforts to support preschool and prekindergarten programs.

Haskins explained that while he does not necessarily support *universal* prekindergarten, he thinks that an unbiased reading of the evidence indicates that the United States is moving in a direction towards higher quality state and federal programs for 4-year-olds. The Bush administration, he suggested, has demonstrated a commitment to improving young children's learning through its initiatives designed to enhance the quality of early childhood education programs.

He concluded his opening remarks with two comments targeted to the two main groups of participants at the conference. First, to congressional staffers, he said, "research has influenced policy." Then, he turned to researchers to say, "the impact of research on policy is circumscribed."

National Science Foundation

Marguerite (Peg) Barratt, Program Director, Developmental and Learning Sciences, National Science Foundation (NSF)

In her presentation, Marguerite Barratt discussed the National Science Foundation's current research agenda related to early childhood learning and what she would like to see prioritized in the future.

She explained that there are two divisions within NSF's Directorate for Social, Behavioral and Economic Sciences that support research relevant to early childhood education: the Division of Behavioral and Cognitive Sciences and the Division of Social and Economic Sciences. NSF spends approximately $200 million annually on the social sciences, with a portion earmarked for early childhood.

Barratt highlighted three key points in her presentation:

- The importance of multidisciplinary projects related to young children
- The need to link curriculum and training with science about children's learning and development
- The need to focus on the "whole child" – to prepare children to be human beings who will make wise decisions and be good friends.

1. Multidisciplinary research

Barratt stressed that a comprehensive agenda on young children's learning and education requires substantial cross-disciplinary work. She indicated that the following disciplines and domains at NSF could contribute to a research agenda:

> Social Psychology, Linguistics, Human Cognition and Perception, Cognitive Neuroscience, Developmental and Learning Sciences, Geography and Regional Science (e.g. GIS mapping, neighborhoods), Sociology (e.g. status variables), Economics (e.g. poverty), Decision, Risk and Management Sciences (e.g. choices parents make about risks for their children), Methodology, Measurement and Statistics, Law and Social Science (e.g. abuse, neglect, child testimony), Education.

2. The need to link curriculum for children and training with scientific knowledge about children's learning and development

"When we say that research doesn't have a huge influence, it's true," Barratt said. "Partly because it never gets to the people who can use it." She explained that NSF has made a concerted effort to disseminate rigorous research findings on children's learning an development to improve educational curricula and policy. As an example of the organization's commitment to enhancing science-policy linkages, she highlighted NSF's support of the Center for Research on Children at Cornell University (Co-Directed by Steven Ceci and Wendy Williams), which aims to place rigorous, scientifically-defensible research findings on children into the hands of policy makers and practitioners in order to better inform their thinking about complex issues related to children's learning and development.

In addition, NSF's Division of Developmental and Learning Sciences funds several basic research projects related to young children's learning and development. She highlighted research on:

- Cognitive and motivational determinants of children's acquisition of expertise
- Causes and consequences of children's interests and conceptual domains related to science
- Causal learning in children
- Biological thought
- Parenting and socio-cognitive correlates of pro-social behavior
- Fundamentals of experimental science in early science education
- Parental management of peers
- Impact of television on very young children
- Pathways to emergent literacy
- Growth in flexible problem solving
- Spatial categorization
- Inductive inference in young children

Barratt underscored that she believes it is essential for work on the fundamentals of learning and development supported by NSF, NICHD and other governmental organizations to be linked to curriculum for children and the training of teachers and caregivers.

3. A "Whole Child" Perspective

Barratt reminded the audience of the need for researchers and policymakers to remember the whole child and the importance of a comprehensive approach to early childhood education. "We want to prepare children to be future workers," she said. "But other areas of their development and learning are equally important – such as making wise decisions and learning how to be good friends." She outlined a few of the skill areas that are important for young children to master:

- Executive skills – what is needed for purposeful activity (attention, planning, memory; flexible responses; inhibitory responses; sequence behavior; mental representation)
- Emotional regulation (initially, sleep, crying; ability to inhibit aggression; precursors of mental health issues – anxiety, withdrawal; understanding emotions of others)
- Numeracy, science
- Motivation (joy of learning, curiosity)
- Learning in the context of children's families

Barratt emphasized that research has an important role to play in understanding these skills and competencies, which, she suggested, can be promoted by universal prekindergarten programs.

Current work at NSF relevant to Early Childhood Education

According to Barratt, the work of NSF's Developmental and Learning Sciences Division is based on the view that an understanding of individual differences and fundamental processes is facilitated through multidisciplinary, multi-method, and integrative research. The division supports and encourages projects that examine development within family, community and cultural contexts.

Funding opportunities at NSF

Dr. Barratt identified some of the current and upcoming funding opportunities at NSF that may support research related to young children's learning and development:

- Children's Research Initiative Centers: The Initiative currently funds four multidisciplinary Centers that carry out research into processes of change for children and adolescents with a particular focus on etiology and consequences. NSF will fund 1-3 more Centers in coming years. http://www.nsf.gov/pubs/2001/nsf0185/nsf0185.htm

- Science of Learning Centers: The initiative will unite neuroscientists with educators and scholars from other disciplines to think about learning in multidisciplinary ways. http://www.nsf.gov/home/crssprgm/slc/

- Human and Social Dynamics: A new initiative to begin in 2003-4 that will broadly link the social sciences with other divisions at NSF. http://www.nsf.gov/pubs/2003/nsf03552/nsf03552.htm

- Science and Technology Centers: An ongoing NSF initiative that will soon link more closely with the social sciences. http://www.nsf.gov/od/oia/programs/stc/start.htm

- Program of Research on Learning and Education: Administered through NSF's Education Directorate, the program will focus on supporting research on curriculum and interventions. http://www.nsf.gov/pubs/2002/nsf02023/nsf02023.html

In summary, Barratt reiterated that (1) she believes research on young children must be multidisciplinary; (2) curriculum and training should be linked to science and technology; and (3) in addition to attending to the preparation of workers, citizens and students, it is essential that early childhood education prepare children to make wise decisions, to be good friends, and to be good members of their communities.

National Institute of Child Health & Human Development

Reid Lyon, Chief, Child Development & Behavior Branch, National Institute of Child Health & Human Development (NICHD)

Lyon explained that the NIH and NICHD foster multidisciplinary and multimethod longitudinal research projects, many of which focus on how children learn to read when they get to school. The research has demonstrated that with proper interventions, children with reading difficulties from even the most disadvantaged backgrounds can catch up with their peers. An enduring challenge, he suggested, is translating, scaling and disseminating the information to teachers.

Echoing the comments of earlier speakers, Lyon agreed that "research can inform policy fairly strongly." As an example, he highlighted the Bush Administration's reliance on research in the establishment of its major education and early childhood initiatives. "In developing the No Child Left Behind Act (NCLB) and the Early Reading First program," Lyon said, "President Bush looked directly at the converging evidentiary and scientific base on reading programs. This is an example of a direct link of how bipartisan legislation built on a converging scientific base." He recalled that in the early days of the Bush Administration, he and other learning experts were called to the White

House to receive instructions from the President. According to Lyon, "the President said very clearly, 'I want to make sure that even though we think we know something about kids from five years of age onward, you have to be able to provide me with a research agenda across agencies…that will make sure that kids coming into school are cognitively ready,…but that they also are emotionally healthy and socially competent. When we see kids from every walk of life, they need to have that particular constellation, that particular foundation.'" Consequently, Early Reading First was launched in 2002 as a trans-agency program designed to prepare children to succeed both academically and socio-emotionally in school.

Although NICHD has historically supported research on socio-emotional and affective development, the agency wanted to give credence to the President's charge and thus created the new department of Early Childhood Development and School Readiness (directed by Dr. Kyle Snow). Through far-ranging discussions with experts in the field, NICHD staff have concluded "that much of what is done in the early childhood field, as in education in general, is driven by biased or untested beliefs, philosophical statements, by appeals to authority and untested assumptions." Lyon also argued that the early childhood field tends to suffer from a bifurcation of philosophy between socio-emotional development and cognitive development that does not reflect a "whole child" approach.

The major questions guiding NICHD's Early Childhood Program are: How can we develop interactions with children from every walk of life and in every setting (e.g. preschool classroom, childcare environment, home) to develop types of interactions that integrate together to foster both cognitive and social competencies? How do you develop cognitive capabilities in the context of bringing emotional health and social competency along? When the NICHD staff reviewed the literature, they found that most early childhood curricula are overly narrow and fail to integrate a broad range of skills and competencies in an ongoing manner. NICHD, therefore, is collaborating on a trans-agency initiative designed to assess the effectiveness of different early childhood curriculum models.

Lyon also spoke about another new program administered by HHS and the Institute for Education Sciences (IES). Over the next five years, $50 million will be allocated to develop different strategies to foster and integrate interactions with children from birth to five. Specifically, the projects are investigating and testing: For which children are which approaches and types of interactions most beneficial at which phases of development in which kinds of settings? Which kinds of adults contribute to this success?

Lyon stressed that the overarching purpose of early childhood related projects at NIH is to build a more coherent knowledge base to inform programs and policy. The research should produce converging evidence, utilize multimethods, and cut across disciplines and philosophies "to provide a less ethereal view on what young children need in every walk of life." To that end, the work is longitudinal, focuses on different age ranges (e.g., 0-3, 3-6), and is geared toward understanding the most effective programmatic and

curricular approaches, especially for young children living in poverty, English language learners, and children with disabilities. "It is a flexible research initiative that doesn't dictate specific projects, but is consistent with NICHD's and NIH's commitment to scientific rigor," Lyon concluded.

U.S. Department of Health and Human Services

Martha Moorehouse, Director, Division of Children and Youth Policy, U.S. Department of Health and Human Services (HHS)

Martha Moorehouse presented the context for prekindergarten research, a wish list for researchers and other funders, and an overview of HHS's work in the early childhood arena.

Setting the context

Morehouse told participants that the federal government needs help from the research community in framing the Pre-K research agenda within a broader early childhood agenda. To illustrate her point, she emphasized that the effectiveness of Pre-K programs and interventions will depend on the development of children birth to three. Determining what to target and emphasize in elementary schools will also depend on how lasting benefits are in the Pre-K period. She pointed to important findings from the Early Childhood Longitudinal Study (ECLS-K) that suggest that the most disadvantaged preschoolers transition into the most disadvantaged schools. In a similar vein, Morehouse encouraged researchers to attend to whether changes in policies and services for one age group have intended or unintended effects for other groups.

A "Wish List" for researchers and other funders of research

Moorehouse used the forum to present a "wish list" to the assembled group of congressional staffers, researchers and foundation representatives. Speaking from the perspective of a federal administrator who relies on research to inform her programmatic and policy options, she urged early childhood researchers and research funders to:

<u>Do good research on effectiveness of services</u>

- Promote the use of rigorous designs in studies that have the explicit goal to examine the effectiveness of Pre-K services and determine whether they make a difference in children's outcomes.
- Promote the inclusion of good implementation studies or process studies in these designs. She stressed that there can be a lot of value in descriptive research about the nature of programs, but it is important that more studies use designs that can tell policymakers what works.

Do good implementation studies

- Ensure that the implementation of the intervention – *including cost* – is documented as part of the research and in reports of the results. Policymakers find this information vital. Good implementation studies can be very valuable as studies in their own right as long as the goal is to understand how services were implemented.
- Address implementation questions such as: How did the interventions differ from existing services? Who were the children involved in the services (e.g., eligible for subsidies)? What was needed to implement the intervention? What were the characteristics of the intervention setting? How did service providers respond? How much did it cost?

Do good descriptive research on service delivery and utilization

- She underscored that little is known about basic elements such as attendance and enrollment patterns (e.g., who is enrolled, attendance and continuity over time, role of parent involvement in getting kids to stay in the program)

Fill key research gaps

Moorehouse recommended that researchers examine questions related to:

- Which children need combinations of services? How to combine services effectively in different types of settings?
- Professional development and workforce issues.
- Assessments and assessment systems. (An increasing concern of federal and state policymakers is how to measure progress to school readiness).
- Quality and quantity issues. If we serve more children, how will quality be affected in ways that make a difference for children?
- How to address health-related issues in preschool contexts?

Help make research findings useful for policy and practice

- For individual studies, researchers can attend to policy issues in the design of the research rather than drawing implications after the study has been completed.
- Help policymakers know how their specific research differs from that which has been done in the past.
- Help policymakers know when their research questions are not answerable. Offer specific steps that can move the knowledge forward. Policymakers always want to know how we can get the "biggest results for the littlest money" and how different policies can be weighed against one another. Be comfortable saying when studies are *not* ready for policy applications.

Overview of Research and Evaluation in HHS

Moorehouse provided a handout outlining key areas of early childhood research in the Department of Health and Human Services:

National Institutes of Health

NIH is the primary sponsor of research in the U.S. and in the world. It is the main funder of child development research (through NICHD) and early childhood mental health research (through the National Institute of Mental Health – NIMH).

Child Care

Discretionary funds appropriated in 2002 included $10 million for child care research, demonstration, and evaluation activities. The authority for child care research by the Child Care Bureau comes through appropriations language. Such language has been added to the appropriations bill annually for the past four years.

Head Start

The authority for research, demonstration, and evaluation activities is provided in the Head Start Act ($12 million per year). The purpose is to foster improvement in quality of programs and effectiveness in helping children to succeed in school. Also, Head Start programs can develop, test, and disseminate new approaches for low-income preschoolers and their families and communities (e.g., demonstrations of innovative non-center-based program models such as home-based and mobile programs). Up to $5 million per year is authorized to carry out the Head Start Impact Study.

Conclusion

Morehouse underscored that she believes that policymakers can benefit from research that utilizes various kinds of methodologies and designs. Effective research, she emphasized, is expensive. "We can make it better and make it deliver more than it does," she added. Moorehouse concluded: "The bottom line is that research can inform the debate. But only if it is good research that is put into the larger research context."

Institute of Education Sciences

Grover (Russ) Whitehurst, Director, Institute of Education Sciences, U.S. Department of Education

Whitehurst introduced the new Institute of Education Sciences (IES), which was established by the "Education Sciences Reform Act" that President Bush signed into law in November, 2002. Whitehurst was appointed the Director of IES later that month. As the "home of evidence-based education," the Institute seeks "to be the primary source for rigorous, valid evidence around which policymakers and educators can make informed decisions rather than rely on intuition or some sense of professional wisdom." IES will strive to apply to educational research many of the rigorous standards and methodologies that have been the hallmark of research in other disciplines, especially

the medical and physical sciences. "As in the case of other fields that have shown substantial progress in the last 50 years," Whitehurst said, "(it is essential for education research) to have a strong evidence base that is combined with professional wisdom in order to make decisions."

The Institute compiles statistics, develops products, and funds research, evaluations, and dissemination activities in areas of demonstrated need. By statute, there are three units of IES, each with relevance to early education. The National Center for Education Statistics and Regional Evaluation (NCES) compiles and analyzes statistics on the condition of education. The National Center for Educational Research (NCER) supports field-initiated research and has as one of its primary areas of emphasis early childhood. The National Center for Educational Evaluation (NCEE) focuses on "what works" in federal programs, including federal investments in early childhood. IES invests about $250 million on research annually, with about $35 million focused on the early childhood arena.

According to Whitehurst, while the function of IES overlaps with other federal research agencies, it differs in some fundamental respects. IES aims to support research that solves problems. This orientation emerged, Whitehurst explained, from a survey of potential users of education research (e.g. legislators, chief state school officers, school superintendents) that showed that important decision makers were not benefitting much from federally-funded research because it was not relevant to their everyday responsibilities.[4] As an illustrative example, he quoted one chief state school officer who responded that, "Ninety-five percent of the work I look at is research conducted by researchers for other researchers. It has nothing to do with the decisions I need to make or practices teachers need to engage in the classroom or other things related to our everyday responsibilities." IES plans to fill that gap by providing relevant information that can lead to better decisions about educating children.

Whitehurst outlined the Institute's research priorities in the preschool years:

- Preschool Curriculum Evaluation Research Program (PCER) ($7 million annually).[5] Whitehurst said that as states are increasing their support for universal preschool programs, they are struggling with the question of how investments should be spent. In particular, states are seeking guidance on curriculum options. He noted that Georgia's Universal Pre-K program endorses seven curriculum models, despite the fact that "I know of no research that indicates that those seven curricula are better than seven other curricula."

[4] Gary Huang, et al. (2003). *Institute of Education Sciences Findings from Interviews with Education Policymakers*. Washington, DC: Institute of Education Sciences.
[5] http://pcer.rti.org/Index.htm

This PCER program currently funds seven grantees to conduct randomized trials of existing preschool curricula.[6] Standardized measures are used across the seven evaluations. IES's goal is to move away from samples of convenience in order to conduct a nationally-representative study.

- Early Childhood Longitudinal Studies (ECLS-K and ECLS-B) ($12 million annually). Conducted out the of the National Center for Educational Statistics. Since 1998, 20,000 children have taken part in these nationally representative cohort studies. The ECLS-K provides information on entry into kindergarten and the characteristics linked to school success. ECLS-B is a nationally representative sample of children who will be followed from birth through the first grade. The study also is collecting data on children's preschool experiences.[7]

- National Center for Early Development and Learning (NCEDL) ($3 million annually).[8] A national early childhood research project supported by the US Dept. of Education's Office of Educational Research and Improvement. Operated by The FPG Child Development Center, UNC-Chapel Hill, in collaboration with the University of Virginia & UCLA. NCEDL research focuses on enhancing the cognitive, social and emotional development of children from birth through age eight.

- Evaluations of Even Start and Early Reading First. ($7 million annually). The National Center for Education Evaluation and Regional Assistance is conducting large scale randomized trials that aim to develop and evaluate the effectiveness of new program models for Even Start and for Early Reading First. Whitehurst commented that the randomized trials of Even Start have not produced promising findings regarding the program's impact on emergent literacy. IES would like the new evaluation trials to result in family literacy models examining what can be done to make the programs more successful.

- What Works Clearinghouse.[9] This database seeks to become "a trusted source" for evaluation of the quality of data that are associated with claims of education effectiveness. The Clearinghouse, for example, will provide in respect to a particular educational curriculum, an analysis of how much research has been conducted assessing effectiveness, as well as an assessment of the quality of the research, its relevance, and its effect size. "(IES) hopes to change the culture in which decisions are made in the preschool arena, as well as other arenas," Whitehurst said, "so that they are based on best evidence available." Research reviews will be available on line in Spring 2003. At a later date, a synthesis of studies will be posted on the Clearinghouse website.

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[6] The curricula being evaluated are: Pre-K Mathematics and DLM Express Math; Project Approach; Let's Begin with the Letter People; Doors to Discovery; Creative Curriculum; Early Literacy and Learning Model; Ladders to Literacy; Bright Beginnings.

[7] http://nces.ed.gov/ecls/kindergarten/agency.asp http://nces.ed.gov/ecls/kindergarten/studybrief.asp

[8] http://www.fpg.unc.edu/~ncedl/

[9] http://w-w-c.org

According to Whitehurst, research at IES will be less driven by the field in terms of identifying questions of importance. "If the responsibility is to solve problems, than somebody has to say what those problems are," Whitehurst explained. "It is very difficult to arrive at that from a bottom-up process when your resources are limited." IES, therefore, will provide direction in identifying the types of questions and problems it wants research to address. Whitehurst expects that the Agency, however, will structure RFA's and funding programs to provide researchers with some flexibility to explore additional questions of primary interest to them.

Whitehurst concluded by highlighting the key domains within which IES currently pursues critical questions related to early childhood education: (1) curriculum; (2) standards and assessment; and (3) professional development in a diverse field.

Group Discussion: Research Priorities in Early Education

Following the panel presentations, Ron Haskins moderated a group discussion about research priorities in early childhood research. Participants used the opportunity to question federal agency staff about the federal role in supporting Pre-K related research.

Ron Haskins launched the discussion by asking the federal administrators to comment on whether federal support for educational research is contingent on the inclusion of random assignment. The key issues and themes raised during the discussion are summarized below:

Is random assignment required to make claims that programs work?

When asking questions of effectiveness, the gold standard is random assignment. The federal agency staff concurred that if the goal is to show effects, researchers should make every attempt to use experimental, random assignment designs. "Other methodologies have strengths," Lyon explained, "but they also carry probabilities of confound….I don't know how in the world you would adjudicate what works without the necessary methodological criteria that one has to meet to address that question."

Federal support for early childhood research will increasingly require experimental methodologies. Whitehurst noted that when IES funds research related to effectiveness or what works, it specifies that random assignment must be used unless researchers can present a compelling justification for using another method. "Our default assumption is that you start with randomized trials," he added.

Random assignment may be more feasible for research in early childhood than in later grades. While acknowledging that it is not always possible to use experimental methodologies in education research, Whitehurst stressed that evaluations of early childhood programs, interventions and curricula are particularly well-suited to random assignment. "In the preschool arena, many of the excuses that have some sense of (validity) for not using random assignment in K-12, aren't as compelling," he argued. "In most cases, there are (preschool-aged) kids who are unserved, who don't have any programs; there is typically more demand than can be filled. Those are perfect circumstances – or the best you're going to get – for randomized trials."

Studies that are <u>experimental</u> and <u>replicable</u> have the most potential to influence policy. The federal administrators agreed that studies that have the greatest influence on policy implementation and funding decisions are those that convincingly demonstrate effectiveness through rigorous, randomly-assigned, head-to-head comparisons. Haskins, thus, underscored that for research to influence policy, "it almost has to be that they are random assignment studies and that they are replicable. Those are the two hallmarks of what the scientific enterprise brings to policy."

Despite the importance and influence of randomized trials, early childhood research must incorporate diverse methodologies and designs. Participants emphasized that some of the most pressing questions relating to prekindergarten will require information on elements and variables (e.g. structural features of programs) that are not amenable to random assignment; quasi-experimental and qualitative methodologies, therefore, are needed to complement experimental research. It is also important not to conduct randomized trials until the curriculum or program being evaluated are far enough along in implementation.

The early childhood research field has been hindered by persistent challenges, limitations, and ideological/philosophical divisions.

Polarized debates within early childhood diminish the quality and impact of research. Federal agency administrators candidly shared their perceptions of some of the limitations of the early childhood field. "Early childhood is extraordinarily vulnerable to philosophical debates that waste time," Lyon said. He pointed to a bifurcation between quantitative and qualitative research that "has carried this field off the mark…(and) has no basis in common sense." He and other participants stressed that multiple methodologies can be combined within single studies and research initiatives.

The methodological and analytical capacity of early childhood researchers must be improved. Several participants commented that few researchers with expertise in the most advanced methodological and analytical techniques concentrate on early childhood education. An enhanced effort is needed, therefore,

to train early childhood researchers in cutting-edge, quantitative and qualitative methods. "I do hope that the federal government can make sure that we provide good opportunities for institutes of higher education to develop experiences for future scholars in preschool education," Lyon said.

Does a sufficient research base currently exist to inform the development and implementation of prekindergarten programs and policy?

Despite the ongoing need for research, we shouldn't lose sight of all that is known about beneficial prekindergarten experiences. Throughout the conference, participants noted that a substantial, cumulative, evidentiary body of research identifies characteristics of prekindergarten programs that foster child development and produce beneficial outcomes. "Do we not have enough good experimental research, with random assignment, to help policymakers define appropriate experiences?" one early childhood scholar asked rhetorically. "Is more research where we should place the emphasis? It strikes me that the research community has a responsibility to say to policymakers that we know this much."

Pursuing "trustworthy" knowledge to guide early childhood programmatic and policy decision-making remains a federal priority. Whitehurst referred to a "false dichotomy" typically presented between conducting more research and providing policymakers with guidance about what can currently be accomplished. He underscored that the U.S. Department of Education, in fact, spends only a small percentage of its total budget on research; the vast proportion of funds goes to program development.

Research must inform implementation. Federal agency staff urged researchers to conduct rigorous studies that provide reliable data on the effectiveness of different approaches to implementing curricula and programs. "Just because we have good ideas about what needs to be done in early childhood," Whitehurst observed, "doesn't mean we know how to implement these ideas effectively….I do think we need a sequenced approach…that can tell the policy community, not only do we think this is where we should be going, but if you go this way, you've got a good chance at being effective at it and not wasting the lives of kids and the taxpayers' money."

What is the role of research in early childhood policy making?

Evaluations of early childhood programs and interventions have been – and will continue to be – influential in shaping prekindergarten policy. Despite political opposition in the U.S. to universal Pre-K, there has been a steady escalation in the provision of publicly-financed prekindergarten programs. Research documenting the beneficial outcomes of high-quality, early childhood learning

experiences has been critical in building political support, and will remain an important factor in maintaining the viability of Pre-K policy.

Not all policymakers accept that preschool should be a governmental responsibility. Supporters of universal Pre-K (including many researchers) assume that the question is not whether something should be done in early childhood, but what needs to be done. Yet, many representatives in congress (mostly Republicans, but also a considerable number of Democrats) think that the primary responsibility for preschool should fall upon families, communities, and, to a lesser extent, states; the role of the federal government should be confined to research and limited funding. "Universal preschool may be on the agenda," Haskins said, "but it is not about to happen. We are taking an incremental approach, spending more to get a higher percentage of kids in quality programs."

New studies and evaluations are needed to persuade policymakers of the value of universal Pre-K. Federal agency staff noted that "astute policymakers" are asking whether they can depend on 30-year-old studies (i.e. longitudinal evaluations of the Perry Preschool and Abecedarian programs) as a justification for substantial increases in federal or state investments. "I would like to be able to respond," Whitehurst said, "'Well, you don't have to rely on that. Here is something done in the last five years. It is large-scale, it is representative, and look at the return you get on the investment.' But we don't have that in the grab bag."

Policymakers in other countries rely far less on research to inform early childhood policy funding decisions. European Union states, for example, invest significantly more per capita in early childhood and obtain better outcomes for young children, but there is less disparity in quality and access. Without exception, they base early childhood policy less on research findings and evaluations than the U.S. does.

Discussion of Prekindergarten Research Gaps and Priorities

Anthony Raden, the Associate Director of Columbia University's Institute for Child and Family Policy, provided a brief overview of preliminary results from the Institute's national survey of early childhood experts. For the survey, federal and state policymakers, researchers, foundation staff, advocates and representatives from national educational organizations were interviewed about essential research needed to guide universal Pre-K policy and program implementation.[10]

Following the presentation, Richard Clifford, the Co-Director of the National Prekindergarten Center at the University of North Carolina, moderated a discussion

[10] See Anthony Raden and Lisa McCabe (in process). Researching Universal Prekindergarten: Thoughts on Critical Questions and Research Domains from Policy Makers, Child Advocates and Researchers.

about research gaps and priorities. During the discussion, participants raised the following issues and themes:

What gaps in the federal research agenda can be filled by researchers outside government?

- A greater focus is needed on implementation studies not necessarily linked to outcomes.
- Many of the priorities and questions highlighted by early childhood practitioners fall outside of the context of federal funding. The federal agency directors suggested that for-profit and non-profit sectors can play a role in answering some of the important questions that can inform programmatic decisions.
- Is there evidence that bad child care hurts children? Many politicians are more interested in getting rid of bad child care, than supporting uniformly high-quality child care.
- Research assumes that health and safety regulations are covered. Are there threshold issues around staff-child ratios?
- Many policymakers still link early childhood issues to fighting poverty: there is a need to demonstrate that unregulated family child care has a negative impact on kids.
- We need more long-term follow-ups of studies, like Arthur Reynolds' longitudinal study of the Chicago Child-Parent Centers.

What information or technical assistance do state policymakers need?

- State government officials have a substantial need for research, but do not have the tools to evaluate research. Researchers need to think critically about strategies to educate consumers of research.
- It would be helpful to synthesize early childhood research for state policymakers. The New York State Department of Education, for example, developed a Pre-K agenda by bringing in national researchers to assist in identifying priorities for the state.
- We need to better understand similarities and differences across states, and capitalize on opportunities for cross-state, quasi-experimental, naturalistic studies.
- The federal government can support initiatives to bring together researchers, state-level administrators and state policymakers.
- Work currently underway with state departments involved in Pre-K (6-10 states) and with early childhood specialists in state departments of education can be expanded.

How does research on Pre-K fit into the larger ECEC research agenda?

- It is important to study Pre-K in relation to other systems, such as Head Start, child care, and family resource centers (e.g., in NY, 60% of children in Pre-K are in non-school settings).
- We need to understand the fragile system of early childhood care and education. What are the (un)intended consequences of UPK for the rest of the system (e.g., 0-3 year-olds)? When the benefits and salaries for teachers of 4-year-olds are

increased, what happens to the workforce for infants and toddlers? How to offset impact of one system on another.

How can research garner public will to focus on Pre-K?

- We need to study how to garner political will in the context of scarce resources.
- There will continue to be more enthusiasm, interest and action at the state level than at the federal level. It would be interesting to examine the conditions under which states make policy changes in early education.
- We need to clarify whether publicly-funded programs should serve only at-risk children or all children (as well as how to define "risk").

What are the implications of the move toward UPK for the research agenda?

- Research is needed both to promote policy action and to foster policy implementation (Reports by the "Early Education for All" campaign in Massachusetts are an excellent example of research that can stimulate policy action[11]).
- Some comparative state work is underway as part of NCEDL's six-state Pre-K study. Additional in-depth, state-level, case studies examining universal vs. targeted Pre-K approaches could help to inform policy decisions.
- The phasing in of state universal Pre-K programs provides a window of opportunity for research to significantly influence policy (e.g., decisions about the pace of going to scale.)
- We need additional studies that compare didactic and child-centered approaches (e.g., The evaluation of Georgia's universal Pre-K program examined the differential benefits associated with each approach[12]).

How do we translate research findings for policymakers and practitioners?

- The level of research sophistication on the Hill is low. For studies to be influential in policy, they should provide summaries, take-away lessons, and easily comprehensible explanations.
- A greater focus is needed on how to translate research findings into useable knowledge and to elevate important studies (e.g. National Research Council reports) to the public and press.
- There needs to be a formalized mechanism for evaluating Pre-K research (distinguishing between that which is good and bad), perhaps in partnership with IES's What Works Clearinghouse. (However, the screening of studies cannot be limited to methodology).
- HHS is supporting current research partnerships with practitioners (e.g., the Early Head Start evaluation), but it would be helpful to know how federal program staff can strengthen these partnerships.

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[11] Margaret Blood (2000). *Our Youngest Children: Massachusetts Voters and Opinion Leaders Speak Out on Their Care and Education*. Boston: Strategies for Children.

[12] As measured by third-grade test scores and retention rate. Gary Henry, et al. (2003). Georgia Pre-K Longitudinal Study: Final Report 1996-2001. Atlanta, GA: Georgia State University Applied Research Center.

What data-related issues remain?

- We need better administrative data on who is being served in order to identify who is not being served. We don't even know, for example, how many 4-year-olds are in preschool programs in the U.S.
- There is also a great need for basic information on costs and expenditures, not just for publicly-funded Pre-K, but for the entire spectrum of public and private providers of early care and education.
- State administrative data collection and federal inter-agency data collection efforts need to be improved. Partnerships should be developed between the federal government and states to test data collection methods.
- To create a common framework for data collection, we need to come to agreement on what data to collect from all programs (i.e., to avoid duplicate counting of children served in many programs).
- For both policy and research purposes, we need agreement on definitions: What constitutes Pre-K? What is needed for programs to qualify as Pre-K?

How can new technologies (instruments, methods, modeling, brain imagining) shape the research agenda?

- New, advanced methodologies provide the capability to do sophisticated, hierarchal analysis to tease apart the impact of federal, state, and local decisions and policies. HLM can be extremely useful, but very few policymakers understand the analysis. There are also promising developments in software for collecting assessment data.
- Geocoding offers enormous potential for analyzing the early childhood capacity of communities. NICHD is supporting the use of geocoding to map student achievement in Montgomery County, Maryland.
- Developmental research is viewed as more sophisticated and rigorous than educational research; for early childhood education research to avoid being easily dismissed, researchers should embrace rigorous, scientific designs.
- There is a training and human resource challenge: researchers with expertise in the most advanced methodological and analytical techniques tend to be outside the field. A "scientific migration" is needed to recruit scholars from other fields to become interested in early childhood research questions and to foster partnerships across disciplines (e.g., economics, statistics, neurology).

SETTING A RESEARCH AGENDA FOR PREKINDERGARTEN

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Participants

Don Bailey
Director
Frank Porter Graham Child Development Center
University of North Carolina at Chapel Hill

Marguerite Barratt
Program Director
Developmental and Learning Sciences
National Science Foundation

Ms. Jamie Cheshire
Legislative Assistant
Office of Congresswoman Nancy Johnson

Barbara Clark
Senior Legislative Analyst
Human Services Division
Office of the Assistant Secretary for Legislation
U.S. Department of Health & Human Services

Richard Clifford
Co-Director
National Prekindergarten Center
FPG Child Development Institute
University of North Carolina – Chapel Hill

Moncrieff Cochran
Professor
College of Human Ecology
Cornell University

Cynthia Gallagher
Coordinator
Early Education Reading Initiatives
New York State Department of Education

Mark Ginsberg
Executive Director
National Association for the Education of Young Children

Melinda Gish
Congressional Research Service
Domestic Social Policy Division

Janet Hansen
Vice President & Director of Education Studies
Committee for Economic Development (CED)

Ron Haskins
Co-Director, Welfare Reform & Beyond
Economic Studies
Brookings Institution

Jason Hustedt
Research Associate
National Institute for Early Education Research

Rebecca Liston
Research Assistant
Office of Senator Judd Gregg

Sharon Lynn Kagan
Virginia & Leonard Marx Professor
Child & Parent Development & Education
Columbia University
Teachers College

Sheila B. Kamerman
Compton Foundation Professor, School of Social Work
Co-Director, Institute for Child and Family Policy
Columbia University

Eugenia Kemble
Executive Director
American Federation of Teachers
Albert Shanker Institute

Amy Kershaw
Director of Research and Policy
Strategies for Children, Inc.

Justin King
Legislative Assistant
Office of Senator James Jeffords

G. Reid Lyon,
Chief, Child Development & Behavior Branch
National Institute of Child Health & Human Development National Institutes of Health

Kelly Maxwell
Co-Director
National Prekindergarten Center
FPG Child Development Institute
University of North Carolina – Chapel Hill

Martha Moorehouse
Director
Division of Children & Youth Policy
U.S. Dept. of Health & Human Services

Michelle Neuman
Graduate Fellow
National Center for Children and Families
Teachers College, Columbia University

Lynn Okagaki
Senior Counselor to the Director
Institute of Education Sciences
U.S. Department of Education

Phil Park
Legislative Assistant
Office of the Honorable George V. Voinovich

Shanny Peer
Director
Early Education Programs
French American Foundation

Anthony Raden
Associate Director
Columbia Institute for Child and Family Policy

Kathleen Reich
Program Officer
Children, Families & Communities Program
The David & Lucile Packard Foundation

Karen Schulman
Child Care Division
Children's Defense Fund

Kyle Snow
Director
Program on Early Learning and School Readiness
Child Development and Behavior Branch
National Institute of Child Health & Human Development

Gerald E. Sroufe
Director
Government Relations
American Educational Research Association

Ruby Takanishi
President
Foundation for Child Development

Fasaha M. Traylor
Senior Program Officer
Foundation for Child Development

Grover J. (Russ) Whitehurst
Director
Institute of Education Sciences
U.S. Department of Education

Marci Young
Deputy Director
Child Care Workforce

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